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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 201-E
6 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 5B

REPORT OF THE CHAIRMAN OF SUB-WORKING GROUP 5B-2 TO THE CHAIRMAN OF WORKING GROUP 5B

Four meetings of Sub-Working Group 5B-2 were held to review proposals concerning existing and possible additional allocations and regulatory aspects as related to the mobile-satellite service in the frequency range 1 - 3 GHz. In order to complete its task, SWG 5B-2 created three informal discussion groups, 5B-2A dealing with generic MSS allocations (coordinator, Mr. J.-E. Lejerkrans (Sweden)), 5B-2B dealing with the frequency range 1 559 - 1 567 MHz (coordinator, Mr. M. Hunt (Canada)), and 5B-2C dealing with the frequency range 1 675 - 1 710 MHz (coordinator, Mr. K.S. Mohanavelu (India)).

Although SWG 5B-2 has almost review all proposals under its term of reference, one more meeting is still scheduled to definitely complete its work.

The following proposals were adopted by the Sub-Working Group and are submitted for your consideration.

1 Frequency range 1 610 - 1 626.5 MHz

MOD **S5.369** *Different category of service:* in Angola, Australia, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

2 Frequency range 2 010 - 2 025 MHz and 2 160 - 2 170 MHz

MOD **S5.389C** The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January ~~2005~~2002 and is subject to coordination under Resolution **46 (Rev.WRC-95)/**No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

ADD **S5.388A** In Argentina, Brazil, Colombia, Cuba and Suriname, the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite service shall not cause harmful interference to, constrain the development of before 1 January 2005, or claim protection from the fixed and mobile services.

3 Frequency range 2 500 - 2 690 MHz

MOD

MHz
2 450 – 2 520

Allocation to Services		
Region 1	Region 2	Region 3
2 500 – 2 520 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.404 S5.407 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.403 S5.404 S5.407 S5.414 S5.403A

MOD

MHz
2 520 – 2 670

Allocation to Services		
Region 1	Region 2	Region 3
2 520 – 2 655 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	**2 520 – 2 655** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403	**2 520 – 2 535** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.403 S5.403A **2 535 – 2 655** FIXED S5.409 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.418

MOD

MHz
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
2 670 – 2 690 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420 S5.420A

ADD S5.403A *Additional allocation*: in Japan, subject to agreement obtained under No. **S9.21**, the band 2 515 - 2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within its national boundary from 1 January 2000.

ADD S5.420A *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2 670 - 2 690 MHz may also be used for the aeronautical mobile-satellite service (Earth-to-space) for operations limited to within its national boundary from 1 January 2000.

4 Article S18

While the principle encompassed in the attached proposal for an addition to the provisions of Article S18 found a good measure of support, concerns were expressed by many administrations.

These concerns related to the need for more time for delegations to review the proposal with their experts on GMPCS and to questions as to whether or not it is appropriate to include this matter in the Radio Regulations. Accordingly, it was decided to refer the attached proposal to Committee 5 where the wider implications could be debated.

ADD **S18.2*bis*** **[2021*bis*]** (2*bis*)To facilitate the circulation of GMPCS stations and earth stations, a group of two or more administrations may allow exceptions to the provisions of No. **S18.1 [2020]** by concluding a special agreement to mutually recognize the licences issued by the countries which are parties to the special agreement. These agreements and/or arrangements shall be communicated to the Secretary-General.

5 Appendix S5

ANNEX 1 TO APPENDIX S5 (WRC-95)

1. Coordination thresholds for sharing between MSS (space-to-Earth) and terrestrial services in the same frequency bands and between non-GSO/MSS feeder links (space-to-Earth) and terrestrial services in the same frequency bands

…..

1.2.2 General considerations

…..

1.2.2.2 Characteristics of reference systems in the fixed service

The following parameters represent the set of reference parameters of the fixed service.

1.2.2.2.1 Characteristics of reference digital point-to-point systems

Three different digital systems are described in the following table:

– 64 kbit/s capacity used, for example, for outside-plant (individual subscriber connection);

– 2 Mbit/s capacity used, for example, for business subscriber connections for the local part of the inside-plant;

– 45 Mbit/s capacity used, for example, for trunk networks.

Capacity	64 kbit/s	2 Mbit/s	45 Mbit/s
Modulation	4-PSK	8-PSK	64-QAM
Antenna gain (dB)	33	33	33
Transmit power (dBW)	7	7	1
Feeder/multiplexer loss (dB)	2	2	2
e.i.r.p. (dBW)	38	38	32
Receiver IF bandwidth (MHz)	0.032	0.7	10
Receiver noise figure (dB)	4	4.5	4
Receiver input level for a BER of 10^{-3} (dBW)	–137	–120	–106
~~Maximum long-term interference Total power (dBW)~~	~~–165~~	~~–151~~	~~–136~~
~~Maximum long-term interference Power spectral density (dB(W/4 kHz))~~	~~–174~~	~~–173~~	~~–170~~

Antenna pattern:

$G(\varphi) = G_{max} - 2.5 \times 10^{-3}$ **Error!** for $0 < \varphi < \varphi_m$

~~$G(\varphi) = G_1$ for $\varphi_m \leq \varphi < 75.86(\lambda/D)$~~

~~$G(\varphi) = 49 - 10 \log (D/\lambda) - 25 \log \varphi$ for $75.86(\lambda/D) \leq \varphi < 48°$~~

~~$G(\varphi) = 7 - 10 \log (D/\lambda)$ for $48° \leq \varphi$~~

$G(j) = 39 - 5 \log (D / l) - 25 \log j$ for $\varphi_m \leq \varphi < 48°$

$G(j) = -3 - 5 \log (D / l)$ for $48° \leq \varphi \leq 180°$

where:

$G(\varphi)$: gain relative to an isotropic antenna (dBi)

φ: off-axis angle (degree)

D: antenna diameter

λ: wavelength expressed in the same unit as D

G_1: gain of the first side-lobe = $2 + 15 \log (D/\lambda)$

(D/λ may be estimated from $20 \log D/\lambda \approx G_{max} - 7.7$)

G_{max}: main lobe antenna gain (dBi)

$\varphi_m =$ $20\ (\lambda/D) \times \sqrt{(G_{max} - G_1)}$ (degrees)

It should be noted that the above antenna radiation pattern corresponds to the average side-lobe pattern and it is recognized that individual side-lobes may exceed it by up to 3 dB.

1.2.2.2.2 Characteristics of reference analogue point-to-point systems

Reference circuit	12 hops with 50 km distance between stations
Antenna gain (dBi)	33
e.i.r.p. (dBW)	36
Feeder/multiplexer loss (dB)	3
Receiver noise figure (referred to input of receiver) (dB)	8
Maximum short- and long-term interference ~~per link~~in the reference circuit ~~(20% of time) (dB(W/4 kHz))~~ • baseband interfering signal power level not to be exceeded for more than 20% of the time • baseband interfering signal power level not to be exceeded for more than 0.01% of the time	~~–170~~ 240 pW0p 50 000 pW0p

Antenna pattern: Use antenna pattern of section 1.2.2.2.1.

1.2.2.2.3 Characteristics of reference point-to-multipoint systems

NOTE - In application of the SCP, the use of the point-to-multipoint reference FS system parameters for the 2 170 - 2 200 MHz band is not required.

Parameter	Central station	Outstation
Antenna type	Omni/Sectoral	Dish/Horn
Antenna gain (dBi)	10/13	20 (analogue) 27 (digital)
e.i.r.p. (max) (dBW) analogue digital	 12 24	 21 34
Noise figure (dB)	3.5	3.5
Feeder/multiplexer loss (dB)	2	2
IF bandwidth (MHz)	3.5	3.5
~~Maximum permissible long-term interference power (20% time)~~ ~~Total (dBW)~~ ~~dB (W/4 kHz)~~ ~~dB (W/MHz)~~	 ~~-142~~ ~~-170~~ ~~-147~~	 ~~-142~~ ~~-170~~ ~~-147~~

Antenna pattern:

For the outstation antenna pattern, the reference pattern described in section 1.2.2.2.1 ~~has~~is to be used.

The reference radiation pattern for omnidirectional or sectoral antennas is the following:

$$G(\theta) = G_0 - 12\,(\theta/\varphi_3)^2, \text{ dBi} \qquad 0 \le \theta < \varphi_3$$

$$G(\theta) = G_0 - 12 - 10 \log\,(\theta/\varphi_3), \text{ dBi} \qquad \varphi_3 \le \theta < 90°$$

where:

G_0 = maximum gain in the horizontal plane (dBi)

θ is the radiation angle above the horizontal plane (degrees)

φ_3 (degrees) is given by:

$$\varphi_3 = \textbf{Error!} \text{ degrees}$$

where: $\alpha = \textbf{Error!}$

~~It should be noted that the above antenna pattern is provisional and that further study is under way in the ITU-R.~~

1.2.3 Determination of the need for coordination between MSS space stations (space-to-Earth) and terrestrial stations

1.2.3.1 Method for the determination of the need for coordination between MSS space stations (space-to-Earth) and other terrestrial services sharing the same frequency band in the 1 to 3 GHz range

Coordination of assignments for transmitting space stations of the mobile-satellite service ~~downlink~~ with respect to terrestrial services is not required if the power flux-density produced at the Earth's surface or the fractional degradation in performance (FDP) of a station in the fixed service does not exceed the threshold values shown in the following table.

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²)~~ ~~in 4 kHz~~	*r* dB/deg	
1 492 - 1 525	analogue FS telephony	~~–152~~-146 dB(W/m2) in 4 kHz	0.5	~~–152~~-146 dB(W/m2) in 4 kHz	0.5	
	~~digital FS~~all cases (NOTE 4)	~~–152~~-128 dB(W/m2) in 1 MHz	0.5	-128 dB(W/m2) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–152~~	~~0.5~~	~~–152~~	~~0.5~~	
1 525 - 1 530	analogue FS telephony	~~–152~~-146 dB(W/m2) in 4 kHz	0.5	~~–152~~-146 dB(W/m2) in 4 kHz	0.5	
	~~digital FS~~all cases	~~–152~~-128 dB(W/m2) in 1 MHz	0.5	-128 dB(W/m2) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–152~~	~~0.5~~	~~–152~~	~~0.5~~	
2 160 - 2 200 (NOTE 3)	analogue FS telephony	~~–152~~-146 dB(W/m2) in 4 kHz	0.5	~~–147~~-141 dB(W/m2) in 4 kHz (NOTE 6)	0.5	
	~~digital FS~~all cases	~~–152~~-128 dB(W/m2) in 1 MHz	0.5	-123 dB(W/m2) in 1 MHz (NOTE 6)	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–152~~	~~0.5~~	~~–147~~	~~0.5~~	

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P dB(W/m²) in 4 kHz	*r* dB/deg	*P* dB(W/m²) in 4 kHz	*r* dB/deg	
2 483.5 - 2 500	fixedall cases	–152-128 dB(W/m²) in 1 MHz and -146 dB(W/m²) in 4 kHz	0.5	–150-126 dB(W/m²) in 1 MHz and -144 dB(W/m²) in 4 kHz (NOTE 7)	0.65	
	other terrestrial services (NOTE 4)	–152	0.5	–150	0.65	
2 500 - 2 520	analogue FS telephony	–152-146 dB(W/m²) in 4 kHz	0.5	–152-146 dB(W/m²) in 4 kHz	0.5	
	digital FSall cases	–152-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
	other terrestrial services (NOTE 4)	–152	0.5	–152	0.5	
2 520 - 2 535	analogue FS telephony	–160-154 dB(W/m²) in 4 kHz	0.75	–152-146 dB(W/m²) in 4 kHz	0.5	
	digital FSall cases	–160-136 dB(W/m²) in 1 MHz	0.75	-128 dB(W/m²) in 1 MHz	0.5	25
	other terrestrial services (NOTE 4)	–160	0.75	–152	0.5	

NOTE 1 – The calculation of FDP (fractional degradation in performance) is contained in section 1.2.2.1, using reference FS parameters contained in sections 1.2.2.2.1 and 1.2.2.2.3.

NOTE 2 – The following formula should be used for deriving the coordination threshold in terms of power flux-density:

P dB(W/m²/4 kHz) for $0° \le \delta \le 5°$

$P + r(\delta - 5)$ dB(W/m²/4 kHz) for $5° < \delta \le 25°$

$P + 20r$ ~~dB(W/m^2/4 kHz)~~ for $25° < \delta \leq 90°$

where δ is the angle of arrival (degrees).

The threshold values are obtained under assumed free-space propagation conditions.

NOTE 3 – The coordination threshold in the band 2 160 - 2 270 MHz (Region 2) and 2 170 - 2 200 MHz (all regions) to protect other terrestrial services does not apply to the terrestrial component of the Future Public Land Mobile Telecommunication Systems (FPLMTS), as the satellite and the terrestrial components are not intended to operate in the same area or on common frequencies within these bands.

~~NOTE 4 – The coordination threshold factors applicable to other terrestrial services may be reviewed at a future conference, as necessary.~~

NOTE 4 - Exceptions for the band 1 492 - 1 525 MHz are as follows:

4.1 For the land mobile service on the territory of Japan (No. **S5.348A**): -150 dB(W/m^2) in 4 kHz at all arrival angles is applicable to all satellite space-to-Earth emissions.

4.2 For the aeronautical mobile service for telemetry (No. **S5.343**), the requirement for coordination is determined by frequency overlap (No. **S5.348**).

NOTE 5 - In all cases involving sharing with analogue systems for telephony in the fixed service, further coordination is only required when the power flux-density values are greater than or equal to the coordination threshold values in both reference bandwidths.

NOTE 6 - The power flux-density values specified for the 2 160 - 2 200 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with a non-GSO MSS system employing narrow-band TDMA/FDMA techniques.

NOTE 7 - The power flux-density values specified for the 2 483.5 - 2 500 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non-GSO MSS systems employing CDMA techniques. The power flux-density values specified will not provide full protection for existing digital fixed systems in all cases. However, these power flux-density values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high power ISM and possible low power applications are expected to produce a relatively high interference environment.

6 Resolution 215

MOD

RESOLUTION 215 (~~WRC-95~~WRC-97)

COORDINATION PROCESS AMONG NON-GEOSTATIONARY MOBILE-SATELLITE SYSTEMS AND EFFICIENT USE OF THE ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 1 - 3 GHz RANGE

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that space-to-Earth transmissions of non-geostationary (non-GSO) mobile-satellite systems are constrained to limit their power flux-density over areas where the frequency band is shared with terrestrial systems;

b) that a number of proposed non-GSO mobile-satellite systems can provide a good service to users within the power flux-density limits given in Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 to Appendix **S5**;

c) that when maximum communication capacity is achieved by non-GSO systems in the mobile-satellite service a major portion of the interference into each of these systems will come from the other mobile-satellite systems sharing the frequency band, and, consequently, if one system starts to transmit at higher power, all others need to do the same in order to overcome mutual interference;

d) that the ITU-R is studying the efficient use of the radio spectrum and frequency sharing within the mobile-satellite service, that Recommendations ITU-R M.1186 and M.1187 are a basis for further study, and that additional preliminary texts are available or can be provided by administrations on this matter~~,~~;

e) that capacities in a codirectional, co-frequency and co-coverage sharing environment of systems using spread-spectrum multiple access techniques are affected by technical and operational characteristics of other mobile-satellite service systems using similar multiple access techniques;

f) that in many parts of the world and in certain frequency bands in the 1 - 3 GHz range, significant congestion already exists due to use by other terrestrial and space services;

g) the need to make most efficient use of frequencies in the MSS allocations,

recognizing

that, as a means to ensure that the frequency bands allocated to the mobile-satellite service can be used in an efficient manner, there is an urgent demand for:

1. criteria to be established by the ITU-R to be used in determining the need to coordinate between mobile-satellite systems; and

2. detailed methods of interference calculation to be used by administrations in the coordination process~~,~~;

3. ITU-R studies that should not impede the timely deployment of any mobile-satellite service systems,

resolves to invite ITU-R

1. to continue its studies on this subject and develop, as a matter of urgency, criteria for determining the need to coordinate and calculation methods for determining levels of interference, as well as the required protection ratios between networks in the mobile-satellite service~~,~~;

2. to urgently study the use of technically and operationally feasible techniques to allow for improvements in spectrum efficiency in MSS systems,

further resolves

1. to focus the ITU studies on the technical and operational characteristics of systems using multiple access techniques that can allow co-frequency, co-coverage, codirectional sharing but which involve the cooperation among systems' operators to maximize the efficient use of spectrum by multiple mobile-satellite service systems using such access techniques;

2. that administrations responsible for the introduction of mobile-satellite systems urge their mobile-satellite operators to implement, as practicable, the latest available technologies to improve spectrum efficiency consistent with the requirement to offer viable MSS services;

3. to recommend that administrations encourage their operators to use the most advanced technology available when preparing to implement their global MSS systems in the 2 GHz range so that they may operate, if necessary, in different frequency bands in different regions, in accordance with the MSS allocations in the 2 GHz range decided by the World Radiocommunication Conference (WRC-97).

~~*invites the Council*~~

~~to include this Resolution in the agenda of WRC-97 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum.~~

A note to GTPLEN-1 will be prepared to this Resolution in the agenda of WRC-99 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum in the context of frequency coordination using existing Resolution 46 procedures.

7 Resolution 716

NOC

USE OF THE FREQUENCY BANDS 1 980 - 2 010 MHz AND 2 170 - 2 200 MHz IN ALL THREE REGIONS AND 2 010 - 2 025 MHz AND 2 160 - 2 170 MHz IN REGION 2 BY THE FIXED AND MOBILE-SATELLITE SERVICES AND ASSOCIATED TRANSITION ARRANGEMENTS

8 Resolution 717

SUP

REVIEW OF ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 2 GHz RANGE

9 Recommendation 717

SUP

FREQUENCY SHARING IN BANDS SHARED BY THE MOBILE-SATELLITE SERVICE AND THE FIXED, MOBILE AND OTHER TERRESTRIAL SERVICES BELOW 3 GHZ

10 Recommendation 721

SUP

FREQUENCY SHARING IN THE BANDS 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

11 Resolution [COM5-10]

RESOLUTION [COM5-10] (WRC-97)

FREQUENCY SHARING IN THE BANDS 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

The World Radiocommunication Conference (Geneva, 1997),

with a view

to allow the most efficient use of frequency bands allocated to the mobile-satellite service (MSS) and the radio astronomy service by these services, and with due regard to the other services to which those bands are also allocated,

considering

a) that the band 1 610.6 - 1 613.8 MHz is allocated to the radio astronomy service and the mobile-satellite service (Earth-to-space) on a shared, primary basis, and that the band 1 660 - 1 660.5 MHz is allocated to the radio astronomy service and the land mobile-satellite service (Earth-to-space) on a shared, primary basis;

b) that No. **[733E] S5.372** of the Radio Regulations states that "harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services ([No. **2904**] **S29.13** applies)"; and that Article **[36] S29** also points out that emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service;

c) that the nature of objects studied by the radio astronomy service in the bands 1 610.6 - 1613.8 MHz and 1 660 - 1 660.5 MHz demands maximum flexibility in the planning of observation frequencies;

d) that in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz, which are shared between the radio astronomy service and the mobile-satellite service, operational constraints are necessary for mobile earth stations of the mobile-satellite service;

e) that Recommendation ITU-R M.829-1, which relates to sharing between the mobile-satellite service and the radio astronomy service in the band 1 660 - 1 660.5 MHz, notes that further studies are required, particularly in the areas of propagation models and assumptions used for the determination of separation distances;

f) that Recommendation ITU-R M.1316 may be used in order to facilitate coordination between the mobile earth stations and radio astronomy stations in the bands 1 610.6 - 1 613.8 and 1 660 - 1 660.5 MHz;

g) that no experience could be gained up to now with the use of the Recommendation mentioned in *considering* f);

h) that the threshold levels of interference detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769,

resolves

that a future competent conference shall evaluate the frequency sharing in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz between the mobile-satellite service (MSS) and the radio astronomy service, based upon the experience gained with the use of ITU-R M.1316 and other relevant ITU-R Recommendations,

invites ITU-R

to submit a report to such a future conference on evaluating the effectiveness of recommendations aiming to facilitate sharing between the mobile-satellite service and the radio astronomy service,

urges administrations

to participate actively in this evaluation.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4B

FIFTH REPORT FROM WORKING GROUP 4B TO COMMITTEE 4

At its sixth meeting on 7 November 1997, the Working Group reviewed texts of Articles S1, S31, S32, Appendix S4 and Resolutions [COM4-7], [COM4-8], 200 and 331 and the corresponding provisions were modified accordingly.

The agreed texts and proposed actions, as reproduced, are submitted to Committee 4 for consideration.

Definitions

ARTICLE S1

ADD S1.109A *Adaptive System:* A radiocommunication system which varies its radio characteristics according to channel quality.

Notification of Stations

APPENDIX S4

ANNEX 1A

(to Appendix **S4**)

List of characteristics of stations in the terrestrial services[1]

MOD *ITEM 8B – Radiated power (dBW)*

The radiated power expressed in dBW in one of the forms described in Nos. **S1.161** to **S1.163**. In the case of systems where automatic power control is applied, indicate the range of power control, expressed in dB above the transmitting power indicated above.

ADD

DRAFT RESOLUTION [COM4-7]

USE OF FREQUENCY ADAPTIVE SYSTEMS IN THE MF/HF BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the efficiency of spectrum use will be improved by the use of frequency adaptive systems in the MF and HF bands shared by the fixed and the mobile services;

b) that trials of frequency adaptive systems which have been undertaken during the past 20 years have demonstrated the feasibility of such systems and their improved spectrum efficiency;

c) that such improved efficiency is attained through:

– shorter call set-up and improved transmission quality by selection of the most suitable assigned channels;

– reduced channel occupancy, permitting same channels to be used by different networks yet decreasing the probability of harmful interference;

– minimization of the transmitter power required for each transmission;

– continued optimization of the emissions owing to the sophistication of the systems;

– simple operation by the use of intelligent peripheral equipment;

– reduced need for skilled radio operators;

d) that following Resolution **23 (WRC-95)**, the Bureau no longer undertakes examination with respect to the probability of harmful interference caused by new assignments recorded in the MIFR in the non-planned bands below 28 MHz;

e) that frequency adaptive systems will actively contribute to the avoidance of interference since, when other signals are observed on the channel, the frequency adaptive system will move to another frequency,

resolves

1 that, in authorizing the operation of frequency adaptive systems in the MF/HF bands, administrations shall:

i) make assignments preferably in the bands allocated to the fixed and mobile services;

ii) not make assignments in the bands:

– allocated exclusively to the maritime or aeronautical mobile (R) services;

– shared on a co-primary basis with the broadcasting service, radiodetermination service or the amateur services;

– allocated to radio astronomy;

iii) avoid use which may affect frequency assignments involving safety services made in accordance with Nos. **S5.155**, **S5.155A** and **S5.155B**;

iv) take into account any footnotes applicable to the proposed bands and the implications regarding compatibility;

2 that frequency adaptive systems shall automatically limit simultaneous use of frequencies to minimum necessary for communication requirements;

3 that, with a view to avoiding harmful interference, the system should evaluate the channel occupancy prior to and during operation;

4 that frequency adaptive systems shall be notified to the Bureau in accordance with the provisions of Article **S11**,

invites ITU-R

1 to pursue its studies on the subject (see for example, Questions ITU-R 204-1/1, 147/9, 205/9 or 214/9) with a view to achieve optimum operational performance and compatibility;

2 to report on the results of these studies to a future WRC,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements, as soon as practicable, for the notification of frequency assignments to adaptive systems and for their recording in the Master International Frequency Register, taking into account the studies already undertaken.

MOD

RESOLUTION No. 331 (~~Mob-87~~Rev.WRC-97)

~~INTRODUCTION OF PROVISIONS FOR~~ TRANSITION TO THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) AND CONTINUATION OF THE ~~EXISTING~~ DISTRESS AND SAFETY PROVISIONS IN APPENDIX S13

The World ~~Administrative Radio Conference for the Mobile Services, Geneva, 1987~~Radiocommunication Conference (Geneva, 1997),

noting

~~that the International Maritime Organization (IMO):~~

~~– has reached the final stage of development of the Global Maritime Distress and Safety System (GMDSS);~~

~~– is preparing a revision of the International Convention for the Safety of Life at Sea (SOLAS), 1974, with a view to introducing the GMDSS;~~

~~– will decide on the dates of initial and full implementation of the GMDSS, including any intermediate dates of application for various classes of ships subject to the above-mentioned Convention;~~

that the International Convention for the Safety of Life at Sea, SOLAS, 1974, as amended, prescribes that all ships subject to this Convention shall be fitted for the GMDSS by 1 February 1999,

noting further

~~*a)* that to ensure compatibility between ships following Chapter **IX** and those following Chapter **N IX** of the Radio Regulations, all ships subject to the 1974 SOLAS Convention will continue to use applicable existing distress and safety provisions until the GMDSS has been implemented fully;~~

a) that a number of administrations have taken steps to implement the GMDSS also for classes of vessels not subject to SOLAS, 1974 as amended;

b) that an increasing number of vessels not subject to SOLAS, 1974 as amended, are making use of the techniques and frequencies of the GMDSS prescribed in Chapter **SVII**;

~~*b)*~~*c)* that some administrations and ~~ships~~vessels, not subject to ~~the 1974~~ SOLAS ~~Convention~~, 1974, as amended, may wish to continue to use provisions of ~~[Chapter **IX**] on~~Appendix **S13** for Distress and Safety Communications ~~after the GMDSS has been implemented fully~~for some time after 1 February 1999;

~~*c)*~~*d)* that it would be costly for administrations to maintain in parallel for an excessive period of time shore-based facilities necessary to support both the ~~existing~~old and new distress and safety system~~s and the GMDSS~~;

~~*d)*~~*e)* that ~~it is necessary~~there may be a need to continue existing shore-based distress and safety services for a certain period after 1 February 1999 so that ships not subject to the 1974 SOLAS Convention and not yet using the techniques and frequencies of the GMDSS will be able to obtain assistance from these services until such time as they are able to participate in the GMDSS;

f) that separate provisions of the existing Radio Regulations designate channel 16 and 2 182 kHz as the international channels for general calling by radiotelephony;

g) that IMO has already decided for GMDSS ships that:

– listening watches on 2 182 kHz will no longer be mandatory after 1 February 1999;

– listening watches on VHF channel 16 will be continued and a final date for the cessation of mandatory watchkeeping on channel 16 is yet to be determined;

h) that the Radio Regulations require GMDSS ships to keep watch on the appropriate DSC distress frequencies;

i) that the Radio Regulations requests ship stations to keep watch on channel 13 where practicable;

j) that several administrations have established Vessel Traffic Service (VTS) systems and require ships to keep watch on local VTS channels;

k) that ships that are required by SOLAS to carry a radio station are being equipped with DSC, but the majority of vessels that carry a radio station on a voluntary basis might not have DSC equipment;

l) that similarly, many administrations have established distress and safety service based on DSC watchkeeping, but the majority of port stations, pilot stations and other operational coast stations have not been equipped with DSC facilities;

m) that for the reasons listed above, it will remain necessary for stations in the maritime mobile service to call each other by radiotelephony in certain situations,

considering

~~*a)* that this Conference has placed in Chapter **N IX** the provisions which are required for the GMDSS to be implemented, and that [Chapter **IX**], as modified, retains the provisions for the existing distress and safety system;~~

~~*b)* that the introduction of the GMDSS will offer the opportunity to gain administrative, technical and operational experience with the new system;~~

~~*c)* that the experience gained from the operation of the GMDSS should be used to improve the distress and safety system;~~

a) that the operation of the GMDSS described in Chapter **SVII** and the present distress and safety system described in Appendix **S13** differ in many crucial aspects, such as means and methods of alerting, communication facilities available, announcement and transmission of maritime safety information etc.;

b) that operation of the two systems in parallel for a long period would cause ever increasing difficulties and incompatibilities between ships operating in the two different systems and may thus seriously degrade the overall safety at sea;

c) that the GMDSS overcomes the deficiencies of the aural watchkeeping on maritime distress and calling frequencies on which the distress and safety system described in Appendix **S13** relies, by replacing these watches by automatic watch, i.e., digital selective calling and satellite communication systems,

~~*recognizing*~~

~~*a)* that to assist IMO, the provisions of Chapter **N IX** should enter into force prior to the initial implementation of the GMDSS;~~

~~*b)* that some elements in the GMDSS described in Chapter **N IX**, particularly digital selective calling, will not be fully operational in all parts of the world on the date of entry into force of the Final Acts of this Conference;~~

resolves

~~1. that the entry into force of Chapter **N IX**:~~

~~*a)* implies that those administrations wishing to start using the provisions of Chapter **N IX** may do so;~~

~~*b)* does not commit any administration to install or establish GMDSS facilities or to start using the provisions of Chapter **N IX**;~~

1 that, until such time as voice calling has become obsolete, channel 16 and 2 182 kHz may be used as voice calling channels;

2 to urge all administrations to assist in enhancing the safety at sea by:

– encouraging all ships to make use of the GMDSS as soon as possible;

– encouraging, where appropriate, establishment of suitable shore-based facilities for GMDSS, either on an individual basis or in cooperation with other relevant parties in the area;

~~2 that nevertheless, and in light of *resolves* 1, administrations shall be obliged to follow the provisions of Chapter **IX** until adequate measures have been taken to ensure the continuation of safety communications for ships not subject to the 1974 SOLAS Convention, until full implementation of the GMDSS and until a future competent conference decides otherwise;~~

3 that administrations may, taking account of all aspects involved, such as:

– decisions by IMO on aural watch on 2 182 kHz and VHF channel 16;

– the GMDSS radio systems available in the area concerned;

– the compatibility problems mentioned in *considering a)* and *b)* above;

– the density and classes of ships normally in the area;

– the geographical nature of the area and the general navigational conditions within the area;

– other adequate measures taken to ensure safety communications for ships sailing in the area.

At a time after 1 February 1999, when the development on transition to the GMDSS and the prevailing conditions in the area makes it reasonable to do so, release ship stations and coast stations within the area concerned from the obligations described in Appendix **S13** on listening watch on 2 182 kHz or VHF channel 16 or both;

when doing so administrations should:

– inform IMO of their decisions and submit to IMO details on the area concerned;

– inform the Secretary-General on the necessary details for inclusion in the List of Coast Stations;

– ensure such arrangements and details regarding the area concerned be indicated in relevant maritime publications,

invites ~~*the Administrative Council*~~*the next world radiocommunication conference*

~~to draw this Resolution to the attention of the next Plenipotentiary Conference and request that Conference to decide on a world administrative radio conference which should be made competent to review this Resolution and Chapters **IX** and **N IX**~~to include the review of this Resolution, Appendix **S13** and Chapter **SVII** on the agenda of the World Radiocommunication Conference 2001,

~~*requests the IMO*~~

~~when it is deciding the dates of implementation of the GMDSS, to take into account:~~

~~1. Resolution **322 (Rev.MOB-87)** relating to Coast Stations and Coast Earth Stations Assuming Watch-Keeping Responsibilities on Certain Frequencies in Connection with the Implementation of Distress and Safety Communications for the GMDSS, which is concerned with the adequate geographic distribution of coast stations and coast earth stations necessary for the implementation of the GMDSS;~~

~~2. the economic repercussions and benefits of the GMDSS and the particular limitations confronting the developing countries;~~

~~3. the possibility of a progressive implementation of the GMDSS by bringing into effect component parts of the system, particularly those having maximum benefit to the safety of life at sea;~~

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO)~~.~~,

invites ITU-R Study Group 8

to review the operational and procedural incompatibilities between the old and new systems with a view to presenting the information to WRC-01.

DRAFT NEW RESOLUTION [COM4-8]

OPERATION OF GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM EQUIPMENT ON AND ASSIGNMENT OF MARITIME MOBILE SERVICE IDENTITIES (MMSI) TO NON-COMPULSORY FITTED VESSELS

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required by international agreement to carry GMDSS equipment could elect to do so for safety purposes;

b) that such vessels may only carry VHF DSC equipment;

c) that some administrations may not require operators on such vessels to have appropriate training, certification or licence;

d) that not all administrations assign and register identities to users of VHF DSC on such ships,

considering

that VHF DSC false distress alerts are a problem for rescue coordination centres, particularly when incorrect identities are used in these alerts, or when the radio is operated by persons untrained in its use,

recognizing

that administrations have different training requirements for users of VHF DSC equipment,

resolves

1 to invite the ITU-R to consider digital selective calling standards and operating procedures in order to simplify operation of this equipment;

2 to invite the ITU-T and ITU-R to review the process for assigning maritime mobile service identities for simplifying the process, taking into account cases of new installation, sale of the vessel or transfer of the equipment to a new ship;

3 to invite the ITU-T and ITU-R to undertake studies to ensure the registration and continuous accessibility and availability of identities to rescue authorities,

instructs the Secretary-General

to communicate this Resolution to the IMO for consideration and comments.

ARTICLE S31

Frequencies for the Global Maritime Distress and Safety System (GMDSS)

NOC S31.18

ARTICLE S32

Operational Procedures for Distress and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section I. General

ADD S32.5B Any GMDSS shipboard equipment which is capable of transmitting position coordinates as part of a distress alert message, and not having an integral electronic position fixing system receiver, shall be interconnected to a separate navigation receiver to automatically provide that information, if one is installed.

ADD S32.7A § 7A. A distress alert is false if it was transmitted without any indication that a mobile unit or person was in distress and required immediate assistance (see No. **S32.9**). Administrations receiving a false distress alert shall report this infringement in accordance with Section V of Article **S15**, if that alert:

a) was transmitted intentionally;

[b) was not cancelled in accordance with Nos. **S32.38A - S32.38N**;]

c) could not be verified as a result of either the ships failure to keep watch on appropriate frequencies in accordance with Nos. **S31.16 - S31.20**, or its failure to respond to calls from an authorized rescue authority;

d) was repeated; or

e) was transmitted using a false identity.

Administrations receiving such a report shall take appropriate steps to ensure that the infringement does not recur. No action should normally be taken against any ship or mariner for reporting and cancelling a false distress alert.

MOD S32.9 § 7. (1) The transmission of a distress alert indicates that a mobile unit[1] or person[2] is ~~in distress~~threatened by grave and imminent danger and requests immediate assistance. The distress alert is a digital selective call using a distress call format[3] in the bands used for terrestrial radiocommunication or a distress message format, in which case it is relayed through space stations.

SUP RESOLUTION No. 200 (Rev.Mob-87)

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 203(Rev.1)-E
20 November 1997
Original: Spanish

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

Colombia (Republic of), Costa Rica, Ecuador

PROPOSALS FOR THE WORK OF THE CONFERENCE

CLM/CTR/EQA/203/1
ADD

DRAFT RESOLUTION [CLM/CTR/EQA-1]

DUE DILIGENCE IN APPLYING THE PRINCIPLES EMBODIED IN THE CONSTITUTION

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Articles **12** and **44** of the Constitution (Geneva, 1992) lay down the basic principles for the use of the radio-frequency spectrum and the geostationary-satellite orbit;

b) that those principles have been incorporated in the Radio Regulations through No. **S0.3**;

c) that, in accordance with Nos. **S11.30**, **S11.31** and **S11.31.2**, notices shall be examined with respect to the provisions of the Radio Regulations, including the provision relating to the basic principles, appropriate rules of procedure being developed for the purpose,

resolves

1 to instruct the Radio Regulations Board, as a matter of urgency and within the framework of Nos. **S11.30**, **S11.31** and **S11.31.2** of the Radio Regulations, to develop the rules of procedure to be followed in examining due compliance with the provisions set out in No. **S0.3** in the process leading up to the recording of frequency assignments in the International Frequency Register. These rules shall be applied from the next world radiocommunication conference;

2 that the Board shall circulate the draft of these rules of procedure to administrations by 1 August 1998 with a view to receiving comments up to 1 January 1999;

3 to instruct the Radiocommunication Bureau:

in line with the rules of procedure developed by the Board, to examine all notices, irrespective of the stage they have reached in the process, and verify compliance with these provisions.

Notices which do not receive a favourable finding with respect to these provisions shall be returned to the submitting administrations, the reasons therefor being given.

Notices which receive a favourable finding shall continue to be processed in line with the Radio Regulations. The text of the findings shall be published in the next weekly circular;

4 that the Board shall submit to WRC, through the Council, a detailed report on the action taken on this Resolution.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 2 au
Document 203-F/E/S
13 novembre 1997
Original: espagnol

SÉANCE PLÉNIÈRE

Colombie (République de)

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter "Costa Rica" dans la liste des pays signataires de ce document.

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PLENARY MEETING

Colombia (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Add "Costa Rica" in the list of countries cosponsoring this document.

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SESIÓN PLENARIA

Columbia (República de)

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Añádase "Costa Rica" a la lista de países firmantes de este documento.

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UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 1 au
Document 203-F/E/S
11 novembre 1997
Original: espagnol

SÉANCE PLÉNIÈRE

Colombie (République de)

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter "Equateur" dans la liste des pays signataires de ce document.

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PLENARY MEETING

Colombia (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Add "Ecuador" in the list of countries cosponsoring this document.

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SESIÓN PLENARIA

Columbia (República de)

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Añádase "Ecuador" a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 203-E
7 November 1997
Original: Spanish

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

Colombia (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 7:

– Resolution 18 (Kyoto, 1994)

– Due diligence in the application of the basic principles set forth in Article 44 of the Constitution (Geneva, 1992)

Reasons:

1 In *considering* a) of Resolution 18 (Kyoto, 1994), reference is made to the basic principles to be respected for the use of the radio-frequency spectrum and the geostationary-satellite orbit; it is therefore necessary to take these principles into account when considering notification, coordination and registration procedures, and to establish "due diligence" measures for their application under the procedures.

2 Working Group 2 of the Plenary will not be studying this aspect.

CLM/203/1
ADD

DRAFT RESOLUTION [CLM-1]

DUE DILIGENCE IN APPLYING THE PRINCIPLES EMBODIED IN THE CONSTITUTION

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Article **44** of the Constitution (Geneva, 1992) lays down the basic principles for the use of the radio-frequency spectrum and the geostationary-satellite orbit;

b) that those principles have been incorporated in the Radio Regulations through No. **S0.3**;

c) that, in accordance with Nos. **S11.30**, **S11.31** and **S11.31.2**, notices shall be examined with respect to the provisions of the Radio Regulations, including No. **S0.3** relating to the basic principles, appropriate rules of procedure being developed for the purpose,

resolves

1 to instruct the Radio Regulations Board, as a matter of urgency and within the framework of Nos. **S11.30**, **S11.31** and **S11.31.2** of the Radio Regulations, to develop the rules of procedure to be followed in examining due compliance with the provisions set out in No. **S0.3** in the process leading up to the recording of frequency assignments in the International Frequency Register;

2 to instruct the Radiocommunication Bureau:

a) as of now, to refrain from recording in the International Frequency Register notices which have not been examined in the light of these new procedures, irrespective of the stage they have reached in the process;

b) in line with the rules of procedure developed by the Board, to examine all notices, irrespective of the stage they have reached in the process, and verify compliance with No. **S0.3**.

Notices which do not receive a favourable finding with respect to these provisions shall be returned to the submitting administrations, giving the reasons therefor.

Notices which receive a favourable finding with respect to No. **S0.3** shall continue to be processed in line with the Radio Regulations. The text of the findings shall be published in the next weekly circular.

3 that the Radiocommunication Bureau shall submit to WRC, through the Council, a detailed report on the action taken on this Resolution.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

Corrigendum 1 to Document 204-E
14 November 1997
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 5

Please replace paragraph 2.9 as follows:

2.9 The **delegate of Uzbekistan** withdrew the proposals contained in sections a) and b) of the annex to Document 174, namely: MOD S5.175 (proposal UZB/7/7), MOD S5.175 (proposal UZB/7/8), ADD S5.175A (proposal UZB/7/9), MOD S5.175 (proposal UZB/59/4), MOD S5.469 (proposal UZB/7/10), MOD S5.469 (proposal UZB/7/11) and ADD S5.469A (proposal UZB/7/12). He also withdrew MOD S5.99 (proposal UZB/59/2), MOD S5.314 (proposal UZB/59/3) and ADD S5.87A (proposal UZB/59/6), as those three proposals were simply a repetition of proposals included in Document 7.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 204-E
11 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 5

(ALLOCATIONS AND ASSOCIATED ISSUES)

Thursday, 6 November 1997, at 0930 hours

Chairman: Mrs. V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Approval of the summary record of the first meeting	120
2	Consideration of country footnotes (continued)	174
3	Second report of Working Group 5C	172
4	Second report of Working Group 5B	188
5	Second report of Working Group 5A	182

1 Approval of the summary record of the first meeting (Document 120)

1.1 The summary record of the first meeting (Document 120) was **approved**.

2 Consideration of country footnotes (continued) (Document 174)

2.1 The **Chairman** introduced Document 174, which contained a brief summary of the Committee's previous discussion on the subject of country footnotes that were not strictly in conformity with Conference agenda item 1.1. Since the Committee's second meeting, she had held informal discussions with the administrations which had put forward the proposals contained in the annex to Document 174. During those discussions, suggestions had been made as to a suitable procedure for dealing with such footnotes, their large number perhaps reflecting initial difficulties in implementing Resolution 26 (WRC-95). She suggested that each proposal should be examined on the basis of the following principle: if no objection was raised, the proposal would be regarded as approved. She asked first whether that principle would be acceptable to the Committee.

2.2 The **delegate of Germany**, recalling that the purpose of agenda item 1.1 was to minimize the number of footnotes in the Radio Regulations and the number of countries included in any one footnote, so as to promote harmonization, said that the proposed consideration of items not in conformity with agenda item 1.1 should not establish a precedent. In his view, many problems could be solved on a bilateral or multilateral basis without using up valuable conference time. He suggested that some action should be taken at this Conference in order to deal with such footnotes at future conferences.

2.3 The **Chairman**, indicating that the views of the delegate of Germany would be reflected in her report to the Plenary, suggested that the proposed principle be applied, as an exceptional measure, at the present Conference only. A more effective procedure - possibly more clearly worded agenda items or a revision of Resolution 26 - would have to be found in future.

2.4 The **delegate of France**, supporting the views of the delegate of Germany, accepted the Chairman's suggested procedure, as well as the possibility of a revision of Resolution 26. He stressed, however, that any footnote concerning another agenda item should be transmitted to the competent committee for approval. The **Chairman** confirmed that such a procedure would be followed.

2.5 The **delegate of Syria** agreed to the Chairman's suggested procedure for consideration of Document 174 but, speaking on behalf of the Arab group of countries, he advocated caution. Agenda items relating to provisions of the Radio Regulations, such as those in Article 8, Section II, "Categories of Services and Allocations", provided greater scope for country footnotes than agenda items relating to resolutions. In particular, agenda item 1.1, which referred to Resolution 26, only made provision for consideration of deletions, not modifications or additions. Country footnotes were important for the protection of national interests, and such points should therefore be borne in mind.

2.6 The **Chairman** said that she would take it that the Committee accepted the principle that those proposed modifications or additions in Document 174 to which no objection was raised should be regarded as approved, on the understanding that the examination of country footnotes not in conformity with agenda item 1.1 would not set a precedent for future conferences.

2.7 It was so **agreed**.

2.8 The **Chairman** invited the Committee to consider the proposals contained in the Annex to Document 174. She also informed the Committee that the requests for footnote modifications proposed by South Africa in Addendum 2 to Document 71(Rev.1), had been withdrawn.

2.9 The **delegate of Uzbekistan** withdrew the proposals contained in sections a) and b) of the annex to Document 174, namely: MOD S5.175 (proposal UZB/7/7), MOD S5.175 (proposal UZB/7/8), MOD S5.177A (proposal UZB/7/9), MOD S5.175 (proposal UZB/59/4), MOD S5.469 (proposal UZB/7/10), MOD S5.469 (proposal UZB/7/11) and ADD S5.469A (proposal UZB/7/12). He also withdrew MOD S5.99 (proposal UZB/59/2), MOD S5.314 (proposal UZB/59/3) and ADD S5.87A (proposal UZB/59/6), as those three proposals were simply a repetition of proposals included in Document 7.

MOD S5.164 (proposal CZE/77/1), MOD S5.393 (proposal MEX/104/1), MOD S5.99 (proposal UZB/7/6), ADD S5.87A (proposal UZB/7/13), MOD S5.314 (proposal UZB/7/15), MOD S5.477 (proposal KRE/17/7), MOD S5.524 (proposal KRE/17/8), MOD S5.542 (proposal KRE/17/9), MOD S5.429 (proposal KOR/79/2), MOD S5.432 (proposal KOR/79/3), MOD S5.542 (proposal PHI/89/3)

2.10 **Approved**.

MOD S5.323 (proposal ARM/AZE/BLR/GEO/KAZ/UZB/KGZ/RUS/TJK/TKM/UKR/78/1)

2.11 The **delegate of Russia** said that the modification to footnote S5.323 had been proposed by a number of countries in order to clarify the text, which concerned the safety of human life and which in their view came within the framework of agenda item 1.1.

2.12 The **delegate of Germany** said that he could not accept the wording of footnote S5.323 as it stood.

2.13 The **Chairman** suggested that, as the text of footnote S5.323 was going through some editorial changes outside the meeting, discussion of that proposal should be deferred.

2.14 It was so **agreed**.

MOD S5.480 (proposal MEX/104/2)

2.15 The **delegate of Brazil** requested that the name of his country be added to those listed in the footnote. Discussion of this proposal was **deferred**.

MOD S5.259 (proposal KOR/79/1)

2.16 The **delegate of Belgium** said that that MOD S5.259 was one of a number of proposals from which the name of Belgium should be deleted.

2.17 It was so **agreed**.

MOD S5.91 (proposal KRE/17/1), MOD S5.140 (proposal KRE/17/2), MOD S5.152 (proposal KRE/17/3), MOD S5.154 (proposal KRE/17/4), MOD S5.382 (proposal KRE/17/6), MOD S5.276 (proposal KRE/17/10)

2.18 The **delegate of Japan** requested that consideration of those proposals in the Committee be deferred, pending informal discussions between his delegation and the delegation of the Democratic People's Republic of Korea, a request supported by the **delegate of the Democratic People's Republic of Korea**.

2.19 It was so **agreed**.

2.20 The **Chairman** suggested that all those proposals in Document 174 which had been the subject of objections would not be considered further and those for which requests or comments were received should be placed in square brackets for discussion at a later meeting. The points raised would be reflected in her report to the Plenary Meeting.

2.21 It was so **agreed**.

3 Second report of Working Group 5C (Document 172)

3.1 The **Chairman of Working Group 5C** presented Document 172 which reflected the work of Drafting Group 5C-1 regarding spurious emissions. The proposed modifications to Appendix S3 had been approved unanimously by Working Group 5C at its sixth meeting on 5 November 1997. Working Group 5C expected to produce two further documents on spurious emissions, and recommended that the subject should be placed on the agenda of WRC-99. Work on the other issues to be considered by the Working Group would be facilitated by the setting up of sub-working groups, to which he hoped there would be no objection. The **Chairman** confirmed the need for increased use of such informal groups as the work of the Conference progressed.

3.2 Document 172 was **approved**.

4 Second report of Working Group 5B (Document 188)

4.1 The **Chairman of Working Group 5B**, reporting on the progress of the Group's two sub-working groups, said that Sub-Working Group 5B-1 would probably be able to complete its work on issues relating to the mobile-satellite service (MSS) below 1 GHz at its forthcoming meeting. Work on issues relating to MSS in the 1 - 3 GHz range was still under way in Sub-Working Group 5B-2. Ad hoc Group 5 had reached agreement on the power flux-density limits for allocations around 7 GHz and 15 GHz; the results of its work would be published shortly. It had also been decided that no change was required as regards the extension and shifting of MSS allocations around 2 GHz. Although Sub-Working Group 5B-2 had made progress in many areas, much work remained to be done in order to resolve outstanding issues before the end of the week. Despite extensive debate, it had not been possible to reach a consensus on non-GSO MSS feeder links in the 19 and 29 GHz ranges, and the matter would thus be referred to Committee 5 for further discussion. As far as the non-GSO fixed-satellite service (FSS) was concerned, it had been unanimously agreed that there was a need for 2 x 500 MHz of spectrum for such applications in the 18.8 - 19.3 GHz band and its associated band, but further discussion was required on the regulatory provisions relating to different sharing methods (e.g. application of Resolution 46 (WRC-95), proposals in Document 5 or RR S22.2) and ad hoc Group 4 had been set up for that purpose. On the basis of decisions taken so far in Sub-Working Groups 5B-1 and 5B-2, it was proposed that no change should be made to the frequency ranges listed in Document 188, which was submitted to Committee 5 for approval.

4.2 The **Chairman** questioned the need for the words "for modification", given that no change to the frequency ranges in question was proposed.

4.3 The **delegate of the United Kingdom** said that not all relevant decisions taken by Working Group 5B were reflected in the document and sought clarification in that regard.

4.4 The **Chairman** said that a report on the outcome of discussions on the 2 GHz issue was being drafted and would be published shortly.

4.5 The **delegate of the United States** pointed out that some of the frequency ranges referred to in Document 188 were being considered by other working groups too. In order not to pre-empt any decision they might take, it would be preferable not to approve the document at the present meeting.

4.6 The **delegate of Russia** suggested that it should be made clear that the proposals related to agenda item 1.9.1.

4.7 The **Chairman**, after endorsing the suggestion by the delegate of Russia, suggested that the Committee should simply note the document for the time being, as output from Working Group 5B.

4.8 It was so **agreed**.

5 Second report of Working Group 5A (Document 182)

5.1 The **Chairman of Working Group 5A** said that, although the proposals contained in Document 182 related mainly to *resolves* 3 of Resolution 712 (Rev.WRC-95), Working Group 5A had made further progress in its consideration of Resolution 712. With regard to *resolves* 4, it had agreed that allocations were required in the 8 025 - 8 400 MHz frequency range. A drafting group had been set up to prepare a country footnote covering requirements for the protection of certain fixed systems from geostationary earth exploration-satellite systems, along with a draft resolution urging ITU-R to study the sharing situation as a matter of urgency. Regarding the 18.6 - 18.8 GHz frequency range, an ad hoc Group had been set up to discuss ways and means of helping the Conference to take a decision on the important passive sensing band, in view of the wish expressed by the Chairman of the Conference and the Chairman of Committee 5 that such matters should not be deferred to a future conference. Under *resolves* 5, agreement had been reached on allocations in the 35 GHz and 94 GHz ranges for active sensors. It might, however, be necessary in the 35.5 - 36 GHz range to provide protection for some fixed systems that were allocated by footnote. In several countries the 33.4 - 36 GHz band was allocated to the fixed service on a primary basis by RR S5.549; a footnote relating to the earth exploration-satellite service allocations in the 35.5 - 36 GHz band might therefore be needed to protect those fixed systems. He was drawing the matter to the attention of Committee 5 because the decisions of Working Group 5C relating to agenda item 1.9.6 would need to be taken into account. A drafting group had been set up to harmonize proposals submitted under agenda item 1.9.4.3 and a draft consolidated text would be submitted to the next meeting of the working group for approval. In connection with agenda item 1.9.4.2, a drafting group had been set up to prepare a footnote on a proposed allocation in order to protect fixed service systems operating in the 26 GHz range.

5.2 Referring to Document 182, he said that the following changes should be made: [ADD S5.334] and "[(and South Africa)]" in ADD S5.335 should be deleted following the withdrawal of Addendum 2 to Document 71(Rev.1); a reference to S5.448A should be added in the table for the frequency range 5 250 - 5 255 MHz; and in ADD S5.448A the frequency band should be amended to read 5 250 - 5 350 MHz.

5.3 He then read aloud a statement by IUCAF, relating to MOD 2 670 - 3 300 MHz, for inclusion in the summary record:

> "IUCAF does not object to a worldwide allocation of the 3 100 - 3 300 MHz band for active space-borne sensor applications for the earth exploration-satellite and space research services.
>
> IUCAF requests that operations in this band by the earth exploration-satellite and space research services start at the bottom end of the band and that the earth exploration-satellite

and space research operations be coordinated with stations of the radio astronomy service operating in the 3 260 - 3 352.5 MHz bands."

5.4 The **Chairman** invited the Committee to consider the proposals in Document 182, one by one.

MOD 890 - 1 240 MHz

5.5 Approved.

MOD 1 240 - 1 452 MHz, ADD S5.332, SUP S5.333, ADD S5.335

5.6 The **Chairman of Working Group 5A** recalled that the frequency range 1 240 - 1 452 MHz had been under consideration by Working Group 5C for the implementation of wind profiler radars. However, as footnote ADD S5.332 gave protection to the radiolocation service, which supported wind profiler radars, it might well be possible to move forward on the matter without awaiting a decision from Working Group 5C. He suggested that the new footnotes drafted by Working Group 5A should be harmonized by the Editorial Committee.

5.7 The **Chairman** confirmed that any additional footnotes or references to resolutions on wind profilers could be added at a later stage.

5.8 On that understanding, MOD 1 240 - 1 452 MHz, ADD S5.332, SUP S5.333 and ADD S5.335 were **approved**.

MOD 2 670 - 3 300 MHz, MOD 4 500 - 5 470 MHz, ADD S5.447D, ADD S5.448A, MOD 4 500 - 5 470 MHz, ADD S5.448B, MOD 12.5 - 14.25 GHz, SUP S5.498, ADD S5.498A, ADD S5.501A

5.9 Approved.

MOD 14.8 - 17.3 GHz, ADD S5.513A

5.10 The **delegate of the Netherlands** queried the need for the word "currently" in ADD S5.513A. The **Chairman of Working Group 5A** said that the wording should be drawn to the attention of the Editorial Committee.

5.11 The **delegate of the Islamic Republic of Iran** suggested that a reference to protection from harmful interference should be included in ADD S5.513A. The **Chairman of Working Group 5A** acknowledged that there was a lack of uniformity in the wording of footnotes and suggested that the Editorial Committee should be consulted on how best to refer to the protection of existing services. The footnotes could then be harmonized throughout. Endorsing that comment, the **Chairman** added that the attention of the Editorial Committee should be drawn specifically to the suggestion made by the delegate of the Islamic Republic of Iran.

5.12 Subject to editorial amendment, MOD 14.8 - 17.3 GHz and ADD S5.513A were **approved**.

The meeting rose at 1105 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 205-E
7 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

FOURTH REPORT OF WORKING GROUP 5A TO COMMITTEE 5

The following proposals for modification to the Radio Regulations were adopted by the Working Group and are submitted for your consideration.

1.

MOD

GHz
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
50.2 – 50.4	EARTH EXPLORATION-SATELLITE (passive) ~~FIXED~~ ~~MOBILE~~ SPACE RESEARCH (passive) MOD S5.340 ADD S5.555A	

MOD

GHz
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
51.4 – ~~54.25~~52.6	~~EARTH EXPLORATION-SATELLITE (passive)~~ FIXED MOBILE ~~SPACE RESEARCH (passive)~~ ~~S5.340~~ S5.556	
~~51.4~~52.6 – 54.25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) MOD S5.340 S5.556	

MOD

GHz
54.25 – 71

Allocation to Services		
Region 1	Region 2	Region 3
54.25 – ~~58.2~~55.78	EARTH EXPLORATION-SATELLITE (passive) ~~FIXED~~ INTER-SATELLITE ADD S5.556A ~~MOBILE S5.558~~ SPACE RESEARCH (passive) ~~S5.557~~ ADD S5.557A	
~~54.25 58.2~~55.78 – 56.9	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556A MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557	
~~54.25 58.2~~56.9 – 57	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556B MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557	
~~54.25~~57 – 58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556A MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557	
58.2 – 59	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) ~~S5.340~~ S5.556	

Allocation to Services		
Region 1	Region 2	Region 3
59 – ~~64~~59.3	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) FIXED INTER-SATELLITE ADD S5.556A MOBILE MOD S5.558 RADIOLOCATION S5.559 ~~S5.138~~	
59.3 – 64	FIXED INTER-SATELLITE MOBILE MOD S5.558 RADIOLOCATION S5.559 S5.138	
64 – 65	~~EARTH EXPLORATION-SATELLITE (passive)~~ ~~SPACE RESEARCH (passive)~~ FIXED INTER-SATELLITE MOBILE except aeronautical mobile ~~S5.340~~ S5.556	
65 – 66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH INTER-SATELLITE ~~Fixed~~FIXED ~~Mobile~~MOBILE except aeronautical mobile	
66 – 71	MOBILE S5.553 MOD S5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE INTER-SATELLITE S5.554	

MOD **S5.340** All emissions are prohibited in the following bands:

1 400 - 1 427 MHz,

2 690 - 2 700 MHz except those provided for by Nos. **S5.421** and **S5.422**,

10.68 - 10.7 GHz except those provided for by No. **S5.483**,

15.35 - 15.4 GHz except those provided for by No. **S5.511**,

23.6 - 24 GHz,

31.3 - 31.5 GHz,

31.5 - 31.8 GHz in Region 2,

48.94 - 49.04 GHz from airborne stations,

50.2 - 50.4 GHz[1], except those provided for by No. **S.555A**,

~~51.4~~52.6 - 54.25 GHz,

~~58.2 - 59 GHz,~~

~~64 - 65 GHz,~~

86 - 92 GHz,

105 - 116 GHz,

140.69 - 140.98 GHz from airborne stations and from space stations in the space-to-Earth direction,

182 - 185 GHz except those provided for by No. **S5.563**,

217 - 231 GHz.

---

[1] The allocation to the earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2 - 50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands.

ADD **S5.555A** The band 50.2 - 50.4 GHz is also allocated, on a primary basis to the fixed and mobile services until 1 July 2000.

ADD **S5.556A** Use of the bands 54.25 - 56.9 GHz, 57.0 - 58.2 GHz and 59.0 - 59.3 GHz by the inter-satellite service is limited to satellites in the geostationary satellite orbit. The single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed -147 dB(W/m^2/100 MHz) for all angles of arrival.

ADD **S5.556B** Use of the band 56.9 - 57 GHz by inter-satellite systems is limited to links between satellites in geostationary satellite orbit and transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed -147 dB(W/m^2/100 MHz) for all angles of arrival.

ADD **S5.557A** *Additional allocation:* in Japan, the band 54.25 - 55.78 GHz is also allocated to the mobile service on a primary basis for low density use.

MOD **S5.557** *Additional allocation:* in Japan ~~and the United Kingdom~~, the band ~~54.25~~55.78 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.

MOD **S5.558** In the bands ~~54.25~~55.78 - 58.2 GHz, 59 - 64 GHz, 66 - 71 GHz, 116 - 134 GHz, 170 - 182 GHz and 185 - 190 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **S5.43**).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

CHAIRMAN OF WORKING GROUP 5C

High altitude platform stations (agenda item 1.9.6)

The attached proposals were adopted by WG 5C and are submitted for your consideration.

1.

ARTICLE S1

Terms and Definitions

ADD S1.X *High Altitude Platform Station*: A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.

2.

ARTICLE S4

Assignment and Use of Frequencies

ADD S4.15A Transmissions to or from high altitude platform stations shall be limited to bands specifically mentioned in Article **S5**.

3.

ARTICLE S5

Frequency Allocations

GHz
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
47.2 – 50.2	FIXED FIXED-SATELLITE (Earth-to-space) S5.552 MOBILE S5.149 S5.340 ADD S5.552A S5.555	

ADD **S5.552A** The allocation to the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is subject to the provisions of Resolution [COM5-7].

4.

ARTICLE S11

Notification and Recording of Frequency Assignments[1]

ADD **S11.26** Notices relating to assignments for high altitude platform stations in the fixed service in the 47.2 - 47.5 GHz and 47.9 - 48.2 GHz bands shall reach the Bureau not earlier than five years before, preferably not later than three months before, and in no case later than one month before the assignments are brought into use.

MOD **S11.24** Notices relating to assignments for stations of terrestrial services, except for those referred to in No. **S11.25** or **ADD S11.26**, shall reach the Bureau not earlier than three months before, preferably not later than one month before, and in no case later than one month after the assignments are brought into use.

5.

ADD

DRAFT NEW RESOLUTION [COM5-7]

USE OF THE BANDS 47.2 - 47.5 GHz AND 47.9 - 48.2 GHz BY HIGH ALTITUDE PLATFORM STATIONS IN THE FIXED SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 47.2 - 50.2 GHz is allocated to the fixed, mobile and fixed-satellite services on a co-primary basis;

b) that WRC-97 has made provision for operation of high altitude platform stations, also known as stratospheric repeaters, within the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz;

c) that the ITU has among its purposes "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. 6 of the Constitution of the ITU (Geneva, 1992));

d) that systems based on new technologies using high altitude platforms will be able to provide high capacity, competitive services to urban and rural areas;

e) that high altitude platform systems are in an advanced stage of development and some countries have notified such systems to the ITU;

f) that the Radio Regulations Board issued a provisional rule of procedure concerning notification periods in **S11.24** (RR 1228) in February 1997, pending a final decision by WRC-97;

g) that in spite of the urgency attached to the development of such systems, technical, sharing and regulatory issues should be studied in order to achieve the most efficient use of the spectrum available for these systems;

h) that technical studies are required in order to ascertain the extent to which sharing of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is feasible between systems using high altitude platforms in the fixed service and those systems in the fixed, fixed-satellite and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;

i) that the radio astronomy service has primary allocations in the bands 42.5 - 43.5 GHz and 48.94 - 49.04 GHz;

j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude relay platforms and the sharing feasibility between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4);

k) that No. **S5.552** urges administrations to reserve fixed-satellite service use of the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service and that preliminary ITU-R studies indicate that high altitude platforms stations in the fixed service could share with broadcasting-satellite feeder links;

l) that the development of services using high altitude platforms in these bands requires major investment and that the manufacturers and operators should be given the confidence to make the necessary investment in these applications,

resolves

1 to urge administrations to facilitate coordination between high altitude platforms in the fixed service operating in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz and other co-primary services in their territory and adjacent territories;

2 that, on a provisional basis, the procedures of Article **S9** shall be used for coordination between satellite systems and high altitude platform systems;

3 to request the ITU-R to urgently carry out studies on the appropriate technical sharing criteria for the situations referred to in *considering* h), with priority given to the sharing with other systems in the fixed and fixed-satellite services, in particular the determination of the appropriate geographic separation from feeder links in the broadcasting-satellite service;

4 that WRC-99 review the results of these studies and consider the possible refinement of the regulatory provisions that might facilitate a broader application of these high altitude platform technologies,

instructs the Director

1 that notices concerning high altitude relay stations that were received by the Bureau prior to 27 October 1997, and provisionally recorded in the ITU Master International Frequency Register in accordance with the provisional rule of procedure issued by the Radio Regulations Board shall be maintained;

2 that from 22 November 1997, and pending the review of the sharing studies in *considering* h) and the review of the notification process by WRC-99, the Bureau shall accept notices in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz only for high altitude platform stations in the fixed service and for feeder links for the broadcasting-satellite service, and shall inform the notifying administrations accordingly.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

CHAIRMAN OF WORKING GROUP 5C

The attached proposals concerning agenda item 1.9.3 - Taking into account the needs of other services to which the relevant frequency bands are already allocated: Recommendation 621 (WARC-92) "Implementation of Wind Profiler Radars at frequencies near 50 MHz, 400 MHz and 1 000 MHz" were adopted by WG 5C and are submitted for your consideration.

1

ARTICLE S5

MOD

MHz
40.98 – 68

Allocation to Services		
Region 1	Region 2	Region 3
44 – 47	FIXED MOBILE S5.162 ADD S5.162A	
47 – 68 BROADCASTING	**47 – 50** FIXED MOBILE	**47 – 50** FIXED MOBILE BROADCASTING
	50 – 54 AMATEUR S5.166 S5.167 S5.168 S5.170	
	54 – 68 BROADCASTING Fixed Mobile S5.172	**54 – 68** FIXED MOBILE BROADCASTING
S5.163 S5.164 S5.165 S5.169 S5.171 ADD S5.162A		

ADD S5.162A *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, Netherlands, Poland, Portugal, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Switzerland and Turkey, the band 46 - 68 MHz is also allocated to the radiolocation service on a secondary basis. The use is limited to the operation of wind profiler radars in accordance with Resolution [COM5-5] (WRC-97).

2

MOD

MHz
470 – 890

Allocation to Services		
Region 1	Region 2	Region 3
470 – 790 BROADCASTING S5.149 S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312 ADD S5.291A	**470 – 512** BROADCASTING Fixed Mobile S5.292 S5.293	**470 – 585** FIXED MOBILE BROADCASTING S5.291 S5.298

ADD S5.291A *Additional allocation:* in Germany, Austria, Denmark, Estonia, Finland, the Netherlands, the Czech Republic, Sweden and Switzerland, the band 470 - 494 MHz is also allocated to the radiolocation service on a secondary basis. Its use is limited to the operation of wind profiler radars in accordance with Resolution [COM5-5] (WRC-97).

3

MHz
1 240 – 1 452

Allocation to Services		
Region 1	Region 2	Region 3
1 240 – 1 260	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.329 Amateur S5.330 S5.331 S5.333 S5.334	
1 260 – 1 300	RADIOLOCATION Amateur S5.282 S5.330 S5.331 S5.333 S5.334	

4

DRAFT RESOLUTION [COM5-5] (WRC-97)

IMPLEMENTATION OF WIND PROFILER RADARS

The World Radiocommunication Conference (Geneva, 1997),

having noted

a request to the ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars,

considering

a) that wind profiler radars are vertically directed Doppler radars exhibiting characteristics similar to radiolocation systems;

b) that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;

c) that it is necessary to use frequencies in different ranges in order to have options for different performance and technical characteristics;

d) that in order to conduct measurements up to a height of 30 km it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km) respectively;

~~d~~e) that some administrations have either already deployed, or plan to expand their use of wind profiler radars in operational networks for studies of the atmosphere and to support weather monitoring, forecasting and warning programs;

~~e~~f) that the ITU Radiocommunication Study Groups have studied the technical and sharing considerations between wind profiler radars and other services allocated in bands near 50 MHz, 400 MHz and 1 000 MHz,

considering further

a) that some administrations have addressed this matter nationally by assigning frequencies for use by wind profiler radars in existing radiolocation bands or on a non-interference basis in other bands;

b) the work of the Voluntary Group of Experts on the Allocation and Improved Use of the Radio Frequency Spectrum and Simplification of the Radio Regulations supports increased flexibility in the allocation of frequency spectrum,

noting in particular

a) that wind profilers operating within the 400.15 - 406.0 MHz meteorological aids service interfere with satellite emergency position-indicating radio beacons operating in the 406.0 - 406.1 MHz mobile-satellite service, which is used under the Table of Frequency Allocations footnote **S5.266**;

b) that under the Table of Frequency Allocations footnote **S5.267**, any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited,

resolves

1 to urge administrations to implement wind profiler radars as radiolocation service systems in the following bands, giving due regard to the potential for incompatibility with other services and assignment to stations within these services, thereby taking due account of the principle of geographical separation, in particular with regard to neighbouring countries and keeping in mind the category of service which each of these services has:

46 - 68 MHz in accordance with **S5.162A**

440 - 450 MHz

470 - 494 MHz in accordance with **S5.291A**

904 - 928 MHz in Region 2 only

1 270 - 1 295 MHz

1 300 - 1 375 MHz;

1a) in case compatibility between wind profiler radars and other radio applications operating in the band 440 - 450 MHz or 470 - 494 MHz cannot be achieved, the bands 420 - 435 MHz or 438 - 440 MHz could be considered for use;

2 to urge administrations to implement wind profiler radars in accordance with Recommendations ITU-R M.1226, ITU-R M.1085-1 and ITU-R M.1227 for the frequency bands around 50 MHz, 400 MHz and 1 000 MHz respectively;

3 to urge administrations not to implement wind profiler radars in the band 400.15 - 406 MHz; and

4 to urge administrations currently operating wind profiler radars in the band 400.15 - 406.0 MHz to discontinue them as soon as possible,

instructs the Secretary-General

to bring this Resolution to the attention of the ICAO, IMO and WMO.

5 Recommendation 621 (WARC-92) is recommended to be suppressed.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 208-E
10 November 1997
Original: English

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COMMITTEE 5

NOTE BY THE CHAIRMAN OF COMMITTEE 5

DATE OF ENTRY INTO FORCE OF 2 GHz MSS ALLOCATIONS IN REGION 2

When considering Document 197, the issue of the date of entry into force of the 2 GHz regional MSS allocations for Region 2 was not finalized. Footnote S5.389C was left in square brackets. This issue has now been addressed and the following two footnotes are submitted for consideration of Committee 5. They are to be inserted into the Table of Frequency Allocations for Region 2 for the bands 2 010 - 2 025 and 2 160 - 2 170 MHz.

MOD S5.389C The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January ~~2005~~2002 and is subject to coordination under Resolution **46 (Rev.WRC-95)/**No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

ADD S5.390 In Argentina, Brazil, Colombia, Cuba and Suriname the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite services shall not cause harmful interference to stations in the fixed and mobile services before 1 January 2005. After this date the use of these bands is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

NOTE BY THE CHAIRMAN OF COMMITTEE 5

CONSIDERATION OF MSS AND FSS ISSUES

This document includes the changes agreed in the fourth meeting of Committee 5, and is based on Document 197.

NOC

MHz
1 700 – 2 010

Allocation to Services		
Region 1	Region 2	Region 3
1 980 – 2 010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 S5.389A S5.389B S5.389F	

MHz
2 010 – 2 170

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**2 010 – 2 025** FIXED MOBILE S5.388	**2 010 – 2 025** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 [S5.389C] S5.389D S5.389E	**2 010 – 2 025** FIXED MOBILE S5.388
	…		
NOC	**2 160 – 2 170** FIXED MOBILE S5.388 S5.392A	**2 160 – 2 170** FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 [S5.389C] S5.389D S5.389E	**2 160 – 2 170** FIXED MOBILE S5.388

NOC

MHz
2 170 – 2 450

Allocation to Services		
Region 1	Region 2	Region 3
2 170 – 2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 S5.389A S5.389F S5.392A	

MOD

GHz
18.6 – 20.2

Allocation to Services		
Region 1	Region 2	Region 3
19.3 – 19.7	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) S5.523B MOD S5.523C ADD S5.523C1 MOD S5.523D MOBILE ~~S5.523C~~	

MOD

GHz
27 – 29.9

Allocation to Services		
Region 1	Region 2	Region 3
29.1 – 29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOD S5.523C ADD S5.523C1 MOD S5.535A S5.539 MOD S5.541A MOBILE Earth Exploration-Satellite (Earth-to-space) S5.541 S5.540	

MOD S5.523C ~~The use of the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz by the FSS shall be in accordance with Resolution **120 (WRC-95)**.~~No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995.

[ADD S5.523C1 No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.6 - 19.7 GHz and 29.4 - 29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 21 November 1997.]

MOD **S5.523D** The use of the band 19.3 - 19.~~6~~7 GHz (space-to-Earth) by GSO/FSS systems and by the feeder links for non-geostationary satellite systems in the MSS is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A**, but not subject to the provisions of No. **S22.2**. The use of this band for other non-GSO/FSS, or for the cases indicated in No. **MOD S5.523C** [and **ADD S5.523C1**], systems is not subject to the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**.]

MOD **S5.535A** The use of the band 29.1 - 29.~~4~~5 GHz (Earth-to-space) by the FSS is limited to GSO satellite systems and feeder links to non-GSO satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A**, but not subject to the provisions of No. **S22.2**, except as indicated in No. **MOD S5.523C** [and **ADD S5.523C1**] where such use is not subject to the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and shall continue to be subject to Articles **11/S9** (except No. **S9.11A**) and **13/S11** procedures, and to the provisions of No. **S22.2**.

MOD **S5.541A** Feeder links of non-GSO/MSS networks and GSO/FSS networks operating in the band 29.1 - 29.~~4~~5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix **S4** coordination information is considered as having been received by the Bureau after 17 May 1996 and until it is changed by a future competent world radiocommunication conference. Administrations submitting Appendix **S4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by the ITU-R (see Resolution **121 (WRC-~~95~~97)**).

[SUP RESOLUTION 120 (WRC-95)

Reasons: As Resolution 120 (WRC-95) is no longer required it is proposed that it be removed from the Radio Regulations.

Consequential changes may be necessary to Resolutions 119, 121 and associated footnotes.]

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 209-E 14 November 1997 Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

MINUTES

OF THE

THIRD PLENARY MEETING

Please replace paragraphs 5.2 and 5.5 by the following text:

5.2 Reviewing the work of the working groups, he said that Working Group 4A had reached decisions on most of the matters concerning Articles S13 and S14, and on Appendix S4. It was awaiting the output of other Working Groups in order to conclude its work on Appendix S5. Work in connection with Resolution 71 (WRC-95) had been completed, and consideration of matters concerning Articles S9 and S11 had been deferred pending the conclusions of Working Group 4D. An ad hoc Group had been set up to deal with incorporation by reference.

5.5 In Working Group 4D, which was responsible for sensitive planning issues, the outstanding matters related to Annex 7 on orbital positions, incompatibility problems, Resolution 506 (Rev.Orb-88) and the use of the BSS bands for non-GSO FSS systems, the possibility of completely new planning and the regulatory approach concerning Article 4 of Appendices 30 and 30A.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 209-E
10 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

MINUTES

OF THE

THIRD PLENARY MEETING

Thursday, 6 November 1997, at 1610 hours

Chairman: Mr. R. SMITH (Australia)

Subjects discussed		**Documents**
1	Oral report by the Vice-Chairman of Committee 2	-
2	Oral report by the Chairman of Committee 3	-
3	Oral report by the Chairman of Working Group PLEN-1	-
4	Oral report by the Chairman of Working Group PLEN-2	-
5	Oral report by the Chairman of Committee 4	-
6	Oral report by the Chairman of Committee 5	-

1 Oral report by the Vice-Chairman of Committee 2

1.1 The **Vice-Chairman of Committee 2** said that the Working Group established following the first meeting of Committee 2 had examined 88 sets of credentials deposited with the Secretariat and had noted that 85 of them were in order. As at 6 November, 127 countries were represented at the Conference, and 94 of them had submitted their credentials. The Working Group would hold a further meeting to consider the remaining credentials already submitted. He urged delegations which had not yet submitted their credentials to do so as soon as possible.

2 Oral report by the Chairman of Committee 3

2.1 The **Chairman of Committee 3** said that, in order to facilitate analysis of the financial situation and of the expenditures resulting from decisions of the Conference, a Joint Working Group COM 3/PLEN-1 had been established to expedite the transmission of information and documents relating to decisions by WRC-97 with financial implications. The Joint Working Group was also engaged in evaluating additional expenditure resulting from decisions of the Conference.

3 Oral report by the Chairman of Working Group PLEN-1

3.1 The **Chairman of Working Group PLEN-1** said that the Working Group had considered all the documents referred to it which did not require contributions by Committees 4 and 5 and had identified 12 items for WRC-99, ten items for WRC-01 and three items requiring urgent consideration. Those items would be circulated in Document DT/70, Annex 1 of which would contain certain passages in square brackets, which merely served to indicate that the Working Group had not managed to bring those passages entirely into agreement with all the comments received from delegations. The Working Group had also established an ad hoc Group to consider Annex 1 of the report submitted by the Director of the BR under item 8.1 of the agenda (Document 27), and that ad hoc Group had prepared a report listing all the obsolete resolutions and recommendations that were recommended for deletion, together with amendments of an editorial nature intended to bring texts into line with the existing structure of ITU. However, one delegation had expressed doubt as to the justification for such work vis-à-vis the agenda of the Conference. The Plenary was therefore required to express its view on that matter. If the work of the ad hoc Group were accepted, the result would be a reduction in volume of the order of 150 pages and a number of resolutions would be clearer for readers familiar with ITU only in its present structure. The Working Group would then turn its attention to Document 122 (Report from the Radiocommunication Assembly) which contained two resolutions for consideration. Lastly, Document 112, submitted by Canada to the Plenary, could be considered by the Working Group under item 8.2 of the agenda.

3.2 The **Chairman** proposed that Document 112 be referred officially to Working Group PLEN-1.

3.3 It was so **agreed**.

3.4 The **Chairman** said that he had been very impressed by the work already done by the ad hoc Group mentioned by the Chairman of Working Group PLEN-1 and that he saw it as the logical follow-up to the report presented by the Director of the BR under agenda item 8.1 He proposed that the Plenary should agree that that work, which was very useful to ITU-R, be completed.

3.5 The **delegate of Germany** was concerned that the work of the ad hoc Group might give rise to further discussions which would not necessarily be covered by the agenda and would unduly increase the workload of the Conference. As the coordinator for the CEPT countries on that item within Working Group PLEN-1, he had already received a number of comments which differed from the initial analysis by the ad hoc Group.

3.6 The **Chairman of Working Group PLEN-1** pointed out that the ad hoc Group had practically finished its work and that the substance of its report was consistent in all respects with the recommendations from the Director of the BR. The report contained nothing that was really likely to give rise to controversy.

3.7 The **Chairman** agreed that the Conference agenda was indeed a heavy one, but observed that the work of the ad hoc Group could result in substantial savings and that it would not necessarily take too long to adopt its conclusions. The Conference should benefit from the expertise that had gone into the work, and it would therefore be appropriate to allow the ad hoc Group to complete its task, even if it became necessary to break off consideration of it in the Plenary if that ultimately gave rise to too many problems. In any event, Working Group PLEN-1 expected to complete its work within the time limit set in Document 107(Rev.1).

3.8 The **delegate of Senegal** said that the Working Group had indeed looked at the criteria for the inclusion of items on the agendas of future conferences, particularly from the point of view of their justification, but that those criteria would have to be evaluated. Given the extremely full schedule, it would be useful if the Working Group were to consider not only the content of Document DL/7 but also the work required in order to include the items on the agenda. Similarly, attention should be given to the question of drawing up financial criteria and defining priorities in that connection.

3.9 The **Chairman** said that the Steering Committee and Joint Working Group COM 3/PLEN-1 would consider the two points raised by the delegate of Senegal.

4 Oral report by the Chairman of Working Group PLEN-2

4.1 The **Chairman of Working Group PLEN-2** recalled the three major categories of question around which the work of the Group revolved. In the first category, work had been completed in connection with the streamlining and simplification of the advance publication procedure, and had been 90-95% completed with respect to the statutory time limits for the bringing into service of a satellite network. At its next meeting the Group should complete its work on the last items pending, which concerned the situation of networks already in the pipeline, with respect to the extension of the time limits, after which all the results of the Group's work would be transmitted to Committee 4 for drafting of the corresponding regulatory texts. The second category of questions, which concerned the "due diligence" principle, was so complex that the Working Group had unfortunately been unable to keep to the time limit it had been set. It would be inclined to prefer the administrative approach to that principle, but could not take a decision until a detailed comparative analysis had been made of that approach and the financial approach. It was to be hoped that a compromise would be achieved on all the essential features of the administrative approach so that the Group could choose between the two approaches. Once that decision had been taken, a drafting group would prepare a final regulatory text on the "due diligence" principle for transmission to the Plenary. The last category of questions covered all the other recommendations given in Document 8, on which agreement might be reached at the next meeting of the Working Group, in which case it would only remain to draft the corresponding texts for the Plenary.

5 Oral report by the Chairman of Committee 4

5.1 The **Chairman of Committee 4** reported that some of the parameters relating to the planning exercises for Stages 1 and 2 for the broadcasting-satellite service (BSS) plan and for the associated feeder-link plan had been defined, and that 2000 hours on Monday, 3 November had been set as the deadline for the receipt of information on the coordination of systems under Article 4 of Appendices 30 and 30A for which the entry into service had been confirmed to the BR. The Committee's decisions reflected in Document 187 had been taken unanimously, and would therefore not need to be submitted to the Plenary; however, he sought precise guidance in that regard. Some issues still remained pending. The Committee had not yet been able to address the question of the agenda for WRC-99, having focused its attention first and foremost on urgent issues.

5.2 Reviewing the work of the working groups, he said that Working Group 4A had reached decisions on most of the matters concerning Articles S13 and S14, and on Appendix S4. It was awaiting the output of other ad hoc Groups in order to conclude its work on Appendix S5. Work in connection with Resolution 71 (WRC-95) had been completed, and consideration of matters concerning Articles S9 and S11 had been deferred pending the conclusions of Working Group 4D. An ad hoc Group had been set up to deal with incorporation by reference.

5.3 Working Group 4B had completed its work under agenda items 1.6.2 and 1.6.4. Studies on digital technology under item 1.6.5 were in progress. Aspects relating to item 4 on the review of resolutions and recommendations should be finalized shortly.

5.4 In Working Group 4C, consideration of the Article 12 procedures had more or less been completed and an ad hoc Group was still investigating the question of bringing forward the date of availability of the additional bands allocated by WARC-92, an area in which all delegations were invited to lend assistance.

5.5 In Working Group 4D, which was responsible for sensitive planning issues, the outstanding matters related to orbital positions, incompatibility problems, Resolution 506 (Rev.Orb-88) and the use of the BSS bands for non-GSO FSS systems, the possibility of completely new planning and Appendices 30 and 30A.

5.6 The **delegate of Syria** recalled that, at a previous conference, the Arab group had formulated a reservation concerning the number of channels allotted to Region 1. The Syrian Administration requested that the planning exercise to be conducted by the present Conference should be based on a limit of ten channels for Region 1 countries, including new countries, rather than on the basis of five channels. Supporting that view, the **delegate of Saudi Arabia** emphasized that the issue should be given very careful consideration. The **Chairman of Committee 4** said that, in the draft Plan, provision was made for five channels for Region 1 and four channels for Region 3; discussions on the subject would continue.

5.7 The **delegate of the Islamic Republic of Iran**, raising the question of the approval of work carried out in Committee 4, stated that the main issues had to be brought back before the Plenary for approval. The **Chairman of Committee 4** explained that the decisions taken unanimously were those reflected in Document 187, which had been drawn up on the basis of Document 160 and its Addendum 1. The **Chairman** said that it was a stage-by-stage process, and suggested that only matters on which there had not been unanimity should be submitted to the Plenary.

5.8 It was so **agreed**.

6 Oral report by the Chairman of Committee 5

6.1 The **Chairman of Committee 5** said that Working Group 5A was making progress and that some of its conclusions would be brought before the Plenary for approval in Document 184. Documents had also been approved on frequency allocations in the 5 GHz, 1.2 GHz, 13 GHz and 17 GHz range, and would be submitted to the Plenary in due course. Working Group 5A was continuing its work on questions relating to the 18 GHz and 26 GHz bands and should have completed its task by the end of the week.

6.2 In Working Group 5B, which was responsible for mobile-satellite (MSS) and fixed-satellite (FSS) services, progress had been made in the areas of MSS allocations below 1 GHz and in the 1 - 3 GHz range, non-GSO MSS feeder links and non-GSO FSS networks. Discussion continued on a number of sensitive issues, such as the allocation of additional frequencies for MSS below 1 GHz, additional MSS requirements in the 1.6 GHz range, MSS spectrum requirements in the 1 - 3 GHz range and non-GSO FSS networks. Working Group 5B had on the whole considered that No. S22.2 should not apply to the additional 2 x 100 MHz allocated in the Ka band for non-GSO MSS feeder links, with certain exceptions, or to the 2 x 500 MHz allocation to non-GSO FSS in the Ka band.

6.3 Working Group 5C had completed its work on spurious emissions and wind profiler radars; discussions were continuing on the subject of frequency bands for high-density fixed systems.

6.4 On the question of footnotes, she pointed out that the Committee had received a number of proposals relating not only to the deletion of country names from footnotes or the deletion of footnotes, but also for the addition of footnotes. The Committee had therefore divided such proposals into two categories, the first containing proposals in compliance with agenda item 1.1 and the second containing all others. It had been agreed to approve such proposed modifications of footnotes when no administrations had any objections. However, as that principle had been accepted only on an exceptional basis, it was important to provide future conferences with clear instructions on how to deal with the question of footnotes. The Plenary should draw up some guidelines to that end. In conclusion, she said that the working groups had suggested, *inter alia*, that the agendas of forthcoming conferences should be more clearly targeted and that Resolution 26 (WRC-95) should be revised. Committee 5's working groups should complete their work relating to the agenda of WRC-99 for referral to Working Group PLEN-1 towards the middle of the following week.

6.5 The **Chairman** said that, given the limited time available to the Conference, Committee 5 should only examine, on an exceptional basis, the proposals to modify footnotes which had already been formally submitted. That being an exceptional measure, Working Group PLEN-1 should also be instructed to reflect on how proposals concerning footnotes might be handled at future conferences.

6.6 The **delegate of Syria** also believed that it was preferable to refer the question of footnotes to the next conference through Working Group PLEN-1. The exceptional procedure adopted by Committee 5 was highly judicious. Experience in ITU had shown that footnotes were extremely useful, and Resolution 26 (WRC-95), while encouraging the deletion of footnotes, had not ruled out the possibility for administrations to request the addition of new footnotes. A WRC could indeed take up a question which was not included on its agenda, as had already been done at the previous conference. In conclusion, he was opposed to the Chairman's suggestion that proposals to amend footnotes which had not yet been submitted to Committee 5 be refused. He asked that such proposals should be accepted until the end of the Conference.

6.7 The **delegate of Germany** said that it would be better to adhere to Committee 5's decision not to examine new footnote proposals. The procedure to be followed in examining proposals concerning footnotes should be discussed by Working Group PLEN-1 in the light of the principles adopted by VGE and WRC-95, thereby avoiding the adoption of new footnotes or amendments to footnotes on subjects which came outside the scope of the agenda.

6.8 The **delegate of Syria** said that to his knowledge Committee 5 had never set a deadline for the consideration of new footnote proposals. The only reason his Administration had not yet submitted a footnote on paired frequency bands was because it was awaiting the outcome of a proposal by China on the same issue.

6.9 The **delegate of Russia**, supported by the **delegate of Australia**, said that Working Group PLEN-1 should be entrusted with the task of considering the method WRC-99 might use to address proposals on footnotes and an appropriate wording for the relevant agenda item. The Conference should stick to the decision taken by Committee 5 at its previous meeting.

6.10 In reply to a question by the **delegate of Saudi Arabia**, the **Chairman** said that administrations would be able to submit proposals on footnotes to future conferences. If the footnotes in question clearly came under one of the items on the agenda, they would be considered as a matter of course. The problem arose when a conference had before it proposals to modify footnotes pertaining to issues outside the scope of its agenda. Working Group PLEN-1 would thus have to reflect on a method to enable future conferences to cope with such situations.

6.11 The **delegate of Syria** requested that, if the proposal which his delegation would be submitting the following day was not deemed to fall within the scope of the agenda, it would nevertheless be taken into account, as an exceptional measure. The **Chairman** said that the Plenary noted Syria's request.

6.12 The **Chairman of Committee 5** acknowledged that her Committee had not clearly stated that there was a deadline for the submission of proposals on footnotes. Nonetheless, it had been implicitly understood that the exceptional procedure it had adopted only applied to proposals which had already been submitted to it.

The meeting rose at 1740 hours.

The Secretary:
Pekka TARJANNE

The Chairman:
R. SMITH

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 210-E
7 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 5B

REPORT OF THE CHAIRMAN OF SUB-WORKING GROUP 5B-1

Four meetings of SWG 5B-1 were held to review proposals concerning existing and possible additional allocations and regulatory aspects related to the mobile-satellite service in the frequency range below 1 GHz. In order to complete its task, SWG 5B-1 created four informal discussion groups, 5B-1A dealing with the frequency range 137 - 138 MHz and Resolution 714 (Coordinator, Mr. D. Jansky (United States)), 5B-1B dealing with the frequency range 148 - 149.5 MHz (Coordinator, Mr. B. Mitani (Canada)), 5B-1C dealing with the frequency range 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (Coordinator, Mr. F. Santini (Italy)) and 5B-1D dealing with Resolution 214 (Coordinator, Dr. E. Miller (United States)). Two other informal groups were also formed to deal with footnote S5.208A (Prof. Ananthakrishnan (India)) and with two resolutions, one for the frequency range 470 - 960 MHz and the other for feeder links for non-GSO MSS below 1 GHz (Mr. Ahan (United States)).

Sub-Working Group 5B-1 reviewed all proposals under its terms of reference and completed its task.

The following proposals are submitted for your consideration.

1 Frequency range 137 - 138 MHz (agreed at SWG 5B-1)

MOD S5.208 The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11**~~**A.** The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev. WRC-95)**/ Annex 1 of Appendix **S5** shall apply until such time as a competent world radiocommunication conference revises it. Additionally, until that time, the provisions of Resolution **714 (WRC-95)** apply~~.

MOD S5.208A In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. ~~For information, t~~The threshold levels of interference detrimental to the radio astronomy service ~~to be protected~~ are shown in Table 1 of Recommendation ITU-R RA.769-1.

ANNEX 2 TO RESOLUTION 46 (Rev.WRC-95)
(ANNEX 2 TO APPENDIX S5)

….

A2.1.1 *Below 1 GHz*
(1.1)

~~In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the MSS (space-to-Earth) with respect to terrestrial services is required only if the power flux-density produced by the station exceeds -125 dB(W/m²/4 kHz) at the Earth's surface.~~

ADD **A2.1.1.1 (1.1.1)** In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to terrestrial services (except the aeronautical mobile (OR) service networks operating in those administrations listed in numbers **S5.204** and **S5.206** as of 1 November 1996) is required only if the power flux-density produced by this space station exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface.

ADD **A2.1.1.2 (1.1.2)** In the band 137 - 138 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to the aeronautical mobile (OR) service is required only if the power flux-density produced by this space station at the Earth's surface exceeds:

– -125 dB (W/m^2/4 kHz) for networks for which complete Appendix **3** coordination information is considered as having been received by the Bureau prior to 1 November 1996.

– -140 dB (W/m^2/4 kHz) for networks for which complete Appendix **3**/Appendix **S4** coordination information is considered as having been received by the Bureau after 1 November 1996 in those administrations referred to in A2.1.1.1(1.1.1) above.

ADD **A2.1.1.3 (1.1.3)** In the band 137 - 138 MHz coordination is also required for replacement of satellites of a mobile-satellite service network for which complete Appendix **3** coordination information is considered as having been received by the Bureau prior to 1 November 1996 and the power flux-density exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface in those administrations referred to in A2.1.1.1(1.1.1) above.

SUP

RESOLUTION 714 (WRC-95)

POWER FLUX-DENSITY LEVEL APPLICABLE IN THE FREQUENCY BAND 137 - 138 MHz SHARED BY THE MOBILE-SATELLITE SERVICE AND TERRESTRIAL SERVICES

2 Frequency range 148 - 149.9 MHz (discussed at 5B-1B)

MOD S5.219 The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/** No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz. [Recommendation ITU-R M.1039-1 describes the system characteristics of a mobile-satellite system using FDMA techniques and a methodology for sharing with terrestrial services. Recommendation ITU-R M.1087 provides examples of a mobile-satellite service using spread spectrum techniques and methods for sharing with terrestrial services.]

3 Frequency range 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (discussed at 5B-1C)

MOD

MHz
148 – 156.8375

Allocation to Services		
Region 1	Region 2	Region 3
149.9 – 150.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ~~S5.224~~ RADIONAVIGATION-SATELLITE MOD S5.220 S5.222 S5.223 ADD S5.224A ADD S5.224B	

MOD

MHz
322 – 400.15

Allocation to Services		
Region 1	Region 2	Region 3
399.9 – 400.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 RADIONAVIGATION-SATELLITE S5.222 S5.260 MOD S5.220 ~~S5.224~~ ADD S5.224A ADD S5.224B	

MOD **S5.209** The use of the bands 137 - 138 MHz, 148 - ~~149.9~~150.05 MHz, 399.9 - 400.05 MHz, 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service ~~and the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the land mobile-satellite service~~ is limited to non-geostationary-satellite systems.

MOD **S5.220** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the ~~land~~ mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. The ~~land~~ mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.

SUP **S5.224**

ADD **S5.224A** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until [1 January 2015].

ADD **S5.224B** The allocation of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz to the radionavigation-satellite service ceases to be valid on [1 January 2015].

Annex 2 to Resolution 46 (Rev.WRC-95), paragraph A2.3.2

….

MOD

TABLE 1

Earth stations operating at frequencies below 1 GHz

Frequency Sharing Situation		Coordination Distance (In sharing situations involving services allocated with equal rights)
Frequency band and earth station for which coordination area is determined	Other service or station (station in terrestrial service)	
148.0 - 149.9 MHz ground-based (mobile) 149.9 - 150.05 MHz ground-based (mobile)	ground-based stations	As determined using Equation (1) and Figure 1 of Recommendation ITU-R M.1185 In this case, the coordination distance is calculated by the administration of the ~~terrestrial~~mobile-satellite service earth station using the parameters of its ~~terrestrial~~earth stations and the relevant parameters taken from the advance publication for the radionavigation-satellite service earth station.
400.15 - 401 MHz ground-based	meteorological aids (radiosonde)	582 km
All bands below 1 GHz ground-based	mobile (aircraft)	500 km
All bands below 1 GHz aircraft (mobile)	ground-based stations	500 km
400.15 - 401 MHz aircraft (mobile)	meteorological aids (radiosonde)	1 082 km
All bands below 1 GHz aircraft (mobile)	mobile (aircraft)	1 000 km
455 - 456 MHz 459 - 460 MHz ground-based	ground-based stations	500 km

MOD

RESOLUTION 715 (~~WRC-95~~Rev.WRC-97)

STUDIES CONCERNING SHARING BETWEEN THE RADIONAVIGATION-SATELLITE SERVICE AND THE MOBILE-SATELLITE SERVICE IN THE BANDS 149.9 - 150.05 MHz AND 399.9 - 400.05 MHz

The World Radiocommunication Conference (Geneva, 199~~5~~7),

considering,

a) that the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz are allocated to and used by radionavigation-satellite service (RNSS) on a primary basis;

~~*b) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) allocated the band 149.9 - 150.05 MHz (Earth-to-space) to the land mobile-satellite service on primary basis;*~~

~~*c*~~*b)* that this Conference ~~has~~ allocated the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (Earth-to-space) to the ~~land~~ mobile-satellite service on a primary basis;

~~*d*~~*c)* that requirements of the RNSS and the mobile-satellite service (MSS) should be met in these frequency bands;

~~*e) that the MSS requirements are not limited solely to use by the land mobile-satellite service;*~~

~~*f*~~*d)* that there may be difficulties in the sharing between the RNSS and the MSS, and studies are being carried out by ITU-R;

~~*g*~~*e)* that there is a need ~~to study~~for further studies of the operational and technical means to facilitate sharing between the RNSS and the MSS (in the Earth-to-space and space-to-Earth directions) in these bands,

recognizing

that No. **953/S4.10** of the Radio Regulations applies to the use of these bands by the RNSS,

resolves

to invite ITU-R, ~~as a matter of urgency, in preparation for the Conference Preparatory Meeting for the 1997 World Radiocommunication Conference (WRC-97)~~, to continue to carry out studies in order to finalize recommendations which identify the operational and technical measures necessary to facilitate sharing between the MSS and the RNSS,

~~*instructs the Secretary-General*~~

~~to bring this Resolution to the attention of the Council, at its next session, with a view to including this item in the agenda of WRC-97,~~

urges

~~1.~~ administrations to participate in such studies by submitting contributions to ITU-R relating to the above-mentioned studies as soon as possible~~;~~.

~~2. ITU-R to bring the results of these studies to the attention of WRC-97 and of preparatory meetings, in order to determine operational criteria for sharing between the RNSS and the MSS.~~

4 Frequency range 401 - 406 MHz

SWG 5B-1 reached no consensus on the proposals to allocate portions of the band 401 - 406 MHz to the MSS (space-to-Earth) limited to NGSO systems. The majority view was that sharing studies with regard to the terrestrial services, are incomplete and that these 5 MHz are needed by the meteorological aids service. These administrations favoured "no change" to this band.

5 Frequency range 450 - 470 MHz

SWG 5B-1 reached no consensus on the proposals to allocate portions of the band 450 - 470 MHz to the MSS (Earth-to-space) limited to NGSO systems. The majority view was that sharing studies with regard to the terrestrial services, are incomplete and, therefore, these administrations favoured "no change" to this band.

6 Resolution 214 (discussed at 5B-1D)

No conclusion to date.

7 SUP Recommendation 717 (Rev.WRC-95) (agreed at SWG 5B-1)

8 Resolution on sharing studies in the 470 - 862 MHz and on feeder links for non-GSO MSS below 1 GHz (discussed at an informal group)

ADD

DRAFT RESOLUTION [COM5-14]

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS IN THE BROADCASTING BAND 470 - 862 MHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for the non-geostationary mobile-satellite services (non-GSO/MSS);

b) that the report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO/MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46", and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that CPM-97 considered the protection requirements for analogue television in the band 470 - 862 MHz against a narrow-band MSS signal in the most sensitive and least sensitive portions of an analogue TV channel and the protection requirements for a digital TV channel, based on existing ITU-R Recommendations (BT.655-4, BT.417-4 and IS.851-1);

d) that CPM-97 stated that the protection ratio for a narrow-band interfering signal in the least sensitive parts of an analogue TV channel, requiring lower protection, is to be verified by further studies;

e) that CPM-97 stated the region of lower protection requirements and commensurately higher permissible interfering power flux levels as being 100 kHz near the band edges of an analogue TV channel;

f) that CPM-97 stated that the interfering effects of a non-GSO/MSS transmission will depend on its specific characteristics (e.g. duty-cycle, duration, periodicity, etc.), that interference contributions from sources other than MSS (even those from other broadcasting stations have to be taken into account), that slightly lower values of field strength to be protected may need to be assumed in countries where television networks are relatively sparse, that studies on sharing are necessary;

g) that the maximum permissible aggregate interfering power flux-density resulting from these protection requirements, for the most sensitive and the least sensitive portions of an analogue TV channel, may be useful in determining the feasibility of sharing with space-to-Earth links from non-GSO/MSS transmitters;

h) that these bands are allocated in part to fixed and mobile terrestrial systems and radionavigation systems;

i) that in many countries, the channels assigned for analogue TV may also be used for digital TV,

noting

a) that on completion of studies, parts of the bands now allocated to the broadcasting service between 470 MHz and 862 MHz might be considered suitable for worldwide allocation to non-GSO/MSS space-to-Earth transmissions;

b) that the bandwidth required in these TV channels may be 1-2% of the total spectrum of 470 - 862 MHz to be shared with the parties noted above;

c) that since the 608 - 614 MHz band is allocated to the radio astronomy service (RAS), and since line-of-sight sharing between the RAS and active services is difficult, this band is not under consideration for non-GSO/MSS downlink (space-to-Earth) sharing studies in this Resolution,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate co-frequency sharing between narrow-band non-GSO/MSS (space-to-Earth) transmissions and the services allocated in the band 470 - 862 MHz, where the broadcasting service is also allocated;

2 to invite a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, additional allocations on a worldwide basis for the non-GSO/MSS with service links operating below 1 GHz,

urges administrations

to participate actively in such studies with the involvement of interested parties.

ADD

DRAFT RESOLUTION [COM5-15]

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS FOR FEEDER LINKS IN BANDS AROUND 1.4 GHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for the non-geostationary mobile-satellite services (non-GSO/MSS);

b) that the Report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO/MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46" and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that the CPM-97 stated that due to the "extreme sensitivity of radio astronomy observations interference from unwanted (spurious and out-of-band) emissions" can be a problem. However, CPM-97 noted that interference to radio astronomy can be avoided using various techniques including, low power transmitter levels, choice of modulation, bit shaping, output filtering, band limiting filters. Use of these techniques can minimize the band separation necessary to attain the recommended interference threshold levels for out-of-band emissions;

d) that, since CPM-97, one administration has carried out additional analyses and hardware demonstrations with a view to determining the feasibility of sharing between non-GSO/MSS feeder links and services such as earth exploration-satellite (passive), radio astronomy, and space research (passive) services in bands around 1.4 GHz;

e) that factors taken into account by these post-CPM-97 activities to protect the passive services around 1.4 GHz from out-of-band emissions include: the use of narrow-band non-GSO/MSS feeder link transmissions; the use of spectrum-efficient modulation methods, such as GMSK, having inherently rapid roll-off of out-of-band emissions; the use, where necessary, of band-pass filters in satellite transmitters and MSS feeder link transmitting earth stations; and guardbands where necessary;

f) that factors taken into account by these post-CPM-97 activities considering sharing with radiolocation, include the use of conventional techniques that may be applied in MSS satellite receivers, such as intermediate frequency limiters and time diversity that have long been employed to protect radiolocation receivers, and techniques such as transmitted wave forms that employ time diversity that have been employed to protect receivers in other services, from high-power pulsed radar transmitters;

g) that the bands near 1.4 GHz are extensively used by many other services in accordance with the Radio Regulations,

noting

a) that Resolution 214 (WRC-97) *resolves* 1 states "that further studies are urgently required on operational and technical means to facilitate sharing between the non-GSO MSS and other radiocommunication services having allocations and operating below 1 GHz";

b) that Resolution 719 (WRC-95) identifies "issues relating to frequency sharing between the mobile-satellite service and terrestrial services at frequencies below 3 GHz" as being among the "urgent studies required in preparation for WRC-97";

c) that one administration performed such studies which were submitted to the ITU-R, but these studies could not be considered due to time limitations;

d) that, since WRC-95, one administration has performed studies of sharing between space and terrestrial services and feeder links near 1.4 GHz for the non-GSO/MSS with service links below 1 GHz,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine the operational and technical measures required to facilitate sharing in portions of the band 1 390 - 1 400 MHz between existing and currently planned services and feeder links (Earth-to-space) for non-GSO/MSS with service links operating below 1 GHz;

2 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate sharing in portions of the band 1 427 - 1 432 MHz between existing and currently planned services and the feeder links (space-to-Earth) for non-GSO/MSS with service links operating below 1 GHz which may be allocated to non-GSO/MSS systems;

3 to invite ITU-R, as a matter of urgency, to study operational and technical measures required to protect passive services in the band 1 400 - 1 427 MHz from unwanted emissions from feeder links near 1.4 GHz for non-GSO/MSS with service links operating below 1 GHz;

4 to invite a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, 2 and 3, additional allocations for feeder links on a worldwide basis for non-GSO/MSS with service links below 1 GHz,

urges administrations

to participate actively in such studies with the involvement of interested parties.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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7 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

FOURTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

The following proposals for modification to the Radio Regulations were adopted by the Working Group and are submitted for your consideration.

1 Frequency range 1 610 - 1 626.5 MHz

MOD S5.369 *Different category of service:* in Angola, Australia, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

2 Frequency range 2 500 - 2 690 MHz

MOD

MHz
2 450 – 2 520

Allocation to Services		
Region 1	Region 2	Region 3
2 500 – 2 520 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.404 S5.407 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.404 S5.407 S5.414 S5.403A

MOD

MHz
2 520 – 2 670

Allocation to Services		
Region 1	Region 2	Region 3
2 520 – 2 655 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	**2 520 – 2 655** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403	**2 520 – 2 535** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.403 S5.403A **2 535 – 2 655** FIXED S5.409 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.418

MOD

MHz
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
2 670 – 2 690 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420 S5.420A

ADD **S5.403A** *Additional allocation*: in Japan, subject to agreement obtained under No. **S9.21**, the band 2 515 - 2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within its national boundary from 1 January 2000.

ADD **S5.420A** *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2 670 - 2 690 MHz may also be used for the aeronautical mobile-satellite service (Earth-to-space) for operations limited to within its national boundary from 1 January 2000.

3 Appendix S5

ANNEX 1 TO APPENDIX S5 (WRC-95)

1. Coordination thresholds for sharing between MSS (space-to-Earth) and terrestrial services in the same frequency bands and between non-GSO/MSS feeder links (space-to-Earth) and terrestrial services in the same frequency bands

…

1.2.2 General considerations

…

1.2.2.2 Characteristics of reference systems in the fixed service

The following parameters represent the set of reference parameters of the fixed service.

1.2.2.2.1 Characteristics of reference digital point-to-point systems

Three different digital systems are described in the following table:

– 64 kbit/s capacity used, for example, for outside-plant (individual subscriber connection);

– 2 Mbit/s capacity used, for example, for business subscriber connections for the local part of the inside-plant;

– 45 Mbit/s capacity used, for example, for trunk networks.

Capacity	64 kbit/s	2 Mbit/s	45 Mbit/s
Modulation	4-PSK	8-PSK	64-QAM
Antenna gain (dB)	33	33	33
Transmit power (dBW)	7	7	1
Feeder/multiplexer loss (dB)	2	2	2
e.i.r.p. (dBW)	38	38	32
Receiver IF bandwidth (MHz)	0.032	0.7	10
Receiver noise figure (dB)	4	4.5	4
Receiver input level for a BER of 10^{-3} (dBW)	–137	–120	–106
~~Maximum long-term interference Total power (dBW)~~	~~–165~~	~~–151~~	~~–136~~
~~Maximum long-term interference Power spectral density (dB(W/4 kHz))~~	~~–174~~	~~–173~~	~~–170~~

Antenna pattern:

$G(\varphi) = G_{max} - 2.5 \times 10^{-3}$ **Error!** for $0 < \varphi < \varphi_m$

~~$G(\varphi) = G_1$ for $\varphi_m \leq \varphi < 75.86(\lambda/D)$~~

~~$G(\varphi) = 49 - 10 \log (D/\lambda) - 25 \log \varphi$ for $75.86(\lambda/D) \leq \varphi < 48°$~~

~~$G(\varphi) = 7 - 10 \log (D/\lambda)$ for $48° \leq \varphi$~~

$G(j) = 39 - 5 \log (D / l) - 25 \log j$ for $\varphi_m \leq \varphi < 48°$

$G(j) = -3 - 5\log(D/l)$ for $48° \leq \varphi \leq 180°$

where:

$G(\varphi)$: gain relative to an isotropic antenna (dBi)

φ: off-axis angle (degree)

D: antenna diameter

λ: wavelength expressed in the same unit as D

G_1: gain of the first side-lobe $= 2 + 15 \log (D/\lambda)$

(D/λ may be estimated from $20 \log D/\lambda \approx G_{max} - 7.7$)

G_{max}: main lobe antenna gain (dBi)

$\varphi_m = 20 (\lambda/D) \times \sqrt{(G_{max} - G_1)}$ (degrees)

It should be noted that the above antenna radiation pattern corresponds to the average side-lobe pattern and it is recognized that individual side-lobes may exceed it by up to 3 dB.

1.2.2.2.2 Characteristics of reference analogue point-to-point systems

Reference circuit	12 hops with 50 km distance between stations
Antenna gain (dBi)	33
e.i.r.p. (dBW)	36
Feeder/multiplexer loss (dB)	3
Receiver noise figure (referred to input of receiver) (dB)	8
Maximum short- and long-term interference ~~per link~~in the reference circuit ~~(20% of time) (dB(W/4 kHz))~~ • baseband interfering signal power level not to be exceeded for more than 20% of the time • baseband interfering signal power level not to be exceeded for more than 0.01% of the time	~~–170~~ 240 pW0p 50 000 pW0p

Antenna pattern: Use antenna pattern of section 1.2.2.2.1.

1.2.2.2.3 Characteristics of reference point-to-multipoint systems

NOTE - In application of the SCP, the use of the point-to-multipoint reference FS system parameters for the 2 170 - 2 200 MHz band is not required.

Parameter	Central station	Outstation
Antenna type	Omni/Sectoral	Dish/Horn
Antenna gain (dBi)	10/13	20 (analogue) 27 (digital)
e.i.r.p. (max) (dBW) analogue digital	 12 24	 21 34
Noise figure (dB)	3.5	3.5
Feeder/multiplexer loss (dB)	2	2
IF bandwidth (MHz)	3.5	3.5
~~Maximum permissible long-term interference power (20% time)~~ ~~Total (dBW)~~ ~~dB (W/4 kHz)~~ ~~dB (W/MHz)~~	 ~~–142~~ ~~–170~~ ~~–147~~	 ~~–142~~ ~~–170~~ ~~–147~~

Antenna pattern:

For the outstation antenna pattern, the reference pattern described in section 1.2.2.2.1 ~~has~~is to be used.

The reference radiation pattern for omnidirectional or sectoral antennas is the following:

$$G(\theta) = G_0 - 12\,(\theta/\varphi_3)^2, \text{ dBi} \qquad 0 \le \theta < \varphi_3$$

$$G(\theta) = G_0 - 12 - 10 \log (\theta/\varphi_3), \text{ dBi} \qquad \varphi_3 \le \theta < 90°$$

where:

G_0 = maximum gain in the horizontal plane (dBi)

θ is the radiation angle above the horizontal plane (degrees)

φ_3 (degrees) is given by:

$$\varphi 3 = \textbf{Error!} \text{ degrees}$$

where: $\alpha = \textbf{Error!}$

~~It should be noted that the above antenna pattern is provisional and that further study is under way in the ITU-R.~~

1.2.3 Determination of the need for coordination between MSS space stations (space-to-Earth) and terrestrial stations

1.2.3.1 Method for the determination of the need for coordination between MSS space stations (space-to-Earth) and other terrestrial services sharing the same frequency band in the 1 to 3 GHz range

Coordination of assignments for transmitting space stations of the mobile-satellite service ~~downlink~~ with respect to terrestrial services is not required if the power flux-density produced at the Earth's surface or the fractional degradation in performance (FDP) of a station in the fixed service does not exceed the threshold values shown in the following table.

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
1 492 - 1 525	analogue FS telephony	~~-152~~-146 dB(W/m²) in 4 kHz	0.5	~~-152~~-146 dB(W/m²) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases (NOTE 4)	~~-152~~-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~-152~~	~~0.5~~	~~-152~~	~~0.5~~	
1 525 - 1 530	analogue FS telephony	~~-152~~-146 dB(W/m²) in 4 kHz	0.5	~~-152~~-146 dB(W/m²) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~-152~~-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~-152~~	~~0.5~~	~~-152~~	~~0.5~~	
2 160 - 2 200	analogue FS telephony	~~-152~~-146 dB(W/m²) in 4 kHz	0.5	~~-147~~-141 dB(W/m²) in 4 kHz and -123 dB(W/m²) in 1 MHz (NOTE 6)	0.5	

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
(NOTE 3)	~~digital FS~~all other cases	~~-152~~-128 dB(W/m²) in 1 MHz	0.5	-123 dB(W/m²) in 1 MHz (NOTE 6)	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~-152~~	~~0.5~~	~~-147~~	~~0.5~~	
2 483.5 - 2 500	~~fixed~~all other cases	~~-152~~-128 dB(W/m²) in 1 MHz and -146 dB(W/m²) in 4 kHz	~~0.5~~	~~-150~~-126 dB(W/m²) in 1 MHz and -144 dB(W/m²) in 4 kHz (NOTE 7)	0.65	
	~~other terrestrial services (NOTE 4)~~	~~-152~~	~~0.5~~	~~-150~~	~~0.65~~	
2 500 - 2 520	analogue FS telephony	~~-152~~-146 dB(W/m²) in 4 kHz	0.5	~~-152~~-146 dB(W/m²) in 4 kHz and -123 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~-152~~-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~-152~~	~~0.5~~	~~-152~~	~~0.5~~	

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
2 520 - 2 535	analogue FS telephony	~~–160~~-154 dB(W/m²) in 4 kHz	0.75	~~–152~~-146 dB(W/m²) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~–160~~-136 dB(W/m²) in 1 MHz	0.75	-128 dB(W/m²) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–160~~	~~0.75~~	~~–152~~	~~0.5~~	

NOTE 1 - The calculation of FDP (fractional degradation in performance) is contained in section 1.2.2.1, using reference FS parameters contained in sections 1.2.2.2.1 and 1.2.2.2.3. The use of FDP threshold is limited to the case of digital fixed service system.

NOTE 2 - The following formula should be used for deriving the coordination threshold in terms of power flux-density:

P ~~dB(W/m²/4 kHz)~~ for $0° \le \delta \le 5°$

$P + r(\delta - 5)$ ~~dB(W/m²/4 kHz)~~ for $5° < \delta \le 25°$

$P + 20r$ ~~dB(W/m²/4 kHz)~~ for $25° < \delta \le 90°$

where δ is the angle of arrival (degrees).

The threshold values are obtained under assumed free-space propagation conditions.

NOTE 3 - The coordination threshold in the band 2 160 - 2 270 MHz (Region 2) and 2 170 - 2 200 MHz (all regions) to protect other terrestrial services does not apply to the ~~terrestrial component of the Future Public Land Mobile Telecommunication Systems (FPLMTS)~~International Mobile Telecommunication-2000 (IMT-2000), as the satellite and the terrestrial components are not intended to operate in the same area or on common frequencies within these bands.

~~NOTE 4 – The coordination threshold factors applicable to other terrestrial services may be reviewed at a future conference, as necessary.~~

NOTE 4 - Exceptions for the band 1 492 - 1 525 MHz are as follows:

4.1 For the land mobile service on the territory of Japan (No. **S5.348A**): -150 dB(W/m^2) in 4 kHz at all arrival angles is applicable to all satellite space-to-Earth emissions.

4.2 For the aeronautical mobile service for telemetry (No. **S5.343**), the requirement for coordination is determined by frequency overlap (No. **S5.348**).

NOTE 5 - In all cases involving sharing with analogue systems for telephony in the fixed service, further coordination is only required when the power flux-density values are greater than or equal to the coordination threshold values in both reference bandwidths.

NOTE 6 - The power flux-density values specified for the 2 160 - 2 200 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with a non-GSO MSS system employing narrow-band TDMA/FDMA techniques.

NOTE 7 - The power flux-density values specified for the 2 483.5 - 2 500 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non-GSO MSS systems employing CDMA techniques. The power flux-density values specified will not provide full protection for existing digital fixed systems in all cases. However, these power flux-density values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high power ISM and possible low power applications are expected to produce a relatively high interference environment.

4 Resolution 215

MOD

RESOLUTION 215 (~~WRC-95~~WRC-97)

COORDINATION PROCESS AMONG NON-GEOSTATIONARY MOBILE-SATELLITE SYSTEMS AND EFFICIENT USE OF THE ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 1 - 3 GHz RANGE

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that space-to-Earth transmissions of non-geostationary (non-GSO) mobile-satellite systems are constrained to limit their power flux-density over areas where the frequency band is shared with terrestrial systems;

b) that a number of proposed non-GSO mobile-satellite systems can provide a good service to users within the power flux-density limits given in Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 to Appendix **S5**;

c) that when maximum communication capacity is achieved by non-GSO systems in the mobile-satellite service a major portion of the interference into each of these systems will come from the other mobile-satellite systems sharing the frequency band, and, consequently, if one system starts to transmit at higher power, all others need to do the same in order to overcome mutual interference;

d) that the ITU-R is studying the efficient use of the radio spectrum and frequency sharing within the mobile-satellite service, that Recommendations ITU-R M.1186 and M.1187 are a basis for further study, and that additional preliminary texts are available or can be provided by administrations on this matter~~,~~;

e) that capacities in a codirectional, co-frequency and co-coverage sharing environment of systems using spread-spectrum multiple access techniques are affected by technical and operational characteristics of other mobile-satellite service systems using similar multiple access techniques;

f) that in many parts of the world and in certain frequency bands in the 1 - 3 GHz range, significant congestion already exists due to use by other terrestrial and space services;

g) the need to make most efficient use of frequencies in the MSS allocations,

recognizing

that, as a means to ensure that the frequency bands allocated to the mobile-satellite service can be used in an efficient manner, there is an urgent demand for:

1. criteria to be established by the ITU-R to be used in determining the need to coordinate between mobile-satellite systems; and

2. detailed methods of interference calculation to be used by administrations in the coordination process~~,~~;

3. ITU-R studies that should not impede the timely deployment of any mobile-satellite service systems,

resolves to invite ITU-R

1. to continue its studies on this subject and develop, as a matter of urgency, criteria for determining the need to coordinate and calculation methods for determining levels of interference, as well as the required protection ratios between networks in the mobile-satellite service~~,~~;

2. to urgently study the use of technically and operationally feasible techniques to allow for improvements in spectrum efficiency in MSS systems,

further resolves

1. to focus the ITU studies on the technical and operational characteristics of systems using spread-spectrum multiple access techniques that can allow co-frequency, co-coverage, codirectional sharing but which involve the cooperation among systems' operators to maximize the efficient use of spectrum by multiple mobile-satellite service systems using such access techniques;

2. that administrations responsible for the introduction of mobile-satellite systems urge their mobile-satellite operators to implement, as practicable, the latest available technologies to improve spectrum efficiency consistent with the requirement to offer viable MSS services;

3. to recommend that administrations encourage their operators to use the most advanced technology available when preparing to implement their global MSS systems in the 2 GHz range so that they may operate, if necessary, in different frequency bands in different regions, in accordance with the MSS allocations in the 2 GHz range decided by the World Radiocommunication Conference (WRC-97).

~~*invites the Council*~~

~~to include this Resolution in the agenda of WRC-97 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum.~~

A note to GTPLEN-1 will be prepared to this Resolution in the agenda of WRC-99 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum in the context of frequency coordination using existing Resolution 46 procedures.

5 Resolution 716

NOC

USE OF THE FREQUENCY BANDS 1 980 - 2 010 MHz AND 2 170 - 2 200 MHz IN ALL THREE REGIONS AND 2 010 - 2 025 MHz AND 2 160 - 2 170 MHz IN REGION 2 BY THE FIXED AND MOBILE-SATELLITE SERVICES AND ASSOCIATED TRANSITION ARRANGEMENTS

6 Resolution 717

SUP

REVIEW OF ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 2 GHz RANGE

7 Recommendation 717

SUP

FREQUENCY SHARING IN BANDS SHARED BY THE MOBILE-SATELLITE SERVICE AND THE FIXED, MOBILE AND OTHER TERRESTRIAL SERVICES BELOW 3 GHz

8 Recommendation 721

SUP

FREQUENCY SHARING IN THE BANDS 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

9 Resolution [COM5-10]

RESOLUTION [COM5-10]

FREQUENCY SHARING IN THE BANDS 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

The World Radiocommunication Conference (Geneva, 1997),

with a view

to allow the most efficient use of frequency bands allocated to the mobile-satellite service (MSS) and the radio astronomy service by these services, and with due regard to the other services to which those bands are also allocated,

considering

a) that the band 1 610.6 - 1 613.8 MHz is allocated to the radio astronomy service and the mobile-satellite service (Earth-to-space) on a shared, primary basis, and that the band 1 660 - 1 660.5 MHz is allocated to the radio astronomy service and the land mobile-satellite service (Earth-to-space) on a shared, primary basis;

b) that No. **[733E] S5.372** of the Radio Regulations states that "harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services ([No. **2904**] **S29.13** applies)"; and that Article **[36] S29** also points out that emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service;

c) that the nature of objects studied by the radio astronomy service in the bands 1 610.6 - 1613.8 MHz and 1 660 - 1 660.5 MHz demands maximum flexibility in the planning of observation frequencies;

d) that in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz, which are shared between the radio astronomy service and the mobile-satellite service, operational constraints are necessary for mobile earth stations of the mobile-satellite service;

e) that Recommendation ITU-R M.829-1, which relates to sharing between the mobile-satellite service and the radio astronomy service in the band 1 660 - 1 660.5 MHz, notes that further studies are required, particularly in the areas of propagation models and assumptions used for the determination of separation distances;

f) that Recommendation ITU-R M.1316 may be used in order to facilitate coordination between the mobile earth stations and radio astronomy stations in the bands 1 610.6 - 1 613.8 and 1 660 - 1 660.5 MHz;

g) that no experience could be gained up to now with the use of the Recommendation mentioned in *considering* f);

h) that the threshold levels of interference detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769,

resolves

that a future competent conference shall evaluate the frequency sharing in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz between the mobile-satellite service (MSS) and the radio astronomy service, based upon the experience gained with the use of ITU-R M.1316 and other relevant ITU-R Recommendations,

invites ITU-R

to submit a report to such a future conference on evaluating the effectiveness of recommendations aiming to facilitate sharing between the mobile-satellite service and the radio astronomy service,

urges administrations

to participate actively in this evaluation.

10 Resolution 115

SUP

RESOLUTION 115 (WRC-95)

CALCULATION OF THE POWER FLUX-DENSITY AT THE GEOSTATIONARY-SATELLITE ORBIT IN THE BAND 6 700 - 7 075 MHz USED FOR FEEDER LINKS OF NON-GEOSTATIONARY-SATELLITE SYSTEMS IN THE MOBILE-SATELLITE SERVICE IN THE SPACE-TO-EARTH DIRECTION

11 Allocation to non-GSO MSS feeder links in the 15.4 - 15.7 GHz

ARTICLE S5

MOD

GHz
14.8 – 17.3

Allocation to Services		
Region 1	Region 2	Region 3
15.4 – ~~15.7~~15.43	~~FIXED-SATELLITE (space-to-Earth) S5.511A S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~	
~~15.4 – 15.7~~15.43 - 15.63	FIXED-SATELLITE (space-to-Earth) (Earth-to-space) MOD S5.511A ~~S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~ MOD S5.511C S5.511D	
~~15.4~~15.63 – 15.7	~~FIXED-SATELLITE (space-to-Earth) S5.511A S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~	

MOD **S5.511A** Use of the band 15.~~4~~3 - 15.~~7~~63 GHz by the fixed-satellite service (space-to-Earth) (see Resolution [COM5-8] (WRC-97)) (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. ~~Emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m^2/MHz) in the bands 15.4 - 15.45 GHz and 15.65 - 15.7 GHz, and -111 dB(W/m^2/MHz) in the band 15.45 - 15.65 GHz, for all angles of arrival. These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions. In the band 15.45 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m^2/MHz) for all angles of arrival, it shall coordinate with affected administrations. Moreover,~~ In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. Also in the space-to-Earth direction, harmful interference shall not be caused to stations of the radio astronomy service using the band 15.35 - 15.4 GHz. The threshold levels of interference and associated power flux-density limits which are detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769. ~~The power flux-density limits and coordination threshold in this footnote shall apply, subject to review by ITU-R and based on the studies referred to in Resolution **116 (WRC-95)**, until changed by a future competent world radiocommunication conference.~~ Special measures will need to be employed to protect the radio astronomy service in the band 15.35 - 15.4 GHz.

SUP **S5.511B**

MOD **S5.511C** ~~*Additional allocation:* the band 15.45 - 15.65 GHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. Such use is limited to feeder links of non-geostationary systems in the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)** /No. **S9.11A**. Until such time as the studies called for in Resolution **117 (WRC-95)** are completed: 1) administrations operating s~~Stations operating in the aeronautical radionavigation service ~~are urged to~~shall limit the ~~average~~effective e.i.r.p. ~~to 42 dBW; 2) stations in the fixed-satellite service shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).~~in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **S4.10** applies) from harmful interference from feeder link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder link earth station shall be in accordance with Recommendation ITU-R S.1340.

ADD **S5.511D** Fixed-satellite service systems for which advance publication information has been received by the Bureau prior to 21 November 1997 may operate in the bands 15.4 - 15.43 GHz and 15.63 - 15.7 GHz in the space-to-Earth direction and 15.63 - 15.65 GHz in the Earth-to-space direction. In the bands 15.4 - 15.43 GHz and 15.65 - 15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m^2/MHz) for all angles of arrival. In the band 15.63 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m^2/MHz) for all angles of arrival, it shall coordinate with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63 - 15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).

MOD TABLE S21-4

Frequency band	Service	Limit in dB(W/m2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
…					
~~15.4 - 15.45 GHz~~ ~~15.65 - 15.7 GHz~~	~~Fixed-Satellite (S-E)~~	~~-146~~			~~1 MHz~~
15.4~~5~~3 - 15.6~~5~~3 GHz	Fixed-Satellite (S-E)	-127	5° - 20°: -127 20° - 25°: -127 + 0.56 (δ-2)^2	25° - 29°: -113 29° - 31°: -136.9 + 25 log (δ-20) 31° - 90°: -111	1 MHz
…					

RESOLUTION [COM5-8]

FEASIBILITY OF IMPLEMENTING FEEDER LINKS OF NON-GEOSTATIONARY SATELLITE NETWORKS IN THE MOBILE-SATELLITE SERVICE IN THE BAND 15.43 - 15.63 GHz (SPACE-TO-EARTH) WHILE TAKING INTO ACCOUNT THE PROTECTION OF THE RADIO ASTRONOMY SERVICE IN THE BAND 15.35 - 15.4 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 15.43 - 15.63 GHz (space-to-Earth) is allocated to the fixed-satellite service on a primary basis for use by feeder links to non-geostationary systems in the mobile-satellite service;

b) that this band is shared with aeronautical radionavigation services on a primary basis;

c) that No. **S4.10** of the Radio Regulations applies to the use of the band by aeronautical radionavigation services;

d) that aircraft stations were not permitted to transmit in the band 15.45 - 15.65 GHz in accordance with No. **S5.511B (WRC-95)**;

e) that WRC-97 recognized that airborne transmitters are operating in the aeronautical radionavigation service in the 15.43 - 15.63 GHz band;

f) that the feasibility to design and operate feeder links in the space-to-Earth direction with the power flux-density limits in Table **S21-4** of Article **S21** has not been studied by the ITU-R;

g) that the band 15.35 - 15.4 GHz is allocated to the radio astronomy service and other passive services and protection from harmful interference from space stations is needed;

h) that the band 15.35 - 15.4 GHz is allocated on a co-primary basis for exclusively passive use by the radio astronomy service, the earth exploration-satellite service and the space research service;

i) that No. **S5.511A** provides that harmful interference shall not be caused to the radio astronomy service by feeder links for the mobile-satellite service operated in the band 15.43 - 15.63 GHz;

j) that out-of-band emissions from space stations in the mobile-satellite service in the band 15.43 - 15.63 GHz may cause interference to the radio astronomy service in the band 15.35 - 15.4 GHz;

k) that Recommendation ITU-R **RA.769-1** specifies the levels of interference which are detrimental to the radio astronomy service which may not be easily met by non-GSO MSS feeder links operating in the space-to-Earth direction,

resolves

1 to invite the ITU-R, as a matter of urgency, to carry out studies in preparation for the CPM for WRC-99 with an objective to study the feasibility of implementing non-GSO MSS feeder links in the 15.43 - 15.63 GHz band, taking into account the above *considerings*;

2 to study, as a matter of urgency, the interference potential of feeder links for NGSO satellites in the mobile-satellite service to the radio astronomy service in the 15 GHz band and develop recommendations to reduce the out-of-band interference;

3 that WRC-99 review the results of the above studies and take appropriate actions, including possible adjustments in spectrum allocations.

SUP

RESOLUTION 116 (WRC-95)

ALLOCATION OF FREQUENCIES TO THE FIXED-SATELLITE SERVICE (SPACE-TO-EARTH) IN THE BAND 15.4 - 15.7 GHz FOR FEEDER LINKS OF NON-GEOSTATIONARY-SATELLITE NETWORKS IN THE MOBILE-SATELLITE SERVICE

SUP

RESOLUTION 117 (WRC-95)

ALLOCATION OF FREQUENCIES TO THE FIXED-SATELLITE SERVICE (EARTH-TO-SPACE) INTHE BAND 15.45 - 15.65 GHz FOR USE BY FEEDER LINKS OF NON-GEOSTATIONARY SATELLITE NETWORKS OPERATING IN THE MOBILE-SATELLITE SERVICE

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 212-E
7 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 5C

NOTE FROM THE CHAIRMAN OF WORKING GROUP 5B TO CHAIRMAN OF WORKING GROUP 5C

During consideration of proposals allocated to Working Group 5B, it was found that proposal EUR/5/319 dealing with operation of high density systems in the fixed-satellite service and in the fixed service was not falling under the terms of reference of Working Group 5B but rather under Working Group 5C's responsibility.

Therefore, proposal EUR/5/319 is forwarded to Working Group 5C for further consideration.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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WORKING GROUP 4A

NOTE TO WORKING GROUP 4A

The Chairman of Working Group 2 of the Plenary herewith transmits to Working Group 4A, for development of the necessary regulatory text, the attached Report of Working Group 2 containing its decisions with regard to Recommendations C and D of Document 8 (Reducing the time-limits for bringing a satellite network into use, and simplifying and streamlining the advance publication information).

David LEIVE
Chairman of Working Group 2 of the Plenary

Report of Working Group 2 of the Plenary to Committee 4

1 Regulatory time limits (Recommendation C, Document 8)

1) WG PL2 has adopted the following decisions [texts] and transmits them to Committee 4:

The initial period (see RR 1042) between the advance publication and the date of bringing into use should be reduced by one year, from six to five, and the present extension period (see RR 1550) should similarly be reduced by one year, from three to two, resulting in a total period of not more than seven years.

2) Two views were expressed on the recommendation made in the second sentence of Recommendation C of Document 8 that "the extension should be limited to specific reasons and decided upon within a well defined procedure."

i) Any extension should be automatic (as at present), and no reasons should be required.

ii) An extension should be granted only if one of a limited number of specific reasons for the grant of an extension is provided to the Bureau with the request, and such an extension should be coupled with a requirement that the requesting administration demonstrate satisfaction of compliance with the due diligence procedure.

3) The sense of the discussion on these views was that the extension is only allowed for the networks which are under coordination, if applicable, and which comply with the due diligence procedure and, if requested and [certified] [justified] [confirmed] by the notifying administration, with respect to one or more of the following specific circumstances:

- launch failure;
- launch delays for circumstances outside the control of the administration or the operator;
- delays caused by modifications of satellite design necessary to reach coordination agreements;
- problems in meeting the design specifications;
- difficulties in obtaining coordination agreements;
- financial circumstances outside the control of the administration or the operator
- *force majeure*.

NOTE 1 - WG PL2 did not reach agreement on the proper term to be used in paragraph 3, and has therefore included in bracketed text the three terms considered ([certified] [justified] [confirmed]) for further consideration by Committee 4.

4) As for the date of implementation of the above Recommendation, it was decided that:

i) for API submissions first received after 21 November 1997 the new rules apply;

ii) for complete API submissions received on or before 21 November 1997, the pre-existing rules would apply (the six-year period and automatic three-year extension).

2 Simplification of Advance Publication Information (API) (Recommendation D, Document 8)

1) WG PL2 agreed as follows:

The advance publication (API) stage should be retained but simplified and streamlined for those satellite networks which are subject to coordination. The API regulatory status ("starting the clock") should be preserved. The six-month gap between the advance publication phase and the formal coordination phase should be preserved. In addition, the API should be automatically deleted if not followed by coordination information submission within 24 months of the date of receipt of the API information.

The information to be submitted and published under the API procedure for satellite networks which require coordination should be simplified and restricted to the following:

- The notifying administration (A.1.f and A.3)
- Satellite name (A.1.a)
- Orbital characteristics
  - GEO (A.4.a)
  - Non-GEO (A.4.b)
- Frequency range (C.1)
- Service area (C.2.a)
- Type of service
  - Class of station/nature of service (C.4)
- Date of bringing into use (A.2.a)

The simplification would not apply to those satellite networks which are not subject to coordination.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Addendum 1 to Document 214-E
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COMMITTEE 5

FIFTH REPORT OF WORKING GROUP 5A TO COMMITTEE 5

The attached proposals for modification to the Radio Regulations were adopted by the Working Group and are submitted for your consideration.

7.

MOD

MHz
410 – 420

Allocation to Services		
Region 1	Region 2	Region 3
410 – 420	FIXED MOBILE except aeronautical mobile ~~Space Research (space-to-space) S5.268~~ SPACE RESEARCH (space-to-space) MOD S5.268	

MOD S5.268 Use of the band 410 - 420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from extra-vehicular activities shall not exceed -153 dB(W/m^2) for $0° \leq \Phi \leq 5°$, $-153 + 0.077 (\Phi-5)$ dB(W/m^2) for $5° \leq \Phi \leq 70°$ and -148 dB(W/m^2) for $70° \leq \Phi \leq 90^o$ where Φ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. No. **S4.10** does not apply to extra-vehicular activities. In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile service.

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COMMITTEE 5

FIFTH REPORT OF WORKING GROUP 5A TO COMMITTEE 5

1 Working Group 5A has held one meeting since the last meeting of Committee 5.

2 The attached proposals for modification to the Radio Regulations were adopted by the Working Group and are submitted for your consideration.

3 Working Group 5A has completed its work, except as presented in my verbal report to Committee 5, and has no further meetings planned.

R. TAYLOR
Chairman of Working Group 5A

1

NOC **MHz**
5 580 – 7 450

Allocation to Services		
Region 1	Region 2	Region 3
7 075 – 7 250	FIXED MOBILE S5.458 S5.459 S5.460	

MOD S5.459 *Additional allocation:* in ~~Region 2, the band 7 125 - 7 155 MHz is~~Russia, the frequency bands 7 100 - 7 155 MHz and 7 190 - 7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**.

2

MOD **MHz**
7 450 – 8 175

Allocation to Services		
Region 1	Region 2	Region 3
8 025 - 8 175	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ADD S5.462A S5.463	

MOD

MHz
8 175 – 8 750

Allocation to Services		
Region 1	Region 2	Region 3
8 175 - 8 215	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ ADD S5.462A S5.463	
8 215 - 8 400	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ ADD S5.462A S5.463	

ADD S5.462A In Region 3 (except for Japan), and in Kuwait, Oman and Qatar and South Africa, in the band 8 025 - 8 400 MHz, the earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival (θ°), without the consent of the affected administration.

-174 dB(W/m^2) in a 4 kHz band	for	$0° \le \theta < 5°$
-174 + 0.5 (θ - 5) dB(W/m^2) in a 4 kHz band	for	$5° \le \theta < 25°$
-164 dB(W/m^2) in a 4 kHz band	for	$25° \le \theta \le 90°$

These values are subject to study under Resolution [COM5-9].

MOD S5.463 ~~In Region 2, a~~Aircraft stations are not permitted to transmit in the band 8 025 - 8 400 MHz.

3

MOD **GHz**
24.45 – 27

Allocation to Services		
Region 1	Region 2	Region 3
25.5 – 27	EARTH EXPLORATION-SATELLITE (space-to Earth) ADD S5.536A ADD S5.536B FIXED INTER-SATELLITE S5.536 MOBILE ~~Earth Exploration-Satellite (space-to-Earth)~~ Standard Frequency and Time Signal-Satellite (Earth-to-space)	

ADD S5.536A Administrations installing earth exploration-satellite earth stations cannot claim protection from fixed and mobile stations operated in neighbouring administrations. In addition, earth stations operating in the earth exploration-satellite service should ~~comply with ITU-R~~ take into account Recommendation ITU-R SA.1278.

ADD S5.536B In [Germany, Argentina, Austria, Belgium, Brazil, China, the Republic of Korea, Denmark, Spain, Estonia, Finland, France, Hungary, Ireland, Kenya, Mexico, New Zealand, Pakistan, the Netherlands, the Philippines, Poland, Slovakia, Romania, the United Kingdom, Sweden, Turkey and Zimbabwe] earth stations operating in the earth exploration-satellite service in the band 25.5 - 27.0 GHz shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services.

4

RESOLUTION [COM5-9]

PROTECTION OF THE FIXED SERVICES IN THE FREQUENCY BAND 8 025 - 8 400 MHz SHARING WITH GEOSTATIONARY-SATELLITE SYSTEMS OF THE EARTH EXPLORATION-SATELLITE SERVICE (SPACE-TO-EARTH)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that previous to WRC-97, the band 8 025 - 8 400 MHz was allocated secondary to the earth exploration-satellite service (space-to-Earth) in Regions 1 and 3 except for those countries listed in footnote No. **S5.464** of the Radio Regulations;

b) that the power flux-density limits given in Table S21.4 of the Radio Regulations apply to emissions from space stations of the earth exploration-satellite service (space-to-Earth);

c) that for those administrations where the secondary allocation applied before WRC-97, geostationary orbital avoidance was not required for fixed services and therefore, the power flux-density limits given in Table S21.4 of the Radio Regulations may give excessive interference to the fixed service;

d) that those administrations identified by footnote No. **S5.462A** of the Radio Regulations have adopted power flux-density limits lower that those shown in Table S21.4 to protect the fixed service;

~~d~~e) that no studies have been conducted in this frequency band by the ITU-R on the power flux-density values to apply to space stations of geostationary earth exploration-satellite services where no geostationary orbital avoidance has been implemented by stations of the fixed service,

considering further

that the band 8 025 - 8 400 MHz is used extensively by the fixed service~~s~~ in accordance with ITU-R channel arrangements for the 8 GHz band (see Recommendation ITU-R ~~Recommendation~~ F.386) and is also used by some countries for television outside broadcast services,

resolves ~~to invite ITU-R~~

to invite ITU-R to ~~urgently~~ study as matter of urgency the required power flux-density limits to be applied to space stations of geostationary earth exploration-satellite services (space-to-Earth) in the frequency band 8 025 - 8 400 MHz where no orbital avoidance has been implemented by fixed services sharing the band.~~,~~

urges administrations

to provide ITU-R with the necessary technical parameters of fixed service links requiring protection in this frequency band.

5

RESOLUTION [COM5-13]

THE USE OF THE FREQUENCY BAND 420 - 470 MHz BY THE EARTH EXPLORATION-SATELLITE SERVICE (ACTIVE)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 1992, identified an urgent need for assessment and systematic observations of forest cover and rate of forest degradation in tropical and temperate regions;

b) that during ~~WRC-97~~this Conference, many countries agreed to the principle that ITU should take action in response to the need identified by UNCED;

c) that frequencies around 450 MHz have been identified as having the unique capability to penetrate the canopy of forests and to determine the ground-trunk interaction;

d) that a bandwidth of about 6 MHz is considered necessary to provide the required resolution,

recognizing

~~e~~a) that this Conference considered a proposal for a secondary allocation for the earth exploration-satellite service (active) within the frequency band 432 - 438 MHz;

~~f~~b) that the Report of the Conference Preparatory Meeting (CPM-97) stated that WRC-97 may deem it appropriate to defer consideration of this agenda item to WRC-99, by which time all relevant studies should be completed;

~~g~~c) that CPM-97 concluded that the spaceborne sensors cannot be considered technically compatible with terrestrial tracking radars without restriction upon the spaceborne sensors;

~~h~~d) that measures may be needed to minimize interference to fixed, mobile, mobile satellite, amateur ~~and~~, amateur satellite and space operation services in countries where primary allocations to those services are provided by the Radio Regulations,

resolves

1 ~~that~~to invite ITU-R to study, as a matter of urgency, emission criteria, specific sharing criteria, and operational characteristics for spaceborne sensors in the frequency band 420 - 470 MHz, and develop a relevant Recommendation;

2 ~~that~~to invite ITU-R to develop ~~a report to CPM-99~~an ITU-R Report by the date of CPM-99 on the specific emission and operational characteristics used by the earth exploration-satellite service (active) in order to minimize the potential interference to existing services, and in order to support the selection of a frequency band having the optimal sharing scenarios;

3 that, based on proposals from administrations, and taking into account the results of the ITU-R studies, the ITU-R ~~r~~Report mentioned in *resolves* 2, and the CPM-99 Report, [WRC-99] ~~shall~~should consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency band 420 - 470 MHz.

6

Res. No.	CPM Report No.	Subject	Relevant ITU-R references	Action recommended
211	5.1	Terrestrial/space sharing in 2 GHz	SA.1154	Suppress
643	5.10	Inter-satellite links in 50 - 70 GHz	S.1326 S.1327	Suppress
710	5.2	Satellite services requirements in 400 MHz	SA.1258	Suppress
711	7.6.2	Relocation 2 GHz to >20 GHz	SA.364 SA.1019 SA.1154 F.1247 F.1248 SA.1273 SA.1274 SA.1275	~~Abrogate~~
712	5.7	Allocations to space services	Fully considered	~~Suppress~~ [Revision]
Rec. 706	5.6	Passive sensors in 18 GHz		

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 6

THIRD SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has concluded its consideration of *resolves* 3 of Resolution 712 under agenda item 1.9.2. It is continuing its consideration of *resolves* 4 and 5 of that Resolution. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

ANNEX

MOD

MHz
890 – 1 240

Allocation to Services		
Region 1	Region 2	Region 3
1 215 – 1 240	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.329 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) S5.330 S5.331 [~~S5.333~~] S5.332	

MOD

MHz
1 240 – 1 452

Allocation to Services		
Region 1	Region 2	Region 3
1 240 – 1 260	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.329 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur S5.330 S5.331 S5.332 [~~S5.333~~] S5.334 S5.335	
1 260 – 1 300	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur S5.282 S5.330 S5.331 S5.332 [~~S5.333~~] S5.334 S5.335	

ADD **S5.332** In the band 1 215 - 1 300 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis.

SUP **S5.333**

ADD **S5.335** In Canada and the United States in the band 1 240 - 1 300 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause interference to, claim protection from, or otherwise impose constraints on operation or development of the aeronautical radionavigation service.

MOD

MHz
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
3 100 – 3 300	RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active) S5.149 [~~S5.333~~] S5.428	

MOD

MHz
4 500 – 5 470

Allocation to Services		
Region 1	Region 2	Region 3
5 250 – 5 255	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH ~~Space Research~~ [~~S5.333~~] S5.447D S5.448 S5.448A	
5 255 – 5 350	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) [~~S5.333~~] S5.448 S5.448A	

ADD **S5.447D** The allocation of the band 5 250 - 5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

ADD **S5.448A** The use of the frequency band 5 250 - 5 350 MHz by the earth exploration-satellite (active) and space research services (active) shall not constrain the future development and deployment of the radiolocation service.

MOD

MHz
4 500 – 5 470

Allocation to Services		
Region 1	Region 2	Region 3
5 350 – 5 460	AERONAUTICAL RADIONAVIGATION S5.449 EARTH EXPLORATION-SATELLITE (active) Radiolocation S5.448B	

ADD **S5.448B** The earth exploration-satellite (active) service operating in the 5 350 - 5 460 MHz frequency band shall not cause harmful interference to, nor constrain the use and development of, the aeronautical radionavigation service.

MOD

GHz
12.5 – 14.25

Allocation to Services		
Region 1	Region 2	Region 3
13.25 – 13.4	AERONAUTICAL RADIONAVIGATION S5.497 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) ~~S5.498~~ S5.499 S5.498A	
13.4 – 13.75	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH Standard Frequency and Time Signal-Satellite (Earth-to-space) ~~Space Research~~ [~~S5.333~~] S5.499 S5.500 S5.501 S5.501A	
13.75 – 14	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research [~~S5.333~~] S5.499 S5.500 S5.501 S5.502 S5.503 S5.503A	

SUP **S5.498**

ADD **S5.498A** The earth exploration-satellite (active) and space research (active) services operating in the 13.25 - 13.4 GHz band shall not cause harmful interference to, nor constrain the use and development of, the aeronautical radionavigation service.

ADD **S5.501A** In the band 13.4 - 13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, nor constrain the use and development of, the radiolocation service. Other uses of the band by the space research service are on a secondary basis.

MOD

GHz
14.8 – 17.3

Allocation to Services		
Region 1	Region 2	Region 3
17.2 – 17.3	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) ~~Earth Exploration-Satellite (active)~~ ~~Space Research (active)~~ S5.512 S5.513 S5.513A	

ADD **S5.513A** Spaceborne active sensors operating in the frequency band 17.2 - 17.3 GHz shall not cause harmful interference to, nor constrain the development of the radiolocation and other services allocated on a primary basis.

RESOLUTION [COM5-3]

THE USE OF THE 5 250 - 5 350 MHz FREQUENCY BAND BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the radiolocation service is allocated on a primary basis in the frequency band 5 250 - 5 350 MHz;

b) that the earth exploration-satellite (active) and the space research (active) services are allocated on a primary basis in the frequency band 5 250 - 5 350 MHz;

c) that the Conference Preparatory Meeting Report to WRC-97 concluded that terrestrial radars would not cause unacceptable interference to either synthetic aperture radars, scatterometers or altimeters, and that active spaceborne sensors and radiolocation systems are compatible provided that spaceborne-synthetic aperture radar and scatterometer design parameters are appropriately selected to ensure compatibility with radiolocation systems;

d) that guidelines for the appropriate selection of these parameters are contained in Recommendation ITU-R SA.1280;

e) that spaceborne sensors have operated since 1991 in this frequency band with no known reports of interference;

f) that many administrations have radiolocation systems operating in this band,

resolves

1 to invite ITU-R to study, as a matter of urgency, specific sharing criteria and emission characteristics for spaceborne active sensors operating in this frequency band, which may add to Recommendation ITU-R SA.1280;

2 that when developing spaceborne active sensors operating in this frequency band, administrations should take into account the guidelines for design of spaceborne active sensors found in Recommendation ITU-R SA.1280.

RESOLUTION [COM5-4]

THE USE OF THE 5 350 - 5 460 MHz FREQUENCY BAND BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the aeronautical radionavigation service is allocated on a primary basis in the frequency band 5 350 - 5 460 MHz;

b) that the earth exploration-satellite (active) service is allocated on a primary basis in the frequency band 5 350 - 5 460 MHz;

c) that the Conference Preparatory Meeting Report to WRC-97 concluded that spaceborne altimeters and aeronautical radionavigation systems are compatible in this frequency band;

d) that the Conference Preparatory Meeting Report to WRC-97 concluded that spaceborne synthetic aperture radars and airborne weather radars operating in the aeronautical radionavigation service are compatible in this frequency band;

e) that guidelines for the appropriate selection of design parameters of active spaceborne sensors are contained in Recommendation ITU-R SA.1280,

resolves

to invite ITU-R to study specific sharing criteria and emission characteristics for spaceborne active sensors operating in the frequency band 5 350 - 5 460 MHz, with a view to provide further guidance on the matter of compatibility with aeronautical radionavigation systems. Such guidance will assist in the design of spaceborne active sensors, and may add to Recommendation ITU-R SA.1280.

MOD

MHz
7 450 – 8 175

Allocation to Services		
Region 1	Region 2	Region 3
7 450 - 7 550	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile S5.461A	
7 550 - 7 750	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	
7 750 - ~~7 900~~7 850	FIXED MOBILE except aeronautical mobile METEOROLOGICAL-SATELLITE (space-to-Earth) S5.461B	
~~7 750~~7 850 - 7 900	FIXED MOBILE except aeronautical mobile	

ADD S5.461A The use of the frequency band 7 450 - 7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary satellite systems. Non-geostationary meteorological-satellite systems notified before 30 November 1997 in the band 7 450 - 7 550 MHz may continue to operate on primary basis until the end of their lifetime.

ADD S5.461B The use of the band 7 750 - 7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellites.

MOD TABLE S21-4

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
…					
7 250 - ~~7 750~~7 850 MHz	Meteorological-Satellite (S-E)	-152	-152+0.5(δ-5)	-142	4 kHz
…					

NOC

GHz
12.5 – 14.25

Allocation to Services		
Region 1	Region 2	Region 3
12.75 – 13.25	FIXED FIXED-SATELLITE (Earth-to-space) S5.441 MOBILE Space Research (deep space) (space-to-Earth)	

NOC

GHz
14.8 – 17.3

Allocation to Services		
Region 1	Region 2	Region 3
16.6 – 17.1	RADIOLOCATION Space Research (deep space) (Earth-to-space) S5.512 S5.513	

MOD

GHz
86 – 116

Allocation to Services		
Region 1	Region 2	Region 3
92 – ~~95~~94	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION S5.149 S5.556	
~~92 – 95~~94 – 94.1	~~FIXED~~ ~~FIXED-SATELLITE (Earth-to-space)~~ ~~MOBILE~~ RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) ~~S5.149 S5.556~~ S5.562	
~~92~~94.1 – 95	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION S5.149 S5.556	

ADD S5.562 The use of the band 94 - 94.1 GHz by the earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

NOTE FROM THE CHAIRMAN OF COMMITTEE 5
TO THE CHAIRMAN OF COMMITTEE 4

MODIFICATION TO ARTICLE S18

Working Group 5B, when dealing with MSS issues under agenda item 1.9.1, considered the proposal CAN/35/146 to modify Article S18. It was concluded, after some discussion, that this matter falls rather within the purview of Committee 4. Please find annexed the text of the proposed modification, which includes changes introduced in the discussions in WG 5B. It is forwarded for consideration in Committee 4.

V. RAWAT
Chairman of Committee 5

Annex: 1

ADD **S18.2*bis*** **[2021*bis*]** (2*bis*)To facilitate the circulation of [GMPCS] stations [and earth stations], a group of two or more administrations may allow exceptions to the provisions of No. **S18.1 [2020]** by concluding a special agreement to mutually recognize the licences issued by the countries which are parties to the special agreement. These agreements and/or arrangements shall be communicated to the Secretary-General.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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10 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 1 OF THE PLENARY

NOTE FROM THE CHAIRMAN OF COMMITTEE 4
TO THE CHAIRMAN OF WG PL1

AGENDA FOR WRC-99

Committee 4 wishes to bring to your attention Document [DT/80] which has been agreed in principle by this Committee. The decision requires that a report from an Intersessional Group of Experts study the BSS Plans for Regions 1 and 3 with a view to a potential increase in minimum channel capacity to around 10 equivalent analogue channels for countries in Regions 1 and 3.

The report is to be assessed by WRC-99 for possible further revision by a competent conference no later than [2000/2001].

Accordingly, WG PL1 is requested to make provision for consideration of the report of the IGE on the WRC-99 agenda.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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14 November 1997
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COMMITTEE 4

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 4

(REGULATORY AND ASSOCIATED ISSUES)

Thursday, 6 November 1997, at 1435 hours

Chairman: Mr. E. GEORGE (Germany)

	Subjects discussed	**Documents**
1	Oral reports by the Working Group Chairmen	-
2	Planning parameters and related issues for use in the revision of Appendices 30 and 30A (continued)	56, 160(Add.2)

1 Oral reports by the Working Group Chairmen

1.1 The **Chairman of Working Group 4A** said that the majority of issues relating to Articles S13 and S14 had reached drafting stage and that a large measure of agreement had been reached regarding the elimination of inconsistencies and obsolete elements in Appendix S4. Certain matters relating to Appendices S4 and S5 and Articles S9 and S11 had been deferred pending input from other working groups. Consideration of Resolution 71 (WRC-95) in relation to Article S19 had been completed, and the report of an ad hoc Group which had been discussing incorporation by reference would soon be available.

1.2 In response to a comment voiced by the **delegate of the United Arab Emirates**, the **Chairman** gave an assurance that the objection of the United Arab Emirates to No. S13.12A of the CPM Report would receive due attention when Working Group 4A presented the relevant report. He recalled that the CPM Report, which had no legal status, had been approved six months previously, as a basis for the Conference discussions. The Committee could not modify the Report.

1.3 The **Chairman of Working Group 4B** said that consideration of Appendix S18 and coordination procedures for NAVTEX were now complete. Discussions on the global maritime distress and safety system (GMDSS) (agenda item 1.6.1) and on the order of priority of communications in the maritime mobile and maritime mobile-satellite services (agenda item 1.6.3) were also drawing to a close. Consideration of new digital technology in the maritime radiotelephony channels (agenda item 1.6.5) was still pending, but no controversy was expected. Rapid resolution of difficulties encountered with respect to bands used by certain East European countries for aeronautical fixed services (in connection with agenda item 1.5) was anticipated. Subjects pending deliberation included Chapter SVII, and modifications to Resolution 331 (Mob-87) relating to the transition to GMDSS, as well as a new resolution on shore-to-ship distress alerting priority, and the general review of resolutions and recommendations (agenda item 4).

1.4 The **Chairman of Working Group 4C** said that slow but steady progress had been made during the three meetings held by the Working Group since Committee 4 had last convened. Article S12 had been fully scrutinized and an ad hoc group had already begun its drafting work. Another ad hoc group had almost completed its review of procedural and coordination issues and would be reporting back the following day. Most of the proposals concerning the bringing forward of the date of use of the extension bands decided by WARC-92 had been introduced, but cooperation from all sides would be vital to a timely termination of the debate.

1.5 The **Chairman of Working Group 4D** reported that most of the planning issues had been resolved and that consensus had been reached on an approach to the one outstanding issue, with a decision likely the following day. The conclusion on planning was still pending, as were the identification of an approach for dealing with incompatibility issues and the consideration of section 2 of Annex 2 to Document 56 (identifying areas possibly requiring Conference decisions). Other subjects pending discussion included non-GSO systems, Resolution 506 (Rev.Orb-88) and a request for a replanning conference. An approach for dealing with regulatory and procedural issues relating to the revision of Appendices 30 and 30A also needed to be identified.

1.6 The **delegate of Syria** said that the Chairman of Working Group 4D had failed to mention that the Syrian delegation, with the support of many administrations, had requested an increase from five to ten channels. It was to be regretted that consideration of the Arab proposals (Document 76) had been relegated to the end of the agenda. Valuable time risked being wasted on the deliberation

of procedural issues. Instead, priority should be given to planning and to satellite system assignments, areas which were crucial for developing countries.

1.7 The **Chairman** assured the previous speaker that Document 76 would receive due attention. The **Chairman of Working Group 4D** added that he would do his best to ensure that at least one hour of the meeting that afternoon would be spent considering Document 76. The **delegate of the Islamic Republic of Iran** endorsed the comments made by the **delegate of Syria** and said that he hoped Document 44 would also be discussed that afternoon.

2 Planning parameters and related issues for use in the revision of Appendices 30 and 30A (continued) (Documents 56, 160(Add.2))

2.1 The **delegate of the Lao People's Democratic Republic** recalled the reservation made by his Administration at the previous meeting and confirmed that the proposed orbital positions 122° and 128° E for Hong Kong would be incompatible with networks LSTAR3B and LSTAR4B (at 116° and 126° E) which were already under implementation. His Administration requested that a more suitable location should be found for the new assignment to Hong Kong. The relevant information had been submitted to the Bureau prior to WRC-95.

2.2 The **delegate of China** stressed the importance of moving ahead with the planning exercise.

2.3 The **Chairman** observed that Hong Kong was being treated as a new country and, as such, had priority over incomplete coordination cases. The Bureau was presumably entitled to accept the orbital position submitted by China for the Hong Kong beam. He urged both parties to work towards a mutually satisfactory solution through informal negotiations. He then invited the Committee to examine Addendum 2 to Document 160.

2.4 Referring to item 2.20 in Addendum 2 to Document 160, the **Chairman of Working Group 4D** said that Working Group 4D had been in favour of granting assignments to the Republic of Seychelles, but would appreciate legal advice.

2.5 The **Legal Adviser** said that the Bureau had advised the Seychelles that, if it wished its request to be considered by the Conference with a view to be included in the revised Plan, it may consider first to become a Member of the Union. The Administration concerned had not, however, pursued membership. A dangerous precedent would be set if assignments were to be granted to a non-member.

2.6 The **Chairman** took it that the request for assignments would be reconsidered once the Republic of Seychelles became a member.

2.7 It was so **agreed.**

2.8 In respect of item 1.2.8 relating to double entries, the **delegate of Australia** observed that, in Working Group 4D, approval of the assignments to Russia (points a) and b)) by the APT countries, on behalf of whom he spoke, had been conditional on satisfactory resolution of point c), the question of agreement by the Working Group on equitable access to orbit and spectrum resources for BSS and FSS services for Regions 1 and 3 countries. He would prefer approval to remain conditional in the expectation that the matter would be resolved at the next meeting of the Working Group.

2.9 In reply to a question from the **Chairman**, the **representative of BR** said it was his understanding that the planning exercise could proceed on the basis of the orbital position characteristics set out in points a) and b), pending agreement on point c).

2.10 The **Chairman of Working Group 4D** endorsed the view that the planning exercise need not be deferred, but observed that only point b) was contingent on a decision in respect of point c).

2.11 In reply to the **delegate of the Islamic Republic of Iran**, the **Chairman of ad hoc Group 3 of Working Group 4D** said that, since his Group had already completed its work, any consideration of extending the arc for BSS assignments from 38° E to 34° E would have to be taken up in Working Group 4D, when his Group's report was discussed.

2.12 It was so **agreed**.

2.13 The **delegate of Russia** considered that there was no need to defer approval of points a) and b), which referred to his country alone and should not be contingent on point c). Moreover, if point b), application of the principles used for "new countries" in the assignment of orbital position 110° E to Russia, were not approved, his country would not have sufficient capacity to cover its territory. Since the 1977 Plan there had been provision for the use of orbital position 110° E in the territory now covered by the Russian Federation, and protection was provided for that. Furthermore, it had been agreed that all standard Plan assignments would be used. It would therefore be most unreasonable to change the 110° E assignment.

2.14 The **Chairman** assured the delegate of Russia that there was no intention to deny his country sufficient capacity to cover its territory. The **Chairman of Working Group 4D** added that the question of sharing between Regions 1 and 3 was close to resolution, and he therefore saw no reason why point b) would not be approved.

2.15 The **Chairman of ad hoc Group 3 of Working Group 4D** explained that a number of countries in Region 3 had expressed concern at the extent of resources being used for BSS in Region 1 and were seeking agreement on a reasonable limit so that the future development of their FSS services would not be unduly impeded. He confirmed that the parties concerned were close to agreement and drew attention to the proposed text set out in Document DT/64.

2.16 The **delegate of the United Kingdom**, supported by the **delegate of Kazakstan**, suggested that the matter should be referred to Working Group 4D for detailed discussion before further consideration by the Committee.

2.17 Point a) of item 1.2.8 in Addendum 2 to Document 160 was **approved** and it was **agreed** that points b) and c) should be referred back to Working Group 4D pending resolution of the sharing issue. On that understanding, it was further **agreed** that the planning exercise should go ahead on the basis of points a) and b).

2.18 Item 1.2.3, which covered the modifications of Step 2 orbital positions agreed during the Conference, was **approved**.

2.19 Referring to item 1.1.1, minimization of the number of Plan options or alternatives, the **Chairman** said that the options in questions were set out in detail in Document DT/39.

2.20 The proposals for item 1.1.1 in Addendum 2 to Document 160 were **approved**.

2.21 The **representative of BR** said that the adoption of the "alternative Step 1 option" would require: grouping the downlink of Portugal with that of the Azores; changing the downlink channels of Azores, Portugal and Cape Verde; removing the 31° W orbital position from the orbital position scenario; and use of a new orbital position at 33.5° W with redistribution of the beams currently at 31° W to orbital positions 30° W and 33.5° W. In order for BR to go ahead with the planning exercise, the Committee might wish to decide: that orbital position 33.5° W should be considered as

from the orbital positions of the Plan; that orbital position 31° W should be suppressed from the orbital positions of the Plan; and that administrations having beams on 31° W should be considered as having agreed to the redistribution of their beam or beams, to orbital positions 30° W and 33.5° W as per paragraph 2.5.1 of Document 56. The Bureau would inform countries not present at the Conference of the Conference decisions in that regard.

2.22 It was so **agreed**.

2.23 Working Group 4D's suggestion that planning should go ahead on the basis of the assignment of five channels for Kazakstan and Ukraine and that, subsequently, BR should examine the possibility of accommodating additional channels, in accordance with the proposals set out by those countries in Documents 123(Add.1) and 167, respectively, was **approved**.

2.24 With reference to item 1.2.9, the **delegate of Syria** said that a number of administrations had supported a request to increase the number of channels per beam assigned to countries in Region 1 from five to ten and he hoped that the request would be taken into consideration when the planning exercises were implemented. The **delegates of Kuwait** and **Saudi Arabia** endorsed those comments.

2.25 The **delegate of Indonesia** suggested that the words "five channels per orbital position" should be amended to read "five channels per beam". In addition an equal number of channels, i.e. five, should be assigned to countries in Regions 1 and 3.

2.26 The **delegate of the United Kingdom** said that it might be reasonable to consider the request by the delegate of Syria once all the elements necessary for the successful completion of Steps 1 and 2 had been implemented. He expressed concern about the potential impact on the BR's resources of undertaking such an examination during the Conference.

2.27 The **Chairman of Working Group 4D** said that there had been extensive discussion of the request in the Working Group. While administrations had the right to change their requirements it was impossible, in view of the time and resources available, to increase the number of channels assigned to countries in Region 1 from five to ten at the present Conference. The Bureau could consider any such requests once Steps 1 and 2 had been completed.

2.28 The **delegate of Viet Nam** observed that a number of APT countries had supported an increase from four to five in the number of channels per beam assigned to countries in Region 3. The **delegate of Australia** added that, although there had been strong support for such an increase, it had been recognized that any increase would delay completion of Step 2, which was a priority. There were a number of requests that might be given further consideration when Step 2 had been completed.

2.29 The **delegate of Japan** said that the planning should be effected on the basis of the assignments referred to in item 1.2.9.

2.30 The **delegate of the Islamic Republic of Iran** supported the comments made by the delegate of Syria and proposed that the same number of channels per beam should be assigned to countries in Region 3.

The meeting was suspended at 1555 hours and resumed at 1935 hours.

2.31 The **Chairman** invited the representative of BR to explain the implications of planning with an increased number of channels.

2.32 The **representative of BR** pointed out that any increase in the number of channels should be identified by the administration concerned and the channels in question made known to BR. Increasing the number of channels from five to ten would be a major departure from the Baseline Option and the variants being considered by the Bureau. Although relatively little time would be required to conduct a BSS systems compatibility analysis, it was more important to ensure compatibility with other services, which would take approximately two weeks. Furthermore, an increase in the number of channels would undoubtedly lead to greater incompatibilities with respect to other services, the Region 2 Plan and the BSS assignments in relation to each other, which would have to be resolved.

2.33 The **delegate of Australia** said that if BR had to go back to a new starting position with regard to the assignment of channels, the primary objective of providing assignments to countries that were currently without them might be jeopardized. He therefore proposed that the minimum additional requirements that had already been determined should be taken as a basis, and that BR should be commissioned to complete Step 1 as quickly as possible. Countries could then perhaps advise the Bureau of specific, rather than general, changes that they wished to be included in Step 2.

2.34 The **delegate of Burkina Faso** proposed that the Plan should be established by the end of the Conference on the basis of the channels currently assigned. The assignment of five additional channels could be considered by WRC-99.

2.35 The **delegate of the United Kingdom** said that, although the assignment of ten channels might be desirable, it was not appropriate to consider the matter at the present juncture, in the light of the points raised by the representative of BR. He stressed the importance of completing Steps 1 and 2 in accordance with Resolution 531 (WRC-95). The proposal by the delegate of Burkina Faso would therefore appear to be a very sensible solution.

2.36 The **delegate of Syria** said that the proposal made by the delegate of Burkina Faso might constitute a way forward. Since 1995, the Bureau had been aware that some administrations were not satisfied with the assignment of five channels. He hoped that all countries would be treated equally when Steps 1 and 2 were implemented.

2.37 The **delegates of India, the Lao People's Democratic Republic** and **Japan** endorsed the views expressed by the delegates of Australia, Burkina Faso and the United Kingdom.

2.38 The **delegate of Russia** supported the proposals put forward by Australia and Burkina Faso.

2.39 The **delegates of the Czech Republic, Portugal, Croatia** and **Slovakia** supported the proposals put forward by the delegates of Australia and the United Kingdom.

2.40 The **delegate of Senegal** supported the proposal put forward by the delegate of Burkina Faso.

2.41 The **delegates of Germany** and **Pakistan** supported the proposal put forward by the delegate of Australia.

2.42 The **delegate of the Netherlands** said that planning should continue on the basis of the channels currently assigned. Resolution 531 (WRC-95) should remain the basis for further work.

2.43 The **delegate of Indonesia**, supported by the **delegate of Viet Nam**, said that five channels per beam should be allocated to both Region 1 and Region 3.

2.44 The **delegate of Syria** observed that Step 1 of the planning exercise was actually the same as the 1977 Plan. Developing countries could not achieve an economically viable system with only five channels. Furthermore, no limit had been stipulated in Article 4 for the number of channels assigned and it should therefore be possible to assign ten channels to the countries in Region 1.

2.45 The **delegates of the United Arab Emirates, Lebanon, Jordan, Yemen** and **Egypt** endorsed the views expressed by the delegate of Syria.

2.46 The **Chairman** said that no one would disagree that it would be highly desirable to have more channels. However, as the representative of BR had indicated, it would not be possible to assign ten channels to countries in Region 1 at the present Conference.

2.47 The **delegate of Tanzania** said that, given the fact that the Bureau would need time to consider the new requirements, the proposal made by the representative of Burkina Faso might constitute an appropriate solution.

2.48 The **delegate of Algeria** said that, although the Bureau had little time to consider new requirements, there was considerable support for increasing the number of channels assigned to countries in Region 1 and a decision on the matter should be taken at the present Conference.

2.49 The **delegate of France** said that new requirements could not be introduced at such a late stage if tangible results were to be achieved at the Conference. The most obvious solution, therefore, was to adopt the approach suggested by the delegate of Australia and to carry out a new planning exercise in the future to address the principle of equitable access to orbit and spectrum resources for all countries and services. He stressed that it was undesirable to leave the spectrum resources unused, yet the resources covered in Appendices 30, 30A and 30B could not currently be used from the same space station or orbital location because of the procedures relating to Appendix 30B. That matter should also be addressed in the future planning exercise.

2.50 The **delegate of the United Kingdom** said that too much time was being devoted to the issue and he proposed that studies should be initiated to determine the extent to which replanning could increase capacity for all countries. Furthermore, Working Group PLEN-1 should be requested to place on the agenda of WRC-99 an item to consider the results of the studies. If replanning was considered feasible, WRC-99 should decide on a date for such replanning and take any necessary decisions. Speaking on a point of order in accordance with No. 388 of the Convention, he called for closure of the debate.

2.51 The **Chairman** indicated that, as stated in No. 399 of the Convention, no more than two speakers might oppose that proposal, after which it would be put to the vote.

2.52 The **delegate of Syria** said that it was not realistic to close the debate since, although there had been a number of proposals as to how to resolve the question of the number of channels per beam, no clear solution had emerged. Further, he wished to make it clear that Syria was not opposed to Step 2 of the planning exercise; he did, however, wish to see an increase in the number of channels per beam. In his view, only the countries of Region 1 should participate in the vote on closure of the debate. The **delegate of Morocco** endorsed those views.

2.53 The **Chairman** said that all delegations present and entitled to vote were entitled to participate in a vote on closure.

2.54 The **delegate of Syria**, speaking on a point of order, called for a secret ballot on the motion for closure of debate.

2.55 The **Chairman** explained that, in accordance with No. 422 of the Convention, voting might take place by a secret ballot provided at least five of the delegations present and entitled to vote so requested.

2.56 The **delegates of the United States**, **Morocco**, **the Islamic Republic of Iran**, **Malaysia**, **the United Arab Emirates** and **Jordan** supported the call for a secret ballot.

2.57 The **delegate of Syria**, speaking on a point of order, drew attention to No. 399 of the Convention which stipulated that, should the motion for closure of the debate succeed, the Chairman was required to call immediately for a vote on the point at issue. He requested clarification of the precise issue on which administrations would be asked to vote in that event.

2.58 The **Legal Adviser** indicated that a vote on the substantive point at issue would only be called for if the motion for closure of debate succeeded, and the proposition for such a vote would therefore only need to be formulated if that were the case. The **Chairman** endorsed that view.

2.59 The **delegate of Syria** could not agree with that interpretation; the point at issue had to be clarified before the vote on closure took place.

2.60 The **Legal Adviser** said that, since the various arguments on the number of channels per beam had already been aired during the debate, interested parties might wish to hold informal discussions during the counting of the votes with a view to drafting a compromise proposal to be put to the Committee should the motion for closure be carried. In reply to further comments by the **delegate of Syria**, he expressed the view that No. 405 of the Convention, which stated that questions of competence that might arise should be settled before a vote was taken on the substance of the matter under discussion, was irrelevant since no one had questioned the competence of the Conference to decide on the number of channels per beam.

2.61 The **Chairman** invited the Committee to proceed to a vote on the motion for closure of debate by secret ballot. At his invitation, the delegations of the Netherlands, China and Canada agreed to act as tellers.

2.62 The **delegate of Syria** wished it to be recorded that, in his view, the Chairman was not acting in accordance with the Constitution and the Convention, and that he could not agree with the legal interpretation given.

2.63 A vote on the motion for closure of debate was taken by secret ballot.

Number of ballot papers:	69
Number of invalid ballots:	1
Number of valid ballots:	68
Number of abstentions:	1
Number of Member States voting	67
Number of votes in favour:	45
Number of votes against:	22

2.64 The motion for closure of debate was **carried**.

2.65 The **Chairman**, explaining that he was now required to put the point at issue to the vote, proposed the following amended text for item 1.2.9 in Addendum 2 to Document 160, for the consideration of the Committee:

"1.2.9 Number of channels per beam:

1) Consequential to the choice of the baseline option for Step 2, in general, all new countries in Region 1 will be assigned five channels per beam and, in Region 3, four channels per beam.

2) Immediate studies will be initiated to examine to what extent a future replanning can accommodate more than five channels per beam in Region 1 and more than four channels per beam in Region 3.

3) On the basis of the results of the studies in accordance with item 2), WRC-99 will decide on the future actions to be taken with regard to replanning."

2.66 The **delegate of Syria** suggested that item 3 of the Chairman's proposal should be amended to indicate that WRC-99 should undertake the appropriate replanning should the studies show that an increase in the number of channels was feasible.

2.67 The **delegate of Mali**, supported by the **delegates of Senegal, Syria** and **Guinea**, proposed that item 2 should be amended to indicate that an increase to ten channels be considered by WRC-99, along the lines proposed earlier by the **delegate of Burkina Faso**.

2.68 In response to a request from the **Chairman**, the **delegate of Syria** proposed that item 2) of the Chairman's proposal should be amended by replacing the words following "can accommodate" with "at least ten channels per beam for both Regions 1 and 3". The Chairman's proposal for item 3) should be replaced by the following text "If those studies prove the feasibility of such a number of channels per beam, WRC-99 shall carry out a replanning accordingly and take the necessary decisions".

2.69 The **Chairman** explained that, in accordance with Nos. 435 and 436 of the Convention, the Committee should proceed to vote on the amendments before considering the proposal as a whole, and that the amendment furthest from the original text should be considered first. He therefore invited the Committee to consider the proposed amendment to item 3) of his proposal.

2.70 The **delegate of Algeria** expressed regret at the repeated recourse to voting, contrary to the spirit of consensus which usually prevailed in ITU. Formulation of the proposition prior to the vote on closure of debate, as suggested by the delegate of Syria, would have clarified the point at issue.

2.71 The **delegate of Russia** said that item 1.2.9, as proposed by the Chairman, should be put to an immediate vote. Given the importance of the remaining proposals, which received his Administration's support, and their potential impact on the work of BR for the following two years, he suggested that they could be incorporated in a draft resolution, which could be put before the Committee for consideration.

2.72 Following a request by the **Chairman** for advice on the procedure to be followed, the **Legal Adviser** confirmed that it would be correct to proceed immediately to a vote, as required by No. 399 of the Constitution. However, not all delegations seemed to be clear about the precise wording of individual proposals. Given the importance of the issue, the Chairman and individual administrations might wish to submit proposals to Committee 4 in writing, in accordance with Nos. 376 and 377 of the Convention.

2.73 The **Chairman** suggested that an attempt should be made to reach an informal compromise on a "package proposal". Administrations could then propose further amendments. An additional meeting would be scheduled to pursue the matter further.

2.74 The **delegate of Syria** expressed support for attempting to draw up a "package proposal", as requested by the Chairman, whether it took the form of a resolution, a document or a liaison statement to Working Group PLEN-1. He did not agree, however, with the Russian Federation that a vote should first be taken on item 1.2.9. That item was an essential part of the whole and should not be treated separately. The **delegate of Senegal** endorsed that view.

2.75 The **delegate of Australia** expressed support for the Russian proposal, but questioned the implications of a decision on item 1.2.9, given that the references to beams and orbital positions were unclear. He would appreciate legal advice to clarify whether the vote would affect decisions already taken by Working Group 4D in cases where a greater number of channels had been assigned. Furthermore, what would be the consequences for 1977 allocations, given the range in the number of channels per beam?

2.76 The **delegate of Lebanon** stressed that although the situation was complex, consensus was possible and would be in the interests of all, particularly developing countries.

2.77 The **delegate of Mali** agreed with the Chairman that a written proposal reflecting the various concerns which had been raised might provide a way out of the dilemma. Legal advice would be needed as to whether a text could be submitted to the Committee for further discussion, or whether an immediate vote would be required.

2.78 The **Chairman** took it that interested parties would meet with him informally in order to draft a compromise proposal for consideration by Committee 4. Legal advice would be sought regarding the requirement to vote in the event of an informal consensus being reached.

2.79 It was so **agreed**.

The meeting rose at 2235 hours.

The Secretary:
T. GAVRILOV

The Chairman:
E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

NOTE BY THE CHAIRMAN OF WORKING GROUP 5A

CONSIDERATION OF THE 18.6 - 18.8 GHz FREQUENCY BAND

Please note that Working Group 5B is considering the addition of non-geostationary FSS systems in the frequency band 17.7 - 18.8 GHz as well as the establishment of power flux-density limits to apply in the band.

Working Group 5A was assigned the task of considering a change in the allocation status of the earth exploration-satellite service (passive) and space research service (passive) in Regions 1 and 3. The issue is, as yet, unresolved, but hinges *inter alia* on the identification of appropriate power flux-density limits.

Please ensure that the Chairman of Working Group 5B takes into account the needs of the earth exploration-satellite service (passive) and space research service (passive) in the 18.6 - 18.8 GHz band during his deliberations.

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COMMITTEE 4

RECOMMENDED AGENDA ITEMS FOR WRC-99 AND WRC-01

Working Group 4B identified the following items, consequential to work on WRC-97 agenda item 1.6, for consideration by WG PL1, for inclusion in the agendas for WRC-99 and WRC-01:

Items for WRC-99 agenda[1]

1 ~~Review the use of the HF bands by the aeronautical mobile and maritime mobile services~~ To consider the frequencies and channelling arrangements in the MF and HF bands allocated to the maritime-mobile service with a view to~~ward~~ meet~~ing~~ the changing needs of ~~these~~this service~~s~~ (Resolution [**COM4-10**]) and in order to provide protection of HF distress and safety communications (Resolution [**COM4-9**]);

2 review the use of the frequency band 415 - 526.5 kHz by the aeronautical radionavigation and maritime mobile services;

11 to consider the use of new technology in the band 156 - 174 MHz and, if appropriate, make the consequential revision of Appendix **S18** to the Radio Regulations (Resolution [**COM4-3**]).

Items for WRC-01 agenda[1]

~~2 review of the frequency and channel arrangements in the MF and HF bands allocated on a primary basis to the maritime mobile service, taking into account the use of new digital technology~~ (NOTE - covered by WRC-99 agenda item 1, as modified);

10 to consider ~~the provisions of Chapter IX~~/Appendix **S13** and Resolution **331 (Rev.WRC-97)** with a view to their deletion and, if appropriate, consider related changes to Chapter ~~N IX~~/SVII and other provisions of the Radio Regulations as ~~stipulated in Resolution **331 (Mob-87)** and appropriate actions on the issues dealt with in Resolution 200 (Rev.Mob-87)~~necessary, taking into account the continued transition to the Global Maritime Distress and Safety System (GMDSS);

11 if resources permit, consideration of studies;

11.1 relating to the exhaustion of the maritime mobile service identity numbering resource (Resolution [**COM4-5**]); and

11.2 relating to the shore-to-ship distress communication priorities (Resolution [**COM4-11**]).

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[1] The numbering and the proposed revisions refer to the proposals contained in Document DT/70 (Working Group 1 of the Plenary).

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COMMITTEE 4

REPORT OF THE CHAIRMAN OF WORKING GROUP 4B CONCERNING THE RECOMMENDED FUTURE WRC AGENDAS AND THE REVISION OF RESOLUTIONS AND RECOMMENDATIONS ACCORDING TO RESOLUTION 94

PART 1: RECOMMENDED FUTURE WRC AGENDAS

PART 2: REVISION OF RESOLUTIONS AND RECOMMENDATIONS.

PART 1

Working Group 4B recommends in its approved texts action by further WRCs as follows:

WRC-99

Art. S52	Special Rules Relating to the Use of Frequencies
App. S17	Frequencies and Channelling Arrangements in the High-Frequency Bands for the Maritime Mobile Service
Res. COM4-9	Protection of distress and safety communication on the frequencies 12 290 kHz and 16 420 kHz from harmful interference caused by these frequencies also being used for non-safety calling
Res. COM4-10	Use of digital telecommunication technologies in the MF and HF bands by the maritime mobile service
App. S18	Table of Transmitting Frequencies in the VHF Maritime Mobile Band - review of technical studies for new digital technologies
Res. COM4-3	Review of the improved efficiency in the use of the band 156 - 174 MHz by stations in the maritime mobile service
Rec. 318	Improved Efficiency in the Use of the Appendix 18 VHF Frequency Spectrum for Maritime Mobile Communications

WRC-01

App. S13	Distress and Safety Communications (Non-GMDSS) - with a view to deletion of Appendix S13 if appropriate
Chapter SVII	Distress and Safety Communications
Res. 331	Transition to the Global Maritime Distress and Safety System (GMDSS) and Continuation of the Distress and Safety Provisions in Appendix S13

Other future WRCs

Working Group 4B recommends consideration of the following Resolutions, Recommendations and associated provisions at a future WRC at the earliest opportunity permitted by available conference resources.

Res. COM4-5	Relating to the exhaustion of the maritime mobile service identity numbering resource
Res. COM4-11	Relating to studies required to provide priority to distress communications originated by shore-based search and rescue authorities
Res. COM4-7	Use of frequency adaptive systems in the MF/HF bands
Res. 300	Use and Notification of the Paired Frequencies Reserved for Narrow-Band Direct-Printing Telegraphy and Data Transmission Systems in the HF Bands Allocated on an Exclusive Basis to the Maritime Mobile Service
Res. 310	Frequency Provisions for Development and Future Implementation of Ship Movement Telemetry, Telecommand and Data Exchange Systems
Res. 705	Mutual Protection of Radio Services Operating in the Band 70 - 130 kHz
Res. 706	Operation of the Fixed and Maritime Mobile Services in the Band 90 - 110 kHz
Rec. 14	Identification and Location of Special Vessels, such as Medical Transports, by Means of Standard Maritime Radar Transponders
Rec. 319	The Need for Technical Improvements to Minimize the Risk of Adjacent Channel Harmful Interference Between Assignments Used for Narrow-Band Direct-Printing Telegraphy and Data Transmission Systems in Accordance with Appendix ~~32~~S17 and Resolution 300 (Rev.Mob-87)

PART 2

Proposed action on Resolutions and Recommendations of WARC/WRC included in the Radio Regulations which have incidence to the terms of reference of Working Group 4B.

Resolution No.	Subject	Proposed action
39 (Mob-83)	Use of Monitoring Facilities in applying decisions of WARCs	SUP
200 (Rev.Mob-87)	Class of emission on 2 182 kHz	SUP
209 (Mob-87)	Enlarging the scope of GMDSS	SUP
210 (Mob-87)	Reducing the guardband around 500 kHz	SUP
300 (Rev.Mob-87)	Paired frequencies for NBDPT in HF/MMS	NOC/(MOD)
310 (Rev.Mob-87)	Ship movement telemetry	MOD
312 (Rev.Mob-87)	Group channels for Morse telegraphy	MOD
314 (Rev.Mob-87)	Collection of data for oceanography	SUP
315	Abolition of mobile station charges	SUP
316 (Rev.Mob-87)	Technical cooperation in Maritime Telecommunications	SUP
319 (Rev.Mob-87)	General review in 4/8 MHz (MMS/FX)	SUP

322 (Rev.Mob-87)	Watch keeping on GMDSS frequencies	SUP
323 (Mob-87)	Use of 156.525 MHz for DSC	SUP
330 (Mob-87)	Frequencies for RTF calling around 3 MHz	SUP
331 (Mob-87)	Entry into force of the GMDSS provisions	MOD
333 (Mob-87)	Use of HF for MSI	SUP
335 (Mob-87)	Non-paired frequencies, NBDP, ships	SUP
336 (Mob-87)	DSC on maritime HF	SUP
338 (WARC-92)	Provisional application of Art. 56	SUP
339 (WRC-95)	Coordination of NAVTEX	MOD
601 (Rev.Mob-87)	Standards for EPIRBs on 121.5 MHz/243 MHz	SUP
602 (Rev.Mob-87)	Differential data correction on maritime radiobeacons	NOC/(MOD)
705 (Mob-83)	Protection of services in 70 - 130 kHz	NOC/(MOD)
706 (Mob-83)	Operation of FX/MOB in 90 - 110 kHz	NOC/(MOD)

Recommendation No.	**Subject**	**Proposed action**
4	National and International Circuits in HF	SUP
5	Reducing the congestion in HF	SUP
7	Standard forms for licences (ship station, aeronautical station)	MOD
8	Automatic identification	NOC/(MOD)
14 (Mob-87)	Identification of special vessels	NOC/(MOD)
302 (Rev.Mob-87)	Improved use of HF in MMS	SUP
303 (Rev.Mob-87)	Use of 4 125 kHz and 6 215 kHz for distress and safety	SUP
304	Frequencies in Appendix 16, Section B	SUP
305	Use of CH15 and CH17 of AP18	SUP
306	Watch on 156.8 MHz	SUP
310	Automated UHF MM	SUP
312 (Rev.Mob-87)	Interconnection of MM in PSTN	SUP
316 (Rev.Mob-87)	Use of SES within harbours	NOC/(MOD)
317 (Rev.Mob-87)	Priority Indicator Signal (MMS)	SUP
318 (Mob-87)	Improved AP18	NOC/(MOD)
319 (Mob-87)	Adjacent channel interference in HF-MMS	NOC/(MOD)
603 (Rev.Mob-87)	Technical provisions for maritime radiobeacon in the African area	SUP

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COMMITTEE 4

Mongolia

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 1.10

Introduction

Mongolia is a country with a large territory. It has the demand and capability to establish a broadcasting-satellite system in the future on the basis of its national satellite system. The Mongolian Administration has been studying the planning exercises and relevant data for Mongolia, which provide for the allocation of five channels at orbital position 74º E.

The Administration of Mongolia points out that the said number of channels and beams are not sufficient for proper implementation of the broadcasting-satellite project in Mongolia.

MNG/221/1

- If technically feasible, to allocate an additional five channels of orbital position 74º E for satellite broadcasting for Mongolia.
- Or, if the above is technically impossible, to allocate an additional five channels for satellite broadcasting for Mongolia at one of the following orbital positions: 104º E, 110º E, 116º E.

The Administration of Mongolia would like to request the Conference to give Mongolia an additional channel and beam if BR calculations show that to be possible.

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COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4B

SIXTH REPORT FROM WORKING GROUP 4B TO COMMITTEE 4

At its seventh meeting on 10 November 1997, the Working Group reviewed all of the remaining texts of Articles S5, S19, S33, S51, S52, Appendix S15, Resolutions 210, 312, 330, COM4-9, COM4-10, COM4-11 and COM4-12, and the corresponding provisions were modified accordingly.

The agreed texts and proposed actions, as reproduced, are submitted to Committee 4 for consideration.

ARTICLE S5

MOD **S5.73** The band 285 - 325 kHz (283.5 - 325 kHz in Region 1), in the maritime radionavigation service~~, radiobeacon stations~~ may ~~also~~ be used to transmit supplementary navigational information using narrow-band techniques, on condition that ~~the prime function of the beacon is not significantly degraded~~no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

MOD **S5.81** The bands 490 - 495 kHz and 505 - 510 kHz shall be subject to the provisions of Appendix **S13** ~~until the entry into force of the reduced guardband in accordance with Resolution **210 (Mob-87)**~~paragraph 15(1), Part A2.

ARTICLE S19

ADD **S19.96A** 5 digit ship station selective call numbers are assigned to SSFC equipment (as described in Recommendation ITU-R M.257-3) for calling in the radiotelephony and for phasing of the NBDP equipment (as described in Recommendation ITU-R M.476-5). Within one administration the same 5 digit number may be used:

– for identification of ship stations fitted with both SSFC and NBDP equipment;

– for identification of ship stations of two different ships fitted with either SSFC or NBDP equipment only.

ARTICLE S33

Operational Procedures for Urgency and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section V. Transmission of Maritime Safety Information[1]

NOC **S33.39** *A. General*

ADD **S33.39A** § 20A.(1) Messages from ship stations containing information concerning the presence of cyclones shall be transmitted, with the least possible delay, to other mobile stations in the vicinity and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

ADD **S33.39.1** [1] Maritime Safety Information includes navigation and meteorological warnings, forecasts and other urgent messages pertaining to safety normally transmitted to/from ships, between ships and between ship and coast stations or coast earth stations.

ADD **S33.39B** (2) Messages from ship stations containing the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, shall be transmitted as soon as possible to other ships in the vicinity, and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

ADD **Section VIII. Medical Advice**

ADD **S33.54** § 29. (1) Mobile stations requiring medical advice may obtain it through any of the land stations shown in the List of Radiodetermination and Special Service Stations.

ADD **S33.55** (2) Communications concerning medical advice may be preceded by the urgency signal.

ARTICLE S51

Conditions to Be Observed in the Maritime Services

Section I. Maritime Mobile Service

D. Ship Stations Using Radiotelephony

MOD **S51.53** *a)* send class J3E ~~or H3E~~ emissions on a carrier frequency of 2 182 kHz and receive class J3E ~~or H3E~~ emissions on a carrier frequency of 2 182 kHz, except for such apparatus as is referred to in No. **S51.56** (see also Appendix **S13**);

ARTICLE S52

MOD **S52.3** (2) Where these provisions specify class F1B emission, class J2B emission and classes J1D and J2D emission shall be considered equivalent. However, these emissions shall not be used with the HF distress and safety frequencies listed in Appendix **S15**.

MOD **S52.7** ~~§ 1.~~ (2) ~~In~~From 1 February 1999, in the maritime mobile service, ~~after full implementation of the GMDSS,~~ the frequency 490 kHz ~~will be~~is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing telegraphy ~~(see Resolution **210 (Mob-87)**)~~.

MOD **S52.54** § 19. (1) Ship Morse radiotelegraph stations equipped to operate in the bands specified in Appendix **S17** Part B, Sections IV and V shall employ ~~only~~ the classes of emission mentioned in No. **S52.2** for Morse telegraphy at speeds not exceeding 40 bauds. Survival craft stations may use class A2A or H2A emissions in these bands (see Appendix **S13**)[6].

S52.54.1 [6] Additionally, use of classes J2B, J1D and J2D emissions are permitted on a non-interference basis to A1A Morse operations. However, these emissions shall not be used on the HF safety and distress frequencies listed in Appendix **S13**.

MOD **S52.55** (2) Except as provided for in No. **S52.222.1**, coast Morse radiotelegraph stations operating in the bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz shall not use Type 2 emissions (see No. **S52.18** and **S52.54**).

MOD **S52.189** § 87. (1) The frequency 2 182 kHz[1] is an international distress frequency for radiotelephony (see Appendix **S13** for details of its use for distress, urgency, safety and emergency position-indicating radiobeacon (EPIRB) purposes). ~~The class of emission to be used for radiotelephony on the frequency 2 182 kHz shall be J3E or H3E (see No. **S51.53**) except for such apparatus as is referred to in No. **S51.56**.~~

MOD **S52.217** § 96. (1) The class of emission to be used for analogue radiotelephony in the bands between 4 000 kHz and 27 500 kHz shall be J3E; for digital telecommunications in those bands the class of emission shall be J1D or J2D.

MOD **S52.219** (3) Coast ~~radiotelephone~~ stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 and 27 500 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

MOD **S52.220** (4) Ship ~~radiotelephone~~ stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 kHz and 27 500 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

NOC

TABLE S15.1

Frequencies below 30 MHz

TABLE S15.2

Frequencies above 30 MHz (VHF/UHF)

	Frequency (in kHz)	Description of usage	Notes
NOC	*156.8	VHF-CH16	The frequency 156.8 MHz is used for distress and safety communications by radiotelephony (see also Appendix **S13**). Additionally, the frequency 156.8 MHz may be used by aircraft stations for safety purposes only.
MOD	1 530 - 1 544	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 530 - 1 544 MHz is used for distress and safety purposes in the space-to-Earth direction in the maritime mobile-satellite service. GMDSS safety communications have priority in this band.
MOD	1 626.5 - 1 645.5	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 626.5 - 1 645.5 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. GMDSS safety communications have priority in this band for the maritime mobile-satellite service and where allocated to the mobile-satellite service by [RR **S5.353**, RR **S5.353A**].

SUP RESOLUTION No. 210 (Mob-87)

SUP RESOLUTION No. 330 (Mob-87)

MOD

ANNEX TO RESOLUTION 312 (Rev.WRC-97)

Distribution plan for group channels HF A1A Morse coast stations by countries and areas
~~(Annex to Resolution 312 (Rev.Mob-87))~~[1]

Group 1		Group 2		Group 3		Group 4	
AGL	LBR	ALG	GRC	ALS	LTU	AFS	MLT
AZE	MAU	ATN	HKG	ARG	LVA	ALB	NZL
AZR	MDG	ARS W[4]	HNG	BRM	MDR	ARS E[8]	PNG
B	MRT	BEL	HOL	CAN CL[7]	MOZ	AUS	POR
BAH	NCG	BEN	I	CAN E[7]	MRA	BUL	PTC
BER	NCL	BRB	KOR	CAN NE[7]	MRC	CHN[9]	RUS AN
BGD	OCE	CBG	LBN	CHN	NIG	COD	RUS EO
BHR	OMA	CHR	MEX	~~D~~	NOR	~~D~~	RUS NW
CAN W[2]	PHL	CKH	MRT	DNK	NRU	E	RUS SW
CAN NW[2]	PTR	CLM	NCL	EST	PAK	FJI	RUS W
CHL	REU	CLN	OCE	FIN	RUS EO	GEO	SEN
CNR	ROU	CME	PNR	GEO	RUS NW	GNE	SEY
CTI	RUS AS	COG	POL	GHA	RUS SW	IND E	SLM
DJI	SNG	CPV	PRG	GNB	RUS W	INS	SMA
EQA	STP	CTR	PRU	GUI	S	IRQ	SRL
ERI	SUI	CUB	REU	GUM	SVN	J	SUR
ETH	TKM	CYP	RUS NW	GUY	TRD	JOR	SYR
F	UKR	CZE	RUS EO	HRV	TUR	KWT	TGO
G	USA E[3]	DOM	SDN	HWA	UKR	LVA	TUN
IND W	VUT	EGY	SVK	IRN	USA W	LTU	UKR
IRL		F	THA	ISL	VEN	MAU	URG
ISR		FLK	USA SO[6]	JMC	YUG	MDA	VTN
KEN		G[5]	VUT	LBY		MLA	YEM
KRE		GAB	YEM				
		GMB					

NOTES

1 The meaning of the symbols is given in Tables B1 and 4E1 of the Preface to the International Frequency List and the Weekly Circular.

2 Canada (West Coast and Western Arctic).

3 United States of America (East Coast).

4 Saudi Arabia (Kingdom of) (West).

5 22 MHz only.

6 United States of America (Gulf Coast).

7 Canada (East Coast and Eastern Arctic).

8 Saudi Arabia (Kingdom of) (East).

9 China (Province of Taiwan).

ADD

DRAFT RESOLUTION [~~EUR-2~~COM4-9]

PROTECTION OF DISTRESS AND SAFETY COMMUNICATIONS ON THE FREQUENCIES 12 290 kHz AND 16 420 kHz FROM HARMFUL INTERFERENCE CAUSED BY THESE FREQUENCIES BEING USED ALSO FOR NON-SAFETY CALLING

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the frequencies 4 125 kHz, 6 215 kHz, 12 290 kHz and 16 420 kHz are used for distress and safety communications as well as for non-safety calling by ships in radiotelephony in accordance with the provisions of Article **S31** and **S52.221** respectively;

b) that considerably worldwide interference to distress and safety communications is experienced especially on the frequencies 12 290 kHz and 16 420 kHz due to ships being unable to monitor these frequencies before calling,

noting further

a) that the recommended agenda for the 1999 World Radiocommunication Conference (WRC-99) includes an agenda item [2.4] for review of the channel arrangements in the HF bands for the maritime mobile service, taking into account the use of new digital technology;

b) that consideration of this item by WRC-99 may result in making the frequencies 12 290 kHz and 16 420 kHz exclusive for distress and safety communications,

recognizing

that it is of vital importance for the safety of life at sea that distress and safety communications can be carried out without being hampered by harmful interference,

resolves

1 to urge administrations:

a) to move, where relevant, their coast stations calling frequencies from the channels 1221 and 1621 to any other suitable HF channel;

b) to request ships under their jurisdiction to refrain from using the frequencies 12 290 kHz and 16 420 kHz for non-safety calling;

2 to recommend that WRC-99 consider this subject,

instructs the Secretary General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

ADD

DRAFT RESOLUTION [~~IAP-8~~COM4-10]

USE OF DIGITAL TELECOMMUNICATION TECHNOLOGIES IN THE MF AND HF BANDS BY THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that amendments to Article **S52** of the Radio Regulations were adopted by WRC-97 to provide for the use of digital telecommunications technology in the maritime HF telephony and A1A Morse bands;

b) that there may be a need for consequential changes in Appendix **S17** to reflect provisions made at WRC-97 for the use of digital telecommunications in the maritime HF telephony bands,

considering further

a) that it would be desirable to extend the use of digital telecommunications technology to the maritime HF A1A Morse telegraphy bands as well;

b) that since these bands are significantly underutilized at present; and

c) that the requirement for use of new digital technologies in the maritime service is growing rapidly,

noting

a) that Resolution **720** of WRC-95 sets forth a preliminary agenda for WRC-99 that includes item 2.4 "Review of channel arrangements in HF bands for the maritime mobile service, taking into account the use of new digital technology";

b) that use of the maritime HF A1A Morse radiotelegraphy bands is steadily diminishing with the results that Administrations are commencing already to use these bands for digital telecommunications systems on a non-interference basis,

resolves

that WRC-99 undertake changes to Appendix **S17** and Article **S52** as needed~~.~~,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

ADD

DRAFT RESOLUTION [~~IAP-7~~COM4-11]

RELATING TO STUDIES REQUIRED TO PROVIDE PRIORITY TO DISTRESS COMMUNICATIONS ORIGINATED BY SHORE-BASED SEARCH AND RESCUE AUTHORITIES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that Article **S53** provides priority for distress and safety communications which involves immediate access to the space segment;

b) that distress and safety communications from shore-based search and rescue authorities will also be given priority access to the space segment;

c) that when ships are communicating using their ship earth stations, these priority requests are not able to be completed without manual intervention using a manual procedure to clear all traffic to and from the ship,

considering

a) that ships in distress or involved with the distress case may desire to use their ship earth stations to notify friends, family and business associates on shore;

b) that this could cause priority requests from Rescue Authorities, to receive a busy signal; and

c) that unacceptable delays may be encountered to manually clear all traffic to and from the ships,

recognizing

a) that life and property may be lost if rapid access is not provided for distress related communications originated by the Rescue Authority;

b) that the International Maritime Organization (IMO) has considered this problem and decided that provisions are necessary for giving priority to shore originated distress communications;

c) that Inmarsat is currently studying how to provide such priority communications,

resolves to invite

1 the ITU-R to monitor the status of these studies and to develop suitable recommendations;

2 the IMO to develop requirements for priority communications for distress related communications originated by shore-based search and rescue authorities and to submit these requirements to the next competent WRC,

further invites the Council

to place this Resolution on the agenda of ~~the next~~a future competent world radiocommunication conference,

instructs the Secretary-General

to communicate this Resolution to IMO and the International Civil Aviation Organization (ICAO) for appropriate action and comment.

DRAFT NEW RESOLUTION [COM4-12] (WRC-97)

OPERATIONAL PROCEDURES FOR CANCELLING FALSE DISTRESS ALERTS IN THE GMDSS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the SOLAS 1974, as amended, prescribes that ships subject to this Convention shall be fitted with GMDSS equipment as appropriate;

b) that non-SOLAS vessels are also being equipped with GMDSS equipment;

c) that false distress alerts are a significant problem within the GMDSS,

noting

that the International Maritime Organization (IMO) has developed similar operational procedures to cancel false distress alerts,

resolves

a) to urge administrations to take all necessary measures to avoid false distress alerts and to minimize the unnecessary burden on rescue organizations which occur;

b) to urge administrations to encourage the correct use of GMDSS equipment with particular attention to appropriate training;

c) to urge administrations to implement operational procedures contained in the Annex to this Resolution; and

d) that administrations should take any consequential appropriate action in this respect,

instructs the Secretary-General

to inform IMO of this Resolution.

ANNEX TO RESOLUTION [COM4-12]

CANCELLING OF FALSE DISTRESS ALERTS

If a distress alert is inadvertently transmitted, the following steps shall be taken to cancel the distress alert.

1. VHF Digital Selective Calling

1) Reset the equipment immediately;
2) Set to Channel 16, and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and Maritime Mobile Service Identity, and cancel the false distress alert.

2. MF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony transmission on 2 182 kHz, and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert.

3. HF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony on the distress and safety frequency in each band in which a false distress alert was transmitted (see Appendix **S15**), and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert on the distress and safety frequency in each band in which the false distress alert was transmitted.

4. Inmarsat Ship Earth Station

Notify the appropriate rescue coordination centre that the alert is cancelled by sending a distress priority message by way of the same coast earth station through which the false distress alert was sent. Provide ship name, call sign, Inmarsat identity with the cancelled alert message.

5. Emergency Position Indicating Radiobeacon (EPIRB)

If for any reason an EPIRB is activated inadvertently, contact the appropriate rescue coordination centre through a coast station or land earth station and cancel the distress alert.

6. General

Notwithstanding the above, ships may use additional appropriate means available to them to inform the appropriate authorities that a false distress alert has been transmitted and should be cancelled.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 223-E
10 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

France

PROPOSALS FOR THE WORK OF THE CONFERENCE

METHODOLOGY FOR THE TREATMENT OF PROCEDURAL AND REGULATORY QUESTIONS RELATED TO APPENDICES 30 AND 30A

During the discussion held during WG 4D and SWG 4D1, it was understood that several countries were not in a position to accept the revision of Appendices 30 and 30A as proposed by CEPT and ASP. France is therefore ready to accept that the proposal of merging Appendices 30 and 30A for all three Regions into a single Article S10 be considered at WRC-99. Recommendation 35 (WRC-95) would therefore be revised accordingly in order not to lose all the work carried out on this issue since WRC-95.

Nevertheless, France considers, as many other countries, that some cleaning up work and improvements can be introduced during WRC-97. One of the main improvements is the question of procedures applicable to unplanned services in respect of the Plans (EUR/5/153).

The existing procedures in the Radio Regulations currently applicable to other than the planned services, in respect of the Plans encompass Articles 6 and 7 of Appendices 30 and 30A, as well as Articles 11, 13 and 14. As a result of the work of the VGE and the decisions of WRC-95, the latter three Articles have been included in Articles S9 to S14 of the simplified procedures. Several provisions in these Articles (i.e. Nos. S9.8, S9.9, S9.17 and S9.19) were intended to reflect Articles 6 and 7 of Appendices 30 and 30A, but their application was suspended pending the decisions of WRC-97.

The CEPT Administrations mentioned in Part D.1 of Document 5 and its Addendum propose that WRC-97 adopts the example text provided by the CPM as Articles S9 and S11 and Appendix S5 for the provisions applicable to unplanned services in respect of Appendices S30 and S30A Plans, together with the modifications identified in Section 6.5.4 of the CPM Report in order to resolve deficiencies reported by the CPM. In line with the approach taken by the VGE and endorsed by WRC-95, these simplified provisions would facilitate the understanding and application of the procedures governing the modifications of these Plans, without changing the substance of these procedures. These provisions would supersede the following provisions currently in force:

– Article 6 of Appendix 30;
– Article 6 of Appendix 30A;
– Article 7 of Appendix 30;

– Article 7 of Appendix 30A;

– Annex 4 of Appendix 30.

This proposal is considered as not affecting the integrity of Region 2 Plans and is therefore in line with Resolutions 524 and 531. It is also considered as not affecting other services in Region 2 using the same frequency bands as Regions 1 and 3 Plans.

The methodology proposed by France for the treatment of procedural and regulatory questions related to Appendices 30 and 30A would therefore be the following:

Step 1 Editorial amendments of Appendices 30 and 30A;

Step 2 Revision of Recommendation 35 (WRC-95) in order to schedule the merging of Appendices 30 and 30A for all three Regions (i.e. Article S10) at WRC-99;

Step 3 Improvement of procedures (including proposal EUR/5/153).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 224-E
18 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

FOURTH MEETING OF COMMITTEE 5

(ALLOCATIONS AND ASSOCIATED ISSUES)

Friday, 7 November 1997, at 1430 hours

Chairman: Mrs. V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Second and third reports of Working Group 5A	182, 194
2	Third report of Working Group 5B	197
3	Consideration of country footnotes (continued)	174(Corr.1)
4	Second report of Working Group 5C	199

1 Second and third reports of Working Group 5A (Documents 182, 194)

Second report (continued) (Document 182)

1.1 The **Chairman of Working Group 5A** said that sections 1 to 7 inclusive had already been approved at the third meeting of the Committee, which thus only had to take a decision on draft Resolutions COM5-3 and COM5-4. In the former, the words "one should" in *resolves* 2 should be replaced by "the administrations shall".

1.2 The **Chairman** having noted that there were no comments, draft Resolutions COM5-3 and COM5-4 in Document 182 were **approved**.

Third report (Document 194)

1.3 The **Chairman of Working Group 5A** introduced Document 194, drawing attention to sections 2 and 3, and in particular to the bands 12.75 - 13.25 GHz and 16.6 - 17.1 GHz in the Table of Frequency Allocations, which the Working Group had decided not to modify.

1.4 The **delegate of the Islamic Republic of Iran** pointed out with regard to section 1 that the frequency bands between 7 750 and 7 900 MHz were used intensively by his Administration's terrestrial networks and that the comment he had made to that effect in Working Group 5A was not reflected in the proposed Table; he proposed the insertion of an additional footnote to protect his Administration's terrestrial services, which would use the wording proposed by his delegation for other frequency bands. The **Chairman** drew the speaker's attention to the power flux-density limit proposed in Table S21-4 and asked whether that value would guarantee protection for his Administration's fixed services. The **delegate of the Islamic Republic of Iran** replied that the limit might be acceptable provided it was approved by ITU-R and mentioned in the footnote in question. The **Chairman of Working Group 5A** said that, following consideration of the question by the Working Group, he had prepared a text calling for urgent study by ITU-R to verify those specific power flux-density values, a text which had been approved and which he intended to submit to the Committee when it considered, in particular, the frequency band 8 025 - 8 400 MHz. The **Chairman** proposed that the delegate of the Islamic Republic of Iran might reach agreement with the Chairman of Working Group 5A on the precise wording of the text in question, which could be inserted later.

1.5 It was so **agreed**.

1.6 With regard to section 4, the **Chairman** drew attention to the deletion of No. S5.551 in the bands 35.2 - 35.5 and 35.5 - 36 GHz. The **Chairman of Working Group 5A** added that the decision to allocate the frequency band 35.5 - 36 GHz to the earth exploration-satellite (active) and space research services would have to be combined with any decision that might subsequently be taken by Working Group 5C under agenda item 1.9.6.

1.7 The **delegate of the Islamic Republic of Iran** having noted that, contrary to a proposal by CPM, there was no Table of Frequency Allocations for the bands between 7 145 and 7 235 MHz, the **Chairman of Working Group 5A** said that the Working Group had considered that frequency range at one of its earlier meetings, but had decided not to make any allocation. The corresponding footnotes would have to be the subject of modifications, which were being prepared.

1.8 Due account being taken of the comments made and the explanations given, Document 194 was **approved**.

2 Third report of Working Group 5B (Document 197)

2.1 The **Chairman of Working Group 5B** first of all reported on the situation with regard to the 2 GHz band (section 1): no modification was to be made to the MSS allocations in the 2 GHz band for Regions 1 and 3, but the question of the date of entry into force of the Region 2 specific MSS allocations in the bands 2 010 - 2 025 and 2 160 - 2 170 MHz had not yet been settled; as far as the Table of Frequency Allocations in the band 2 010 - 2 170 MHz was concerned, it had been decided to delete the square brackets.

2.2 The **delegate of Canada** pointed out that further consideration of the question of the date of entry into force would undoubtedly affect the footnotes referred to in that part of the Table and that the text ought to indicate clearly, as the deleted square brackets had done, that the question remained pending. The **Chairman**, supporting that view, proposed that all the footnotes in question under Region 2 in that part of the Table should be put in square brackets. The **delegate of Canada** having pointed out that such a solution would exclude the possibility of any new footnote, the **delegate of New Zealand** suggested that only No. S5.389C should be put in square brackets, thereby leaving all options open. The **delegate of Mexico** observed that No. S5.389C as modified had already been adopted and could be approved forthwith by the Committee, which would then only need to revise No. S5.388A. The **delegate of Cuba** said that the two footnotes formed a whole and that the text of one depended on that of the other. After asking to see the text of No. S5.388A, the **Chairman** proposed that pending further action No. S5.389C should be put in square brackets.

2.3 It was so **agreed**.

2.4 Taking account of the above decision and the comments made, section 1 of Document 197 was **approved**.

2.5 Concerning section 2, the **Chairman of Working Group 5B** said that with regard to the use of frequencies in the bands 19.6 - 19.7 and 29.4 - 29.5 GHz by non-GSO MSS feeder links, the majority of participants in the Working Group had been in favour of removing the application of No. S22.2, but that most of the CEPT countries had considered that the designation of 2 x 300 MHz would be sufficient. It had not proved possible to resolve that difference of views in the debate that had followed, and he therefore invited the Committee either to decide to delete the square brackets, or to postpone its decision, so as to allow the Working Group to dispose of the outstanding problems.

MOD Table 18.6 - 20.2 GHz, MOD Table 27 - 29.9 GHz

2.6 The **delegate of France** said that the CEPT countries had agreed not on the designation of 2 x 400 MHz, but on the application of Resolution 46 (Rev.WRC-95) to the additional 100 MHz. The **Chairman** took it that in that case the square brackets which had been put round the tables in question could be deleted.

2.7 It was so **agreed**.

MOD S5.523C

2.8 The **Chairman** pointed out that the provision in question was a completely new one. It derived from Resolution 120 (WRC-95).

2.9 The **delegate of France**, supported by the **delegate of Portugal**, observed that as it stood the footnote was not very clear and that at the very least the date given, 18 November 1995, should be replaced by 21 November 1997; however, he feared that to do that would make the provision

retroactive in effect. The **delegate of the United Kingdom**, recognizing that it would be undesirable to depart from the principle of non-retroactivity, suggested having two footnotes, one on the bands on which a decision had already been taken by WRC-95 and the other on the additional 100 MHz on which a decision was being taken by the present Conference. The **delegate of Canada** stressed that it must be quite clear that a unified regime applied to the whole 400 MHz. The delegate of Mexico supported this view. The **representative of EUTELSAT** drew attention to the difficulties that would be caused by retroactive application of the provision. The **delegate of Brazil** did not think two footnotes were necessary. The **delegates of India,** and **Luxembourg** were in favour of having two footnotes with two dates. The **delegate of the United States** referred to the text of Resolution 120 (WRC-95), saying that it was quite clear. He too thought it would be simpler to have two footnotes. The **delegates of Cape Verde** and **Germany** saw no objection to keeping just one footnote. However, the delegate of Germany stated that the date should be 21 November 1997.

2.10 After an exchange of views between the **delegates of France** and **Canada**, the **Chairman** proposed that there should be two footnotes: the first, MOD S5.523C, would be as in Document 197, except that the frequency bands would be "19.3 - 19.6 GHz and 29.1 - 29.4 GHz"; the second, MOD S5.523C.1, would have the same text as MOD S5.523C, except that the frequency bands would be 19.6 - 19.7 GHz and 29.4 - 29.5 GHz and the date would be 21 November 1997. She further suggested that new proposed MOD S5.523C.1 should be put in square brackets pending further consultation and discussion.

2.11 It was so **agreed**.

2.12 **MOD S5.523C**, as amended, was **approved**.

MOD S5.523D

2.13 The **Chairman** suggested that the reference to S5.523C should be followed by a reference to [MOD S5.523C.1]. The **delegate of Luxembourg** said that he would support that modification once Committee 4 had given its opinion on the matter. The **Chairman** took note of that reservation.

MOD S5.535A

2.14 The **Chairman** proposed that where there was a reference to MOD S5.523C, a reference to [MOD S5.523C.1] should be added. In addition, the square brackets around the whole note should be deleted.

2.15 It was so **agreed**.

MOD S5.541A

2.16 The **delegate of Germany** said that Resolution 121 (WRC-95), which dealt solely with the band 29.1 - 29.4 GHz, ought to be brought up to date. The **Chairman** proposed that MOD S5.541A should remain in square brackets until the modification to Resolution 121 had been approved by the Committee.

2.17 It was so **agreed**.

SUP Resolution 120 (WRC-95)

2.18 At the request of the **delegate of Canada**, it was **agreed** to leave Resolution 120 pending, and in square brackets, until the regulatory question regarding MOD S5.523C.1 had been settled.

2.19 Concerning section 3, the **Chairman of Working Group 5B** said that the regulatory provisions ought to be gone into in greater detail, in the light of the considerations relating to different methods of sharing, e.g. coordination under Resolution 46 (Rev.WRC-95) and the power flux-density and equivalent power flux-density limits in proposals EUR/5 and F/62. Those points were being dealt with in ad hoc Group 4.

3 Consideration of country footnotes (continued) (Document 174(Corr.1))

MOD S5.323

3.1 Approved.

4 Second report of Working Group 5C (Document 199)

4.1 The **Chairman of the Drafting Group of Working Group 5C** introduced Document 199, adding that the Working Group had kept strictly to the provisions of Resolution 408 (Mob-87), that it had tried to delete all secondary allocations in the band 136 - 137 MHz, together with the relevant footnotes, and that it was proposing transitional periods for a number of services. In the Table MOD 75.2 - 137 MHz, all secondary allocations had been deleted, but some footnotes had been found necessary (MOD S5.198, MOD S5.203, ADD S5.203A, MOD S5.202). In addition, the Working Group was recommending the deletion of Resolution 408 (Mob-87). It had also decided, at its last meeting, to delete the draft Resolution on the last page of Document 199.

MOD Table 75.2 - 137 MHz, MOD S5.198, MOD S5.203

4.2 Approved.

ADD S5.203A

4.3 The **delegate of the United Kingdom** proposed that the following sentence should be added at the end of the footnote: "Administrations shall gradually cease the operation of existing stations until that date".

4.4 The **Chairman** proposed that the square brackets round the date 2005 should be deleted.

4.5 With those amendments, ADD S5.203A was **approved**.

The meeting rose at 1610 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97

WORLD
RADIOCOMMUNICATION
CONFERENCE

Corrigendum 1 to
Document 225-E
17 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

REPORT OF WORKING GROUP 5C TO COMMITTEE 5

Throughout this document, the country code FYROM should be replaced by MKD.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 225-E
10 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

REPORT OF WORKING GROUP 5C TO COMMITTEE 5

Agenda item 1.1 - Requests from administrations to delete their country footnotes or to have their country's name deleted from footnotes, if no longer required, within the limits of Resolution 26 (WRC-95)

The attached proposals for modifications to the footnotes of the Radio Regulations were agreed at the last meeting of Working Group 5 and are submitted for consideration.

The attached proposals are classified as follows:

a) removal of country's names from *additional allocation* and proposals to delete entire footnote (page 2);

b) country's names to be removed from footnotes where the removal gives a lower category of the service (page 18);

c) country's names to be removed from footnotes where the removal gives a higher category of the service (page 20);

d) other removals of country's names from *alternative allocation* (page 21);

e) proposals for a NOC or NOC (page 26).

a) Removal of country's names from *additional allocation* and proposals to delete entire footnote on the basis "when other countries mentioned in the footnote do agree"

BLR/45/1
MDA/81/1
MOD S5.55

Additional allocation: in Armenia, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 - 17 kHz is also allocated to the radionavigation service on a primary basis.

MDA/81/1
MOD S5.56

The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

BLR/45/2
MDA/81/1
MOD S5.58

Additional allocation: in Armenia, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 67 - 70 kHz is also allocated to the radionavigation service on a primary basis.

G/34/1
SUP S5.63

In the band 90 - 110 kHz, the United Kingdom may continue to use its coast radiotelegraph stations in operation on 14 September 1987, on a secondary basis.

ARM/48/1
BLR/45/3
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.67

Additional allocation: in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Romania, ~~Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.

ASP/41/1
SNG/82/1
MOD S5.91

Additional allocation: in ~~Australia,~~ the Philippines, ~~Singapore~~ and Sri Lanka, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.

FYROM/180/1
MOD S5.99 *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq, ~~The Former Yugoslav Republic of Macedonia,~~ Libya, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MWI/88/2
MOD S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya~~, Malawi~~, Somalia, Swaziland and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

ASP/14/2
MDA/81/1
MOD S5.128 In Afghanistan, Argentina, Armenia, ~~Australia,~~ Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakstan, Mali, ~~Moldova,~~ Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

BLR/45/4
MOD S5.152 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

BLR/45/5
MOD S5.154 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ Georgia, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18 068 - 18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.

AFS/71/1
MOD S5.160 *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, ~~South Africa,~~ Swaziland and Zaire, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

HNG/18/1
MOD S5.177 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, ~~Hungary,~~ Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.

BEL/127/4
E/10/4
G/34/7
MOD S5.181

Additional allocation: in Germany, Austria~~, Belgium~~, Cyprus, Denmark, Egypt, ~~Spain,~~ France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, ~~the United Kingdom,~~ Sweden and Switzerland, the band 74.8 - 75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

HNG/18/2
MOD S5.184

Additional allocation: in Bulgaria~~, Hungary~~ and Romania, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).

SNG/82/4
MOD S5.186

Additional allocation: in Region 3 (except in the Republic of Korea, India, Japan, Malaysia~~,~~ and the Philippines ~~and Singapore~~), the band 79.75 - 80.25 MHz is also allocated to the radio astronomy service on a primary basis.

[ASP/14/3
IRN/44/1
SUP S5.186]

[ASP/14/4
MOD S5.149 In making assignments to stations of other services to which the bands:

13 360 - 13 410 kHz,
25 550 - 25 670 kHz,
37.5 - 38.25 MHz,
73 - 74.6 MHz in Regions 1 and 3,
~~79.75 - 80.25 MHz in Region 3,~~
150.05 - 153 MHz in Region 1,
322 - 328.6 MHz*,
406.1 - 410 MHz,
608 - 614 MHz in Regions 1 and 3,
1 330 - 1 400 MHz*,
1 610.6 - 1 613.8 MHz*,
1 660 - 1 670 MHz,
1 718.8 - 1 722.2 MHz*,
2 655 - 2 690 MHz,
3 260 - 3 267 MHz*,
3 332 - 3 339 MHz*,
3 345.8 - 3 352.5 MHz*,
4 825 - 4 835 MHz*,
4 950 - 4 990 MHz,
4 990 - 5 000 MHz,
6 650 - 6 675.2 MHz*,
10.6 - 10.68 GHz,
14.47 - 14.5 GHz*,
22.01 - 22.21 GHz*,
22.21 - 22.5 GHz,
22.81 - 22.86 GHz*,
23.07 - 23.12 GHz*,
31.2 - 31.3 GHz,
31.5 - 31.8 GHz in Regions 1 and 3,
36.43 - 36.5 GHz*,
42.5 - 43.5 GHz,
42.77 - 42.87 GHz*,
43.07 - 43.17 GHz*,
43.37 - 43.47 GHz*,
48.94 - 49.04 GHz*,
72.77 - 72.91 GHz*,
93.07 - 93.27 GHz*,
97.88 - 98.08 GHz*,
140.69 - 140.98 GHz*,
144.68 - 144.98 GHz*,
145.45 - 145.75 GHz*,
146.82 - 147.12 GHz*,
150 - 151 GHz*,
174.42 - 175.02 GHz*,
177 - 177.4 GHz*,
178.2 - 178.6 GHz*,
181 - 181.46 GHz*,
186.2 - 186.6 GHz*,
250 - 251 GHz*,
257.5 - 258 GHz*,
261 - 265 GHz,
262.24 - 262.76 GHz*,
265 - 275 GHz,
265.64 - 266.16 GHz*,
267.34 - 267.86 GHz*,
271.74 - 272.26 GHz*

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **S4.5** and **S4.6** and Article **S29**).**]**

F/72/2
ISR/54/1
MOD S5.190 *Additional allocation:* in ~~France,~~ Ireland~~, Israel~~, Italy and Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. **S9.21**.

PHI/89/1
SNG/82/5
MOD S5.192 *Additional allocation:* in China~~,~~ and the Republic of Korea~~, the Philippines and Singapore~~, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a primary basis.

ARM/48/1
BLR/45/6
BUL/16/1
KAZ/123/1
MDA/81/1
MNG/143/1
UZB/7/2
RUS/15/1
TJK/64/1
TUR/19/1
UKR/130/1
MOD S5.194 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus, Bulgaria,~~ Georgia, ~~Kazakstan,~~ Lebanon, ~~Moldova, Mongolia, Uzbekistan,~~ Kyrgyzstan, Syria~~, Russia~~, Somalia~~, Tajikistan,~~ and Turkmenistan~~, Turkey and Ukraine~~, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis.

E/10/5
ISR/54/2
G/34/8
MOD S5.197 *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, ~~Spain,~~ France, ~~Israel,~~ Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, ~~the United Kingdom~~ and Sweden, the band 108 - 111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. **S9.21**.

LTU/11/1
MOD S5.201 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

BEL/127/5
LUX/163/2
MOD S5.210 *Additional allocation:* in Austria~~, Belgium~~, France, Italy, Liechtenstein, ~~Luxembourg,~~ Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138 - 143.6 MHz and 143.65 - 144 MHz

are also allocated to the space research service (space-to-Earth) on a secondary basis.

KEN/UGA/
TZA/47/11
UGA/55/1
MOD S5.237

Additional allocation: in the Congo, Eritrea, Ethiopia, Gambia, Guinea, Libya, Malawi, Mali, ~~Uganda,~~ Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 223 MHz is also allocated to the fixed and mobile services on a secondary basis.

Oman*
G/34/13
MOD S5.244

Additional allocation: in ~~Oman, the United Kingdom and~~ Turkey, the band 216 - 235 MHz is also allocated to the radiolocation service on a secondary basis.

BEL/127/6
G/34/14
SUI/126/1
MOD S5.259

Additional allocation: in Germany, Austria~~, Belgium,~~ Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria, ~~the United Kingdom,~~ and Sweden ~~and Switzerland,~~ the band 328.6 - 335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

ARM/48/1
KAZ/123/1
MDA/81/1
UZB/7/3
G/34/16
RUS/15/1
TJK/64/1
MOD S5.271

Additional allocation: in ~~Armenia,~~ Azerbaijan, Belarus, China, Estonia, Georgia, India, ~~Kazakstan,~~ Latvia, Lithuania, ~~Moldova, Uzbekistan,~~ Kyrgyzstan~~, the United Kingdom, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 420 - 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.

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* Announced during last meeting of Working Group 5C.

BUL/16/2
MWI/88/4
NGR/6/1
KRE/17/5
MOD S5.277 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ Cameroon, the Congo, Djibouti, Estonia, Gabon, Georgia, Hungary, Kazakstan, Latvia, ~~Malawi,~~ Mali, Moldova, Mongolia, ~~Niger,~~ Uzbekistan, Pakistan, Poland, Kyrgyzstan, ~~Democratic People's Republic of Korea,~~ Slovakia, the Czech Republic, Romania, Russia, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.

TUR/19/2
MOD S5.296 *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland~~,~~ and Tunisia ~~and Turkey~~, the band 470 -790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

CUB/66/1
SUP S5.310 *Additional allocation:* in Cuba, the band 614 - 890 MHz is also allocated to the radionavigation service on a primary basis, subject to agreement obtained under No. **S9.21**.

LTU/11/3
MOD S5.312 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 645 - 862 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

E/10/6
F/152/1
SUP S5.313 *Alternative allocation:* in Spain and France, the band 790 - 830 MHz is allocated to the broadcasting service on a primary basis.

AFS/71/2
MOD S5.322 In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**) excluding Algeria, Egypt, Spain, Libya~~,~~ ~~and~~ Morocco and South Africa, subject to agreement obtained under No. **S9.21**.

GUI/75/1
MWI/88/5
THA/21/1
MOD S5.330 *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, ~~Guinea,~~ Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, ~~Malawi,~~ Morocco, Mozambique, Nepal, Nigeria, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, ~~Thailand,~~ Togo and Yemen, the band 1 215 - 1 300 MHz is also allocated to the fixed and mobile services on a primary basis.

ARM/48/1
BLR/45/7
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.338 In ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania ~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the existing installations of the radionavigation service may continue to operate in the band 1 350 - 1 400 MHz.

ARM/48/1
BLR/45/9
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.350 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Georgia, ~~Kazakstan, Moldova,~~ Kyrgyzstan ~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 1 525 - 1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.

ARS/63/1
NGR/6/2
MOD S5.355 *Additional allocation:* in ~~Saudi Arabia,~~ Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, ~~Niger,~~ Oman, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo, Yemen and Zambia, the bands 1 540 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a secondary basis.

SNG/82/6
MOD S5.381 *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, the Islamic Republic of Iran, Malaysia, Pakistan ~~, Singapore~~ and Sri Lanka, the band 1 690 - 1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

THA/21/2
MOD S5.384 *Additional allocation:* in India, Indonesia~~,~~ and Japan ~~and Thailand~~, the band 1 700 - 1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.

BUL/16/5
MDA/81/1
MOD S5.387 *Additional allocation:* in Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ Georgia, Kazakstan, Mali, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 1 770 - 1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**.

ARM/48/1
BLR/45/10
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.412 *Alternative allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Kyrgyzstan~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 2 500 - 2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

BUL/16/6
CME/94/3
LTU/11/5
MWI/88/7
SNG/82/7
THA/21/3
MOD S5.422 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, ~~Bulgaria, Cameroon,~~ the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, ~~Lithuania,~~ Malaysia, ~~Malawi,~~ Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Romania, Russia, ~~Singapore,~~ Somalia, Tajikistan, ~~Thailand,~~ Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia, Zaire and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

ARM/48/1
BLR/45/11
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.428 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Cuba, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Poland, Kyrgyzstan, Romania, ~~Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 3 100 - 3 300 MHz is also allocated to the radionavigation service on a primary basis.

SNG/82/8
MOD S5.429 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea~~, Singapore~~ and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

ARM/48/1
BLR/45/12
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.430 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Cuba, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Poland, Kyrgyzstan, Romania, ~~Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 3 300 - 3 400 MHz is also allocated to the radionavigation service on a primary basis.

DNK/12/2
MOD S5.437 *Additional allocation:* in Germany~~, Denmark~~ and Norway, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.

PHI/89/2
MOD S5.439 *Additional allocation:* in China, the Islamic Republic of Iran~~,~~ and Libya ~~and the Philippines~~, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.

ARM/48/1
BLR/45/13
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.448 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan,~~ Libya, ~~Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.

ARM/48/1
BLR/45/14
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.450 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, the Islamic Republic of Iran, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MWI/88/8
NGR/6/3
MOD S5.453 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, ~~Malawi, Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650 -5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

GUI/75/2
NGR/6/5
THA/21/4
MOD S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, ~~Guinea,~~ Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Swaziland, Tanzania, Chad, ~~Thailand,~~ Togo, Tunisia and Yemen, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

ARM/48/1
BLR/45/15
HNG/18/4
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.478

Additional allocation: in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Hungary,~~ Kazakstan, ~~Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 9 800 - 10 000 MHz is also allocated to the radionavigation service on a primary basis.

BUL/16/7
CME/94/4
CUB/66/2
MOD S5.483

Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, ~~Bulgaria, Cameroon,~~ China, Colombia, the Republic of Korea, Costa Rica, ~~Cuba,~~ Egypt, the United Arab Emirates, Georgia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Democratic People's Republic of Korea, Romania, Russia, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the band 10.68 - 10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

NGR/6/6
MOD S5.494

Additional allocation: in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, ~~Niger,~~ Nigeria, Qatar, Syria, Senegal, Somalia, Sudan, Chad, Togo, Yemen and Zaire, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

BEL/127/8
E/10/8
FYROM/180/2
LUX/163/3
MOD S5.495

Additional allocation: in ~~Belgium,~~ Bosnia and Herzegovina, Croatia, Denmark, ~~Spain,~~ France, Greece~~, The Former Yugoslav Republic of Macedonia,~~ Liechtenstein, ~~Luxembourg,~~ Monaco, Norway, Uganda, Portugal, Romania, Slovenia, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

ARM/48/1
BLR/45/16
BUL/16/8
HNG/18/5
KAZ/123/1
MDA/81/1
UZB/7/5
RUS/15/1
TJK/64/1
MOD S5.496 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus, Bulgaria,~~ Georgia, ~~Hungary, Kazakstan, Moldova, Uzbekistan,~~ Kyrgyzstan~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in Article **S21**, Table S21-4 for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.

GUI/75/3
MWI/88/9
NGR/6/7
MOD S5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, ~~Guinea,~~ Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, ~~Malawi,~~ Mali, Malta, Morocco, Mauritania, ~~Niger,~~ Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Chad and Tunisia, the band 13.4 - 14 GHz is also allocated to the fixed and mobile services on a primary basis.

ARM/48/1
BLR/45/17
KAZ/123/1
MDA/81/1
RUS/15/1
TJK/64/1
MOD S5.501 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Hungary, Japan, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Romania, the United Kingdom~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 13.4 - 14 GHz is also allocated to the radionavigation service on a primary basis.

MWI/88/10
NGR/6/8
MOD S5.505

Additional allocation: in Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, ~~Malawi,~~ Mali, Morocco, Mauritania, ~~Niger,~~ Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

BEL/127/9
DNK/12/3
E/10/9
LUX/163/5
NOR/116/2
MOD S5.508

Additional allocation: in Germany, Austria~~, Belgium~~, Bosnia and Herzegovina, ~~Denmark, Spain,~~ France, Greece, Ireland, Iceland, Italy, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, ~~Luxembourg, Norway,~~ Portugal, the United Kingdom, Slovenia, Switzerland, Turkey and Yugoslavia, the band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis.

FYROM/180/4
MOD S5.511

Additional allocation: in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, the Islamic Republic of Iran, Iraq, Israel, Kuwait, ~~The Former Yugoslav Republic of Macedonia,~~ Lebanon, Libya, Pakistan, Qatar, Syria, Slovenia, Somalia and Yugoslavia, the band 15.35 - 15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.

FYROM/180/5
MWI/88/11
S/13/2
THA/21/6
MOD S5.512

Additional allocation: in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, the Islamic Republic of Iran, Jordan, Kuwait~~, The Former Yugoslav Republic of Macedonia~~, Libya, Malaysia, ~~Malawi,~~ Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Slovenia, Somalia, Sudan, ~~Sweden,~~ Swaziland, Tanzania, Chad, ~~Thailand,~~ Yemen and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

FYROM/180/6
MOD S5.514

Additional allocation: in Algeria, Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, ~~The Former Yugoslav Republic of Macedonia,~~ Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Slovenia, Sudan, Sweden, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply.

NGR/6/9
THA/21/7
MOD S5.524

Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan, Tanzania, Chad, ~~Thailand,~~ Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

NGR/6/10
SNG/82/9
THA/21/8
MOD S5.542

Additional allocation: in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Pakistan, Qatar, Syria, ~~Singapore,~~ Somalia, Sudan, Sri Lanka~~,~~ and Chad ~~and Thailand~~, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.

E/10/10
GUI/75/4
MWI/88/12
NGR/6/11
KEN/UGA/
TZA/47/13
TZA/80/2
THA/21/19
MOD S5.549 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, ~~Spain,~~ Gabon, ~~Guinea,~~ Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, ~~Malawi,~~ Mali, Malta, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, ~~Tanzania, Thailand,~~ Togo, Tunisia, Yemen and Zaire, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.

G/34/28
MOD S5.557 *Additional allocation:* in Japan ~~and the United Kingdom~~, the band 54.25 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.

S/13/3
MOD S5.564 *Additional allocation:* in Germany, Argentina, Spain, Finland, France, India, Italy~~,~~ and the Netherlands ~~and Sweden~~, the band 261 - 265 GHz is also allocated to the radio astronomy service on a primary basis.

According to Document 178(Rev.1) (Note from the Chairman of WG 5B to the Chairman of WG 5C) the following modification is proposed to S5.221:

IAP/40/220
BFA/105/1
INS/84/33
MOD S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, ~~Burkina Faso,~~ Cameroon, ~~Canada,~~ China, Cyprus, ~~Colombia,~~ Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, ~~Ecuador,~~ Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Honduras, Hungary, India, ~~Indonesia,~~ the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the

Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russia, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, ~~Suriname,~~ Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe.

b) Different category of the service - proposals for countries to be removed from footnotes where the removal gives a lower category of service

BUL/16/3
MDA/81/1
MOD S5.290

Different category of service: in Afghanistan, Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ China, Georgia, Japan, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460 - 470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.

ARM/48/1
BLR/45/8
BUL/16/4
MDA/81/1
UZB/7/4
RUS/15/1
TJK/64/1
MOD S5.349

Different category of service: in Saudi Arabia~~, Armenia~~, Azerbaijan, Bahrain, ~~Belarus,~~ Bosnia and Herzegovina, ~~Bulgaria,~~ Cameroon, Egypt, the United Arab Emirates, France, Georgia, the Islamic Republic of Iran, Iraq, Israel, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, ~~Moldova,~~ Mongolia, Oman, ~~Uzbekistan,~~ Qatar, Syria, Kyrgyzstan, Romania~~, Russia, Tajikistan~~, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 525 - 1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).

CTI/115/1
MOD S5.369

Different category of service: in Angola, Australia, Burundi, ~~Côte d'Ivoire,~~ Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

KEN/UGA/
TZA/47/12
KEN/70/1
MOD S5.382

Different category of service: in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Georgia, Guinea, Hungary,

Iraq, Israel, Jordan, Kazakstan, ~~Kenya,~~ Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690 - 1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

SEN/9/1

MOD S5.400 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, ~~Senegal,~~ Sudan, Swaziland, Togo, Zaire and Zambia, the allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MDA/81/1

MOD S5.454 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **S5.33**).

CTI/115/3
NGR/6/4
SEN/9/2

MOD S5.464 *Different category of service:* in Bangladesh, Benin, Burkina Faso, Cameroon, China, the Central African Republic, ~~Côte d'Ivoire,~~ Egypt, France, Guinea, India, the Islamic Republic of Iran, Italy, Japan, Libya, Mali, ~~Niger,~~ Pakistan, ~~Senegal,~~ Somalia, Sudan, Sweden, Tanzania, Zaire and Zambia, the allocation of the band 8 025 - 8 400 MHz to the Earth exploration-satellite service (space-to-Earth) is on a primary basis, subject to agreement obtained under No. **S9.21**.

THA/21/5

MOD S5.477 *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sweden, ~~Thailand,~~ Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

POL/20/1
G/34/27

MOD S5.521 *Alternative allocation:* in Germany, Denmark, the United Arab Emirates, Greece, ~~Poland,~~ Slovakia, and the Czech Republic ~~and the United Kingdom~~, the band 18.1 - 18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis. The provisions of No. **S5.519** also apply.

MDA/81/1
POL/20/2
MOD S5.545 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, ~~Poland,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31 - 31.3 GHz to the space research service is on a primary basis (see No. **S5.33**).

POL/20/3
MOD S5.546 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, ~~Poland,~~ Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31.5 - 31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

MDA/81/1
MOD S5.550 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. **S5.33**).

c) Different category of the service - proposals for countries to be removed from footnotes where the removal gives a higher category of service

CLM/57/1
E/10/7
HNG/18/3
FYROM/180/2
MWI/88/6
PNR/67/1
S/13/1
MOD S5.347 *Different category of service:* in Bangladesh, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, ~~Colombia,~~ Cuba, Denmark, Egypt, ~~Spain,~~ Greece, ~~Hungary,~~ Ireland, Italy, Jordan, Kenya~~, The Former Yugoslav Republic of Macedonia, Malawi~~, Mozambique, ~~Panama,~~ Portugal, Sri Lanka, ~~Sweden,~~ Swaziland, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1 452 - 1 492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007.

DNK/12/1
NOR/116/1
G/34/21
SUP S5.434 In ~~Denmark, Norway and the United Kingdom~~, the fixed, radiolocation and fixed-satellite services operate on a basis of equality of rights in the band 3 400 - 3 600 MHz. However, these Administrations operating radiolocation systems in this band are urged to cease operations by 1985. After this date, these Administrations shall take all practicable steps to protect the

fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.

BEL/127/7
LUX/163/3
MOD S5.466 *Different category of service:* in ~~Belgium,~~ Israel, ~~Luxembourg,~~ Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400 - 8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**).

d) Removal of countries from *alternative allocation* - the proposal as well as the relevant part of the Table of Frequency Allocations is shown

F/72/1
LUX/163/1
MWI/88/1
UZB/7/1
KEN/UGA/
TZA/47/10
TZA/80/1
MOD S5.98 *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, ~~France,~~ Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, ~~Luxembourg, Malawi,~~ Moldova, ~~Uzbekistan,~~ the Netherlands, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan, ~~Tanzania,~~ Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

kHz
1 800 – 2 065

Allocation to Services		
Region 1	Region 2	Region 3
1 800 – 1 810 RADIOLOCATION S5.93 **1 810 – 1 850** AMATEUR **S5.98** S5.99 S5.100 S5.101	**1 800 – 1 850** AMATEUR	**1 800 – 2 000** AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation
1 850 – 2 000	**1 850 – 2 000**	

BEL/127/1
E/10/1
G/34/3
SNG/82/2
MOD S5.112 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, Cyprus, Denmark, ~~Spain,~~ France, Greece, Iceland, Italy, Malta, Norway, ~~the United Kingdom, Singapore,~~ Sri Lanka, Turkey and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

kHz
2 045 – 2 501

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td rowspan="2">2 045 – 2 160
FIXED
MARITIME MOBILE
LAND MOBILE
S5.92</td><td colspan="2"></td></tr>
<tr><td rowspan="2">2 065 – 2 107
MARITIME MOBILE S5.105
S5.106</td></tr>
<tr><td rowspan="2">2 160 – 2 170
RADIOLOCATION
S5.93 S5.107</td><td rowspan="2">2 107 – 2 170
FIXED
MOBILE</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>2 170 – 2 173.5</td><td colspan="2">MARITIME MOBILE</td></tr>
<tr><td>2 173.5 – 2 190.5</td><td colspan="2">MOBILE (distress and calling)
S5.108 S5.109 S5.110 S5.111</td></tr>
<tr><td>2 190.5 – 2 194</td><td colspan="2">MARITIME MOBILE</td></tr>
<tr><td>2 194 – 2 300
FIXED
MOBILE except aeronautical mobile (R)
S5.92 S5.103 S5.112</td><td>2 194 – 2 300
FIXED
MOBILE
S5.112</td><td></td></tr>
</table>

BEL/127/2
E/10/2
G/34/4
MOD S5.114 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, Cyprus, Denmark, ~~Spain,~~ France, Greece, Iraq, Italy, Malta, Norway, ~~the United Kingdom,~~ Turkey and Yugoslavia, the band 2 502 - 2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

BEL/127/3
CME/94/1
E/10/3
G/34/5
SNG/82/3
MOD S5.117 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, ~~Cameroon,~~ Cyprus, Côte d'Ivoire, Denmark, Egypt, ~~Spain,~~ France, Greece, Iceland, Italy, Liberia, Malta, Norway, ~~the United Kingdom, Singapore,~~ Sri Lanka, Togo, Turkey and Yugoslavia, the band 3 155 - 3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

kHz
2 501 – 3 230

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td>2 501 – 2 502</td><td colspan="2">STANDARD FREQUENCY AND TIME SIGNAL
Space Research</td></tr>
<tr><td>2 502 – 2 625
FIXED
MOBILE except aeronautical mobile (R)
S5.92 S5.103 S5.114</td><td colspan="2">2 502 – 2 505
STANDARD FREQUENCY AND TIME SIGNAL</td></tr>
<tr><td>2 625 – 2 650
MARITIME MOBILE
MARITIME RADIONAVIGATION
S5.92</td><td colspan="2" rowspan="3">2 505 – 2 850
FIXED
MOBILE</td></tr>
<tr><td>2 650 – 2 850
FIXED
MOBILE except aeronautical mobile (R)
S5.92 S5.103</td></tr>
<tr><td>2 850 – 3 025</td><td colspan="2">AERONAUTICAL MOBILE (R)
S5.111 S5.115</td></tr>
<tr><td>3 025 – 3 155</td><td colspan="2">AERONAUTICAL MOBILE (OR)</td></tr>
<tr><td>3 155 – 3 200</td><td colspan="2">FIXED
MOBILE except aeronautical mobile (R)
S5.116 S5.117</td></tr>
</table>

MWI/88/3
MOD S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya~~,~~ and Madagascar ~~and Malawi~~, the band 7 000 - 7 050 kHz is allocated to the fixed service on a primary basis.

kHz
5 450 – 7 100

Allocation to Services		
Region 1	Region 2	Region 3
5 450 – 5 480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	**5 450 – 5 480** AERONAUTICAL MOBILE (R)	**5 450 – 5 480** FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
5 480 – 5 680	AERONAUTICAL MOBILE (R) S5.111 S5.115	
5 680 – 5 730	AERONAUTICAL MOBILE (OR) S5.111 S5.115	
5 730 – 5 900 FIXED LAND MOBILE	**5 730 – 5 900** FIXED MOBILE except aeronautical mobile (R)	**5 730 – 5 900** FIXED Mobile except aeronautical mobile (R)
5 900 – 5 950	BROADCASTING S5.134 S5.135 S5.136	
5 950 – 6 200	BROADCASTING	
6 200 – 6 525	MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137	
6 525 – 6 685	AERONAUTICAL MOBILE (R)	
6 685 – 6 765	AERONAUTICAL MOBILE (OR)	
6 765 – 7 000	FIXED Land Mobile S5.139 S5.138	
7 000 – 7 100	AMATEUR S5.120 AMATEUR-SATELLITE S5.140 **S5.141**	

SVK/23/1

MOD S5.174 *Alternative allocation:* in Bulgaria, Hungary, Poland~~,~~ and Romania ~~and Slovakia~~, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960).

e) Proposals for a NOC or NOC

NOTE - Such proposals should be noted and may only need discussion when other countries propose deletions, or when the Conference decides to change the allocations to the frequency bands concerned. In the latter case administrations should bring their proposals to the attention of the relevant working group of the Conference:

G/34/2
G/34/6
G/34/9
G/34/10
G/34/11 (related to work of WG 5B)
G/34/12
G/34/15 (related to work of WG 5B)
G/34/17-20
G/34/22-26
G/34/29
B/49/1

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

Corrigendum 1 to Document 226-E 26 November 1997 Original: French

PLENARY MEETING

MINUTES

OF THE

FOURTH PLENARY MEETING

Friday, 7 November 1997, at 1610 hours

Please replace paragraph 3.2 by the following text:

3.2 In reply to a question by the **delegate of France** concerning §§ 1.3 and 3.1 of Document 157, the **Legal Adviser** said that § 3.2 should be reworded as follows: "Accordingly, by adopting (at the second reading) a reference to a Recommendation, the Plenary Meeting shall be deemed to have formally adopted the incorporation by reference of the text of the Recommendation, as it stands, in the Radio Regulations". While a WRC could not amend a Recommendation which had already been approved by a radiocommunication assembly or by correspondence, it was nevertheless empowered to incorporate it by reference in the Radio Regulations. By virtue of such incorporation, that version of the Recommendation changed status, becoming henceforth an integral part of the Radio Regulations which was a treaty with binding force.

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 226-E
12 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

MINUTES

OF THE

FOURTH PLENARY MEETING

Friday, 7 November 1997, at 1610 hours

Chairman: Mr. R. SMITH (Australia)

Subjects discussed		**Documents**
1	Report by the Chairman of Committee 4	DT/80
2	First series of texts submitted by the Editorial Committee for first reading (B.1)	184
3	ITU-R Recommendations and incorporation by reference	157, 170
4	Approval of the minutes of the first and second Plenary Meetings	118, 159
5	Information documents to be noted	99(Rev.1), 149, 153

1 Report by the Chairman of Committee 4 (Document DT/80)

1.1 The **Chairman of Committee 4** said that, after extremely arduous discussions, Committee 4 had managed to take unanimously all the necessary decisions on planning parameters and related matters to enable BR to start developing the draft Plan. Thus, none of those decisions, with one exception, needed to be considered and approved in Plenary. It had been agreed that planning at WRC-97 would be based in principle on 5 channels for Region 1 and 4 channels for Region 3, except where otherwise decided; discussions on any possible changes to those values had come up against an obstacle, in that it would be impossible to carry out all the necessary calculations during the Conference. With regard to the approach to be adopted in future, Committee 4 had agreed that the matter should be entrusted to an intersessional group of experts which would report to WRC-99 on the feasibility of replanning which, if it went ahead, should be completed not later than 2000 or 2001. An ad hoc group of Committee 4 had thus been asked to prepare two resolutions, one setting up the intersessional group of experts, whose report would thus have to be included in the agenda for WRC-99 by Working Group PLEN-1, and the second, along the lines of WRC-99 Resolution 25, on the extremely important issue of the consent of other countries for coverage outside national territory. The only item requiring a decision of the Plenary was § 1 of Document DT/80. There was no disagreement on that item within the Committee, but one administration had requested that it be considered in the Plenary.

1.2 Referring to the difficult discussions in Committee 4, the **delegate of Algeria** said that committee Chairmen should as far as possible avoid resorting to a vote and instead seek compromises that safeguarded the rights and interests of all countries and the fundamental purposes of the Union.

1.3 The **delegate of Syria** said that his Administration considered in principle that all parameters, especially those which departed from the principle of equal treatment, ought to be considered in Plenary. The Syrian Administration also formulated a reservation concerning the exceptions to the figures of 5 channels for Region 1 and 4 channels for Region 3. It endorsed the appeal made by the delegate of Algeria and, on behalf of all the Arab administrations, thanked the Chairman of Committee 4 for all he had done to reach a solution which was satisfactory for all.

1.4 The **Chairman** proposed that § 1 in Document DT/80 be approved as a principle to be used by BR in order to start work on planning.

1.5 It was so **agreed**.

2 First series of texts submitted by the Editorial Committee for first reading (B.1) (Document 184)

2.1 The **Chairman of Committee 6** said that the texts submitted to Plenary in Document 184 stemmed from the work of Committees 4 and 5, and were preceded by an introductory note designed to facilitate the work of the Plenary and preparation of the Final Acts. She pointed out that, although Annexes 2 and 3 to Recommendation 7 (Rev.WRC-97) had been adopted without change by Committee 4, they had been amended in the Editorial Committee to take account of the provisions of the Constitution, which stipulated that the Radio Regulations supplemented the Constitution and Convention.

2.2 The **delegate of the United States** said that the introductory note in Document 184 had not been considered in the Editorial Committee prior to its submission to the Plenary. The fourth paragraph of the note, in particular, posed a problem in that it spoke of "instructing" the

Secretary-General to refer any editorial problems to the Chairman and Vice-Chairmen of the Editorial Committee. In his opinion, the paragraph in question should not be approved without discussion.

2.3 The **Secretary-General** said that the fourth paragraph of the introductory note reflected usual practice followed in WRCs, according to which, in the event of editorial problems, the Secretary-General studied the matter and consulted the Chairman and Vice-Chairmen of the Editorial Committee. This flexibility was indeed embodied in No. 461 of the Convention, even if the prime purpose of that provision was the numbering of paragraphs in the Final Acts.

2.4 The **Chairman of Committee 6** said that the paragraph at issue was word-for-word the same as the note by the Chairman of the Editorial Committee submitted at WRC-95, which perhaps explained why it had not been discussed in her committee that time round. The **delegate of Israel** said that the paragraph should at least be reworded to specify that any changes made at that stage should be submitted to the administrations for comment. The **delegate of Lebanon** proposed that the paragraph be placed in square brackets and referred back to the Editorial Committee for discussion and resubmission to the Plenary.

2.5 It was so **agreed**.

2.6 The **delegate of Saudi Arabia** said that the many amendments made to the texts were not clearly visible in Document 184 and should perhaps have been highlighted. The **delegate of Canada** wondered what should be inferred from the fact that some provisions were not accompanied with the usual symbol (MOD, NOC, etc.) in the margin. The **Chairman** said that the amendments made were clearly indicated in the source documents (Documents 175 and 177). The **Chairman of Committee 6** said that the texts submitted by Committee 6 to the Plenary were as presented by the technical committees; it was not the Editorial Committee which determined whether the provision was a NOC, a MOD or an ADD.

2.7 The **Chairman of Working Group PLEN-1** said that for the resolutions and recommendations contained in Document 184, the Group's task was confined to considering at which future WRC the matters should be considered.

2.8 The **Chairman** invited the meeting to consider the Committee 5 texts taken from Document 175.

Article S5 (MOD S5.391, MOD Table 400.15 - 410 MHz, MOD Table 8 175 - 8 750 MHz, ADD S5.463A, MOD Table 8 750 - 10 000 MHz, ADD S5.476A, MOD Table 12.5 - 14.25 GHz, MOD Table 14.25 - 14.8 GHz)

2.9 **Approved**.

Article S22 (MOD S22.5A)

2.10 **Approved**.

Resolution [COM5-1] (WRC-97)

2.11 **Approved**.

Resolution [COM5-2] (WRC-97)

2.12 Following comments by the **observer for ICAO**, the **delegates of Syria**, **Saudi Arabia**, **Turkey**, the **Chairman of Committee 6** and the **Chairman of Committee 5**, it was **agreed** to

delete the square brackets around *considering* c) and the reference to ICAO participation in *considering* f) and under *instructs the Director of BR*; to refer in *considering* f) to the participation of other relevant organizations and entities; and, under *instructs the Director of BR*, to invite relevant organizations and entities to participate in the studies.

2.13 Further to explanations provided by the **Legal Adviser** in response to a question by the **delegate of Saudi Arabia**, it was **agreed** that under *resolves* the verb "shall examine" would be replaced by "should examine", and that the French, English and Spanish versions should be aligned.

2.14 With those amendments, Resolution [COM5-2] (WRC-97) was **approved**.

2.15 The **Chairman** then invited the meeting to consider the Committee 4 texts taken from Document 177.

Article S4 (NOC S4.1-S4.3, MOD S4.4, NOC S4.5-S4.22)

2.16 **Approved**.

Article S7 (NOC S7.1-S7.8)

2.17 **Approved**.

Article S53 (MOD S53.1, SUP S53.1.1, SUP S53.1.2, ADD S53.1A, ADD S53.1A.1)

2.18 **Approved.**

Appendix S13

2.19 The texts relating to Appendix 13 were **approved**.

Resolution 339 (Rev.WRC-97) (MOD), Annex to Resolution 339 (WRC-95) (SUP)

2.20 **Approved**.

Article S5 (MOD Table 315 - 495 kHz)

2.21 **Approved**, subject to the reference to No. S5.73 for the band 315 - 325 kHz in Regions 1, 2 and 3 being placed in square brackets.

Article S5 (MOD Table 495 - 1 606.5 kHz, MOD Table 4 063 - 5 450 kHz, ADD S5.79A, MOD S5.82, MOD S5.84, MOD S5.131)

2.22 **Approved.**

Recommendation 7 and its three annexes (Rev.WRC-95) (MOD)

2.23 **Approved.**

3 ITU-R Recommendations and incorporation by reference (Documents 157, 170)

3.1 The **Secretary-General** said that the principle of incorporation by reference had been approved by WRC-95 in its Resolutions 27 and 28, and that Document 157 described a procedure to enable WRC-97 to apply the concept. It was proposed that a list of Recommendations for incorporation by reference should be drawn up and constantly updated. The list in question was

given in Document 170, and the full text of the Recommendations could be consulted on paper in the secretariat and on the World Wide Web.

3.2 In reply to a question by the **delegate of France** concerning §§ 1.3 and 3.1 of Document 157, the **Legal Adviser** said that § 3.2 should be reworded as follows: "Accordingly, by adopting (at the second reading) a reference to a Recommendation, the Plenary Meeting shall be deemed to have formally adopted the incorporation of the text of the Recommendation, as it stands, in the Radio Regulations". While a WRC could not amend a Recommendation which had already been approved by a radiocommunication assembly or by correspondence, it was nevertheless empowered to incorporate it by reference in the Radio Regulations. By virtue of such incorporation, that version of the Recommendation changed status, becoming henceforth an integral part of the Radio Regulations which was a treaty with binding force.

3.3 In reply to a question by the **delegate of Syria**, he said that only texts which had been formally incorporated in the Radio Regulations by an explicit and precise reference had binding force. That was not the case for Recommendations or parts of Recommendations in respect of which the Radio Regulations said that administrations should take them into account. In accordance with § 3 of the Annex to Resolution 27 (WRC-95), when a WRC wished to make only a part of a Recommendation mandatory and the relevant text was brief, the text in question should be incorporated directly in the body of the Radio Regulations.

3.4 In reply to a question by the **delegate of Saudi Arabia**, he said that the practical arrangements set out in §§ 2 and 3 of Document 157 would only be applied during the course of the Conference. In accordance with § 4.4 of the Annex to Resolution 27 (WRC-95), all texts incorporated by reference would be published in a separate volume after the Conference.

3.5 The measures and practical arrangements described in Documents 157 and 170 were **approved**.

4 Approval of the minutes of the first and second Plenary Meetings (Documents 118, 159)

4.1 The **delegate of Syria** said that he would submit corrections to §§ 10.3 and 16.2 of the minutes of the first meeting (Document 118) to the secretariat in writing.

4.2 Subject to those corrections, the minutes of the first Plenary Meeting (Document 118) were **approved**.

4.3 With regard to the minutes of the second Plenary Meeting (Document 159), the **Chairman** said that the Secretary-General, by Document 153, had acted on the request made by the Syrian delegate in § 1.7, and the question raised in § 1.10 by the delegate of the Islamic Republic of Iran would indeed be taken up in the Plenary Meeting.

4.4 The **Chairman of Committee 4** said that he would submit amendments to § 1.3 to the secretariat in writing.

4.5 Subject to those amendments, the minutes of the second Plenary Meeting (Document 159) were **approved**.

5 Information documents to be noted (Documents 99(Rev.1), 149, 153)

5.1 The following documents were **noted**:

Document 99(Rev.1): Loss of the right to vote

Document 149: Loss of right to vote and matters concerning credentials

Document 153: Resolution 24 (WRC-95)

5.2 The **delegate of Syria** said that his delegation reserved the right to come back to Document 153 at a subsequent meeting.

The meeting rose at 1800 hours.

The Secretary:
Pekka TARJANNE

The Chairman:
R. SMITH

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 227-E
10 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Chairman of Working Group 5C

FINAL REPORT OF WG 5C TO COMMITTEE 5

Working Group 5C held 10 meetings to deal with the WRC-97 agenda items assigned in Document DT/6. In particular:

Agenda item 1.1 - To consider requests from administrations to delete their country footnotes or to have their country's name deleted from footnotes, if no longer required, within the limits of Resolution 26 (WRC-95)

From the several contributions received, WG 5C considered only those proposals clearly according to agenda item 1.1. The conclusions reached are contained in Document 225.

Proposal ASP/14/1 on suppression of footnote S5.186 and relevant MOD S5.149 was agreed by a majority of delegates present at the meeting. Nevertheless this is kept between square brackets, pending agreement of remaining administrations of Region 3 absent from the debate at the last meeting of WG 5C.

Agenda item 1.3 - To review Appendix 28 (S7) to the Radio Regulations, taking into account Resolution 60 (WARC-79), Resolution 712 (Rev.WRC-95) and Recommendation 711 (WARC-79)

WG 5C concurred with the CPM Report and agreed that there is no sufficient material at this stage for updating Appendix S7 (28).

Document 155, submitted to Committee 5 asked that the issue be forwarded to WG PL1 on request for inclusion in the draft agenda for WRC-99.

Resolution 60 (WARC-79) was not considered in the Working Group. The Chairman's suggestion is that it might be retained with some pure editing for the time being.

Agenda item 1.7 - To review Appendix 8 to the Radio Regulations taking into account Recommendation 66 (Rev.WARC-92)

A group was established under the leadership of Mr. K. Nebbia (United States) to carry out the spurious emissions issue. The Group prepared 3 documents as follows:

– Document 172 (draft revision to Appendix S3 (8)) was approved by Committee 5.

– Document 173(Rev.1) on draft revision of Recommendation 66 was also approved by Committee 5 at its fifth meeting.

– Document 171(Rev.2) was the subject of lengthy discussions both in the Group and WG 5C. Opinion in favour of inclusion of out-of-band limits in the Radio Regulations received considerable support, but also strong opposition by several administrations. Therefore, WG 5C agreed to include two different alternative texts between square brackets for consideration by Committee 5.

Agenda item 1.8 - To consider the possible deletion of all secondary allocations from the band 136 - 137 MHz, which is allocated to the aeronautical mobile (R) service on a primary basis, in accordance with Resolution 408 (Mob-87) and in order to meet the special needs of the aeronautical mobile (R) service

This matter was considered by a group chaired by Mr. B.-D. Wolko (Germany). The conclusion of the Group is included in Document 199.

WG 5C agreed to the proposals of modifying RR Article S5 with relevant footnotes as contained in the document.

Resolution 408 (Mob-87) is recommended to be suppressed.

Agenda item 1.9.3 - Recommendation 621 (WARC-92)

The subject of wind profiler radars was considered in a sub-working group chaired by Mr. P. Rinaldo (United States). In Document 207, submitted to Committee 5, WG 5C proposes as follows:

a) Modification of provisions of RR Article 5 to allow implementation of wind profiler radars near 50 MHz, 400 MHz and 1 000 MHz as stated in Recommendation 621. The modifications proposed were limited to the addition of footnotes to the radiolocation service limited to wind profiler radar operations in bands already allocated to the radiolocation service.

b) Draft Resolution [COM5-5] for the purpose of:

   – identifying bands recommended for wind profiler radar operations;

   – urge the administrations to implement these systems in accordance with relevant ITU-R Recommendations; and

   – prevent the operation of wind profiler radars in the band 400.15 - 406.0 MHz to eliminate interference to COSPAS-SARSAT systems.

c) Recommendation 621 is proposed for deletion and replacement by draft new Resolution [COM5-5].

Agenda item 1.9.6 - The identification of suitable frequency bands above 30 GHz for use by the fixed service for high-density applications

Contributions received were classified in two groups and sub-working groups established accordingly. Namely, Sub-Working Group 5C3, chaired by Mr. G. Hutchins (Australia) to focus on high altitude platforms, and Sub-Working Group 5C2 on identification of suitable frequency bands above 30 GHz for use by high-density FS systems, under the leadership of Mr. W. Taylor (Canada).

The conclusions of Sub-Working Group 5C3 are contained in Document 206 submitted to Committee 5. The proposals in the document recommend:

– MOD relevant provisions on RR Articles S1, S4, S5 and S11 to allow implementation of the systems in the 47.2 - 47.5 GHz and 47.9 - 48.2 GHz range;

– approval of draft new Resolution [COM5-7] on the use of these bands by fixed services using high altitude platform stations.

One administration expressed the opinion that further additional frequency allocations and coordination with other existing services for the high-altitude platform stations should be discussed in the [WRC-99] Conference.

Sub-Working Group 5C2 drafted several temporary documents, in particular:

– DT/79(Rev.1) on draft Resolution [COM5-11] regarding the use of the 31.8 - 33.4 GHz range by the FS and the necessary ITU-R studies on sharing with existing services to be carried out.

– DT/81(Rev.1) on draft Resolution [COM5-12] for the identification of suitable frequency bands.

– DT/88(Rev.1) on proposals concerning identification of frequency bands for use by FS in high-density applications.

Due to lack of time, WG 5C could not reach conclusions on these documents.

Therefore, it is suggested that Committee 5 establish an ad hoc Group to deal with the subject.

I would like to thank all the participating delegates particularly those who undertook the chairmanship of Groups and the BR Secretariat for efficient work in achieving the results and conclusions.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 228-E
10 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

NOTE FROM THE CHAIRMAN OF COMMITTEE 5 TO THE CHAIRMAN OF COMMITTEE 4

DATA ITEM TO BE INCLUDED IN APPENDIX S4

During consideration of proposals on the use of the band 6 700 - 7 075 MHz (space-to-Earth) by feeder links of the non-geostationary-satellite system in the mobile-satellite service, Committee 5 decided to suppress Resolution 115 (WRC-95) on this matter on the condition that *resolves* 3 of Resolution 115 be included as an additional item in Annexes 2A and 2B to Appendix S4.

Resolves 3 of Resolution 115 is therefore forwarded to your Committee for further action.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 229-E
12 November 1997

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

B.2 **PLENARY MEETING**

SECOND SERIES OF TEXTS SUBMITTED BY THE
EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 5	215	**ARTICLE S5** – Table of allocation band 1 215 - 1 240 MHz band 1 240 - 1 300 MHz – Number S5.332; S5.333; S5.335 – Table of allocation band 3 100 - 3 300 MHz band 5 250 - 5 350 MHz – Number S5.447D; S5.448A – Table of allocation band 5 350 - 5 460 MHz – Number S5.448B – Table of allocation band 7 450 - 7 900 MHz – Number S5.461A – Number S5.461B – Table of allocation band 12.75 - 14 GHz – Number S5.498 – Number S5.498A – Number S5.501A – Number S5.501B – Table of allocation band 16.6 - 17.1 GHz band 17.2 - 17.3 GHz – Number S5.513A – Table of allocation band 92 - 95 GHz – Number S5.562

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ARTICLE S21: Table S21-4; 7 250 - 7 850 MHz

RESOLUTION COM5-3 (WRC-97)

RESOLUTION COM5-4 (WRC-97)

COM 5 191 **APPENDIX S3**

A.-M. NEBES
Chairman of Committee 6

Annex: 18 pages

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ARTICLE S5

MOD

MHz
890 – 1 240

Allocation to Services		
Region 1	Region 2	Region 3
1 215 – 1 240	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.329 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) S5.330 S5.331 S5.332	

MOD

MHz
1 240 – 1 452

Allocation to Services		
Region 1	Region 2	Region 3
1 240 – 1 260	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.329 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur S5.330 S5.331 S5.332 S5.334 S5.335	
1 260 – 1 300	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur S5.282 S5.330 S5.331 S5.332 S5.334 S5.335	

ADD S5.332 In the band 1 215 - 1 300 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis.

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SUP **S5.333**

ADD **S5.335** In Canada and the United States in the band 1 240 - 1 300 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause interference to, claim protection from, or otherwise impose constraints on operation or development of the aeronautical radionavigation service.

MOD

MHz
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
3 100 – 3 300	RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active) S5.149 S5.428	

MOD

MHz
4 500 – 5 470

Allocation to Services		
Region 1	Region 2	Region 3
5 250 – 5 255	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH S5.447D S5.448 S5.448A	
5 255 – 5 350	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) S5.448 S5.448A	

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ADD S5.447D The allocation of the band 5 250 - 5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

ADD S5.448A The use of the frequency band 5 250 - 5 350 MHz by the earth exploration-satellite (active) and space research (active) services shall not constrain the future development and deployment of the radiolocation service.

MOD

MHz
4 500 – 5 470

Allocation to Services		
Region 1	Region 2	Region 3
5 350 – 5 460	AERONAUTICAL RADIONAVIGATION S5.449 EARTH EXPLORATION-SATELLITE (active) Radiolocation S5.448B	

ADD S5.448B The earth exploration-satellite (active) service operating in the band 5 350 - 5 460 MHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service.

MOD

MHz
7 450 – 8 175

Allocation to Services		
Region 1	Region 2	Region 3
7 450 - 7 550	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile S5.461A	
7 550 - 7 750	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	
7 750 - 7 850	FIXED MOBILE except aeronautical mobile METEOROLOGICAL-SATELLITE (space-to-Earth) S5.461B	
7 850 - 7 900	FIXED MOBILE except aeronautical mobile	

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ADD **S5.461A** The use of the band 7 450 - 7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on primary basis until the end of their lifetime.

ADD **S5.461B** The use of the band 7 750 - 7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems.

GHz
12.5 – 14.25

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**12.75 – 13.25**	FIXED FIXED-SATELLITE (Earth-to-space) S5.441 MOBILE Space Research (deep space) (space-to-Earth)	
MOD	**13.25 – 13.4**	AERONAUTICAL RADIONAVIGATION S5.497 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) S5.498A S5.499	
	13.4 – 13.75	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH Standard Frequency and Time Signal-Satellite (Earth-to-space) S5.499 S5.500 S5.501 S5.501A S5.501B	
	13.75 – 14	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research S5.499 S5.500 S5.501 S5.502 S5.503 S5.503A	

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SUP S5.498

ADD S5.498A The earth exploration-satellite (active) and space research (active) services operating in the band 13.25 - 13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service.

ADD S5.501A The allocation of the band 13.4 - 13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

ADD S5.501B In the band 13.4 - 13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service.

GHz
14.8 – 17.3

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**16.6 – 17.1**	RADIOLOCATION Space Research (deep space) (Earth-to-space) S5.512 S5.513	
MOD	**17.2 – 17.3**	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) S5.512 S5.513 S5.513A	

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ADD **S5.513A** Spaceborne active sensors operating in the band 17.2 - 17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis.

MOD

GHz
86 – 116

Allocation to Services		
Region 1	Region 2	Region 3
92 – 94	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION S5.149 S5.556	
94 – 94.1	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) S5.562	
94.1 – 95	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION S5.149 S5.556	

ADD **S5.562** The use of the band 94 - 94.1 GHz by the earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars.

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ARTICLE S21

TABLE S21-4

MOD

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
…					
7 250 - 7 850 MHz	Meteorological-Satellite (S-E)	-152	-152+0.5(δ-5)	-142	4 kHz
…					

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RESOLUTION COM5-3 (WRC-97)

USE OF THE FREQUENCY BAND 5 250 - 5 350 MHz BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the frequency band 5 250 - 5 350 MHz is allocated to the radiolocation service on a primary basis;

b) that the frequency band 5 250 - 5 350 MHz is also allocated to the earth exploration-satellite (active) and the space research (active) services on a primary basis;

c) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that terrestrial radars would not cause unacceptable interference to synthetic aperture radars, scatterometers or altimeters, and that active spaceborne sensors and radiolocation systems are compatible provided that spaceborne-synthetic aperture radar and scatterometer design parameters are appropriately selected to ensure compatibility with radiolocation systems;

d) that guidelines for the appropriate selection of these parameters are contained in Recommendation ITU-R SA.1280;

e) that spaceborne sensors have operated in this frequency band since 1991 with no known reports of interference;

f) that many administrations have radiolocation systems operating in this band,

resolves

1 to invite ITU-R to study, as a matter of urgency, specific sharing criteria and emission characteristics for spaceborne active sensors operating in this frequency band, which may be added to Recommendation ITU-R SA.1280;

2 that when developing spaceborne active sensors operating in this frequency band, administrations should take into account the guidelines for the design of spaceborne active sensors found in Recommendation ITU-R SA.1280.

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RESOLUTION COM5-4 (WRC-97)

USE OF THE FREQUENCY BAND 5 350 - 5 460 MHz BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the frequency band 5 350 - 5 460 MHz is allocated to the aeronautical radionavigation service on a primary basis;

b) that the frequency band 5 350 - 5 460 MHz is also allocated to the earth exploration-satellite (active) service on a primary basis;

c) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that spaceborne altimeters and aeronautical radionavigation systems are compatible in this frequency band;

d) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that spaceborne synthetic aperture radars and airborne weather radars operating in the aeronautical radionavigation service are compatible in this frequency band;

e) that guidelines for the appropriate selection of design parameters of active spaceborne sensors are contained in Recommendation ITU-R SA.1280,

resolves

to invite ITU-R to study specific sharing criteria and emission characteristics for spaceborne active sensors operating in the frequency band 5 350 - 5 460 MHz, with a view to providing further guidance on the matter of compatibility with aeronautical radionavigation systems which will assist in the design of spaceborne active sensors and may add to Recommendation ITU-R SA.1280.

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MOD

APPENDIX S3

Table of Maximum Permitted Spurious Emission Power Levels

(See Article **S3**)

1. The following sections indicate the maximum permitted levels of spurious emissions, in terms of power as indicated in the tables, of any spurious component supplied by a transmitter to the antenna transmission line. Section 1 is applicable until 1 January 2012 to transmitters installed on or before 1 January 2003; Section 2 is applicable to transmitters installed after 1 January 2003 and to all transmitters after 1 January 2012. This Appendix does not cover out-of-band emissions. Out-of-band emissions are dealt with in No. S4.5 of the Radio Regulations.

2. Spurious emission from any part of the installation, other than the antenna and its transmission line, shall not have an effect greater than would occur if this antenna system were supplied with the maximum permitted power at that spurious emission frequency.

3. These levels shall not, however, apply to emergency position-indicating radiobeacon (EPIRB) stations, emergency locator transmitters, ships' emergency transmitters, lifeboat transmitters, survival craft stations or maritime transmitters when used in emergency situations.

4. For technical or operational reasons, more stringent levels than those specified may be applied to protect specific services in certain frequency bands. The levels applied to protect these services, such as safety and passive services, shall be those agreed upon by the appropriate world radiocommunication conference. More stringent levels may also be fixed by specific agreement between the administrations concerned. Additionally, special consideration of transmitter spurious emissions may be required for the protection of safety services, radio astronomy and space services using passive sensors. Information on the levels of interference detrimental to radio astronomy, earth exploration satellites and meteorological passive sensing is given in the most recent version of Recommendation ITU-R SM.329.

5. Spurious emission limits for combined radiocommunication and information technology equipment are those for the radiocommunication transmitters.

Section I. Spurious Emission Limits for Transmitters Installed on or Before 1 January 2003 (valid until 1 January 2012)

6. The measurement methods for radar systems should be guided by Recommendation ITU-R M.1177. For those radar systems for which acceptable methods of measurement do not exist, the lowest practicable power of spurious emission should be achieved.

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TABLE I

Attenuation values and absolute mean power levels used to calculate maximum permitted spurious emission power levels for use with radio equipment

Frequency Band Containing the Assignment (lower limit exclusive, upper limit inclusive)	For any spurious component the attenuation (mean power within the necessary bandwidth relative to the mean power of the spurious component concerned) shall be at least that specified below and the absolute mean power levels given shall not be exceeded (Note 1)
9 kHz to 30 MHz	40 decibels 50 milliwatts (Notes 2, 3 and 4)
30 MHz to 235 MHz	
- mean power above 25 watts	60 decibels 1 milliwatts (Note 5)
- mean power 25 watts or less	40 decibels 25 microwatts
235 MHz to 960 MHz	
- mean power above 25 watts	60 decibels 20 milliwatts (Notes 6 and 7)
- mean power 25 watts or less	40 decibels 25 microwatts (Notes 6, 7)
960 MHz to 17.7 GHz	
- mean power above 10 watts	50 decibels 100 milliwatts (Notes 6, 7, 8 and 9)
- mean power 10 watts or less	100 microwatts (Notes 6, 7, 8 and 9)
Above 17.7 GHz	The lowest possible values achievable shall be employed (see Recommendation **66 (Rev.WRC-[97]**)).

Notes in Table I

[1] When checking compliance with the provisions of the table, it shall be verified that the bandwidth of the measuring equipment is sufficiently wide to accept all significant components of the spurious emission concerned.

[2] For mobile transmitters which operate below 30 MHz any spurious component shall have an attenuation of at least 40 decibels without exceeding the value of 200 milliwatts, but every effort should be made to comply with the level of 50 milliwatts wherever practicable.

[3] For transmitters of a mean power exceeding 50 kilowatts which can operate on two or more frequencies covering a frequency range approaching an octave or more, while a reduction below 50 milliwatts is not mandatory, a minimum attenuation of 60 decibels shall be provided.

[4] For hand-portable equipment of mean power less than 5 watts, the attenuation shall be 30 decibels, but every practicable effort should be made to attain 40 decibels attenuation.

[5] Administrations may adopt a level of 10 milliwatts provided that harmful interference is not caused.

[6] Where several transmitters feed a common antenna or closely spaced antennae on neighbouring frequencies, every practicable effort should be made to comply with the levels specified.

[7] Since these levels may not provide adequate protection for receiving stations in the radio astronomy and space services, more stringent levels might be considered in each individual case in the light of the geographical position of the stations concerned.

[8] These levels are not applicable to systems using digital modulation techniques, but may be used as a guide. Values for these systems may be provided by the relevant ITU-R Recommendations, when available (see Recommendation **66 (Rev.WRC-[97])**).

[9] These levels are not applicable to stations in the space services, but the levels of their spurious emissions should be reduced to the lowest possible values compatible with the technical and economic constraints to which the equipment is subject. Values for these systems may be provided by the relevant ITU-R Recommendations, when available (see Recommendation **66 (Rev.WRC-[97])**).

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ADD

Section II. Spurious Emission Limits for Transmitters Installed After 1 January 2003 and for All Transmitters After 1 January 2012

Application of these Limits

7. The frequency range of the measurement of spurious emissions is from 9 kHz to 110 GHz or the second harmonic if higher.

8. Guidance regarding the methods of measuring spurious emissions is given in the most recent version of Recommendation ITU-R SM.329. The e.i.r.p. method specified in that Recommendation should be used when it is not possible to measure the power supplied to the antenna transmission line. Additionally, the e.i.r.p. method may need some modification for special cases, e.g. beam-forming radars.

9. Guidance regarding the methods of measuring spurious emissions from radar systems is given in the most recent version of Recommendation ITU-R M.1177. The reference bandwidths required for proper measurement of radar spurious emissions should be calculated for each particular radar system. Thus, for the three general types of radar pulse modulation utilized for radionavigation, radiolocation, acquisition, tracking and other radiodetermination functions, the reference bandwidth values should be:

– for fixed-frequency, non-pulse-coded radar, one divided by the radar pulse length, in seconds (e.g. if the radar pulse length is 1 microsecond, then the reference bandwidth is 1/1μs = 1 MHz);

– for fixed-frequency, phase coded pulsed radar, one divided by the phase chip length, in seconds (e.g. if the phase coded chip is 2 microseconds long, then the reference bandwidth is 1/2μs = 500 kHz);

– for frequency modulated (FM) or chirped radar, the square root of the quantity obtained by dividing the radar bandwidth in MHz by the pulse length, in seconds (e.g. if the FM is from 1 250 to 1 280 MHz or 30 MHz during the pulse of 10 microseconds, then the reference bandwidth is $(30\ \text{MHz}/10\mu\text{s})^{1/2}$ = 1.73 MHz).

For those radar systems for which acceptable methods of measurement do not exist, the lowest practicable power of spurious emission should be achieved.

10. The spurious emission levels are specified in the following reference bandwidths:

– 1 kHz between 9 and 150 kHz

– 10 kHz between 150 kHz and 30 MHz

– 100 kHz between 30 MHz and 1 GHz

– 1 MHz above 1 GHz

As a special case, the reference bandwidth of all space service spurious emissions should be 4 kHz.

11. For the purpose of setting limits, all emissions, including harmonic emissions, intermodulation products, frequency conversion products and parasitic emissions, which fall at frequencies separated from the centre frequency of the emission by ±250%, or more, of the necessary bandwidth of the emission will generally be considered as spurious emissions. However, this frequency separation may be dependent on the type of modulation used, the maximum bit rate in the case of digital modulation, the type of transmitter and frequency coordination factors. For example, in the case of digital (including digital broadcasting) modulation systems, broadband systems, pulsed modulation systems and narrow-band high power transmitters, the frequency separation may need to differ from the ±250% factor. For multichannel or multicarrier transmitters/transponders, where several carriers may be transmitted simultaneously from a final output amplifier or an active antenna, the centre frequency of the emission is taken to be the centre of the -3 dB bandwidth of the transmitter or transponder and the necessary bandwidth is taken to be the transmitter or transponder bandwidth.

12. Examples of applying 43 + 10log(P) to calculate attenuation requirements

Where specified in relation to mean power, spurious emissions are to be at least x dB below the total mean power P, i.e. -x dBc. The power P (in watts) is to be measured in a bandwidth wide enough to include the total mean power. The spurious emissions are to be measured in the reference bandwidths given in the Recommendation. The measurement of the spurious emission power is independent of the value of necessary bandwidth. Because the absolute emission power limit, derived from 43 + 10log(P), can become too stringent for high power transmitters, alternative relative powers are also provided in Table II.

Example 1

A land mobile transmitter, with any value of necessary bandwidth, must meet a spurious emission attenuation of 43 + 10log(P), or 70 dBc, whichever is less stringent. To measure spurious emissions in the frequency range between 30 and 1 000 MHz, Recommendation ITU-R **SM.329-7** *recommends* 4.1 indicates the use of a reference bandwidth of 100 kHz. For other frequency ranges, the measurement must use the appropriate reference bandwidths given in *recommends* 4.1.

With a measured total mean power of 10 watts:

– Attenuation relative to total mean power = 43 + 10log(10) = 53 dBc.

– The 53 dBc is less stringent than 70 dBc, so the 53 dBc value is used.

– Therefore: Spurious emissions must not exceed 53 dBc in a 100 kHz bandwidth, or converting to an absolute level, spurious emissions must not exceed 10 dBW - 53 dBc = -43 dBW in a 100 kHz reference bandwidth.

With a measured total mean power of 1 000 watts:

– Attenuation relative to total mean power = 43 + 10log(1 000) = 73 dBc.

– The 73 dBc is more stringent than 70 dBc limit, so the 70 dBc value is used.

– Therefore: Spurious emissions must not exceed 70 dBc in a 100 kHz bandwidth, or converting to an absolute level, spurious emissions must not exceed 30 dBW - 70 dBc = -40 dBW in a 100 kHz reference bandwidth.

Example 2

A space service transmitter with any value of necessary bandwidth, must meet a spurious emission attenuation of 43 + 10log(P), or 60 dBc, whichever is less stringent. To measure spurious emissions at any frequency, Note 1 of Table II indicates using a reference bandwidth of 4 kHz.

With a measured total mean power of 20 watts:

– Attenuation relative to total mean power = 43 + 10log(20) = 56 dBc.

– The 56 dBc is less stringent than the 60 dBc limit, so the 56 dBc value is used.

– Therefore: Spurious emissions must not exceed 56 dBc in a 4 kHz reference bandwidth, or converting to an absolute level, spurious emissions must not exceed
13 dBW - 56 dBc = -43 dBW in a 4 kHz reference bandwidth.

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TABLE II

Attenuation values used to calculate maximum permitted spurious emission power levels for use with radio equipment

Service category in accordance with Article **S1**, or equipment type (Note 15)	Attenuation (dB) below the power supplied to the antenna transmission line
All services except those services quoted below:	43 + 10 log(P), or 70 dBc, whichever is less stringent
Space services (earth stations) (Notes 10 and 14)	43 + 10 log(P), or 60 dBc, whichever is less stringent
Space services (space stations) (Notes 10 and 14)	43 + 10 log(P), or 60 dBc, whichever is less stringent
Radiodetermination	43 + 10 log(PEP), or 60 dB, whichever is less stringent
Broadcast television (Note 11)	46 + 10 log(P), or 60 dBc, whichever is less stringent, without exceeding the absolute mean power level of 1 mW for VHF stations or 12 mW for UHF stations. However, greater attenuation may be necessary on a case by case basis.
Broadcast FM	46 + 10 log(P), or 70 dBc, whichever is less stringent; the absolute mean power level of 1 mW should not be exceeded
Broadcasting at MF/HF	50 dBc; the absolute mean power level of 50 mW should not be exceeded
SSB from mobile stations (Note 12)	43 dB below PEP
Amateur services operating below 30 MHz (including with SSB) (Note 12)	43 + 10 log(PEP), or 50 dB, whichever is less stringent

Service category in accordance with Article **S1**, or equipment type (Note 15)	Attenuation (dB) below the power supplied to the antenna transmission line
Services operating below 30 MHz, except space, radiodetermination, broadcast, those using SSB from mobile stations, and amateur (Note 12)	43 + 10 log(X), or 60 dBc, whichever is less stringent, where X = PEP for SSB modulation, and X = P for other modulation
Low-power device radio equipment (Note 13)	56 + 10 log(P), or 40 dBc, whichever is less stringent
Emergency position-indicating radio beacon Emergency locator transmitter Personal location beacon Search and rescue transponder Ship emergency, lifeboat and survival craft transmitters Land, aeronautical or maritime transmitters when used in emergency	No limit

P: mean power in watts supplied to the antenna transmission line, in accordance with No. **S1.158**. When burst transmission is used, the mean power P and the mean power of any spurious emissions are measured using power averaging over the burst duration.

PEP: peak envelope power in watts supplied to the antenna transmission line, in accordance with No. **S1.157**.

dBc: decibels relative to the unmodulated carrier power of the emission. In the cases which do not have a carrier, for example in some digital modulation schemes where the carrier is not accessible for measurement, the reference level equivalent to dBc is decibels relative to the mean power P.

Notes in Table II

[10] Spurious emission limits for all space services is stated in a 4 kHz reference bandwidth.

[11] For analogue television transmissions, the mean power level is defined with a specified video signal modulation. This video signal has to be chosen in such a way that the maximum mean power level (e.g., at the video signal blanking level for negatively modulated television systems) is supplied to the antenna transmission line.

[12] All classes of emission using SSB are included in the category "SSB".

[13] Low-power radio devices having a maximum output power of less then 100 mW and intended for short-range communication or control purposes; such equipment is in general exempt from individual licensing.

[14] These values are "design objectives". Unless decided otherwise by WRC-99, this note will not be applicable after 31 December 1999.

[15] In some cases of digital modulation (including digital broadcasting), broadband systems, pulsed modulation and narrow-band high power transmitters for all categories of services, there may be difficulties in meeting limits close to ±250% of the necessary bandwidth.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 230-E
12 November 1997

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

R.1 **PLENARY MEETING**

FIRST SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **second reading**:

Source	**Document**	**Title**
COM 6	184 (B.1)	**ARTICLE S4**
		ARTICLE S7
		ARTICLE S53
		APPENDIX S13 (Part A1; Part A2)
		RESOLUTION COM5-1 (WRC-97)
		RESOLUTION COM5-2 (WRC-97)
		RESOLUTION 339 (Rev.WRC-97)
		RECOMMENDATION 7 (Rev.WRC-97)

A.-M. NEBES
Chairman of Committee 6

Annex: 14 pages

PINK PAGES

NOTE BY THE CHAIRMAN

The attached pages contain the first series of texts received by Committee 6 from Committees 4 and 5 and submitted to the Plenary Meeting for first reading.

Under No. 362 of the ITU Convention (Geneva, 1992), the terms of reference of Committee 6, which are reproduced in Document 121 of the Conference, are to perfect the form of the texts adopted by the Conference without altering their sense. By force of circumstance, this work is often carried out in difficult conditions and with stringent time constraints.

Therefore, in order to facilitate the task of Committee 6, speed up the submission of texts to the Plenary Meeting and expedite the production of the Final Acts at the end of the Conference, it is proposed that well-established abbreviations widely used and accepted in ITU may be used in the version of the Final Acts submitted for signing. The Secretary-General shall ensure, when preparing the published version of the Final Acts, that the abbreviations in question are written out in full, as appropriate, in line with the prevailing editorial rules applied in the instruments of the Union.

Under No. 461 of the Convention, the Editorial Committee is responsible for the numbering of texts approved by the Conference which will constitute the Final Acts. However, in view of the above-mentioned time constraints, the Conference may wish to entrust the final numbering of chapters, articles, paragraphs, resolutions and recommendations to the Secretary-General.

[Furthermore, should any editorial problems arise in the preparation of the definitive Final Acts of WRC-97 by Union headquarters, the Conference may wish to authorize the Secretary-General to resolve these, with the assistance of the Chairman and Vice-Chairmen of the Editorial Committee, and the relevant Committe Chairmen.]

Pending preparation of the definitive version, texts will, for the duration of the Conference and in the Final Acts, retain their original numbering, together with the customary symbols in the left-hand margin identifying their source and the action which the Conference has taken on them.

A.-M. NEBES
Chairman

PINK PAGES

ARTICLE S4

NOC **S4.1 - S4.3**

MOD **S4.4** Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.

NOC **S4.5 - S4.22**

ARTICLE S7

NOC **S7.1 - S7.8**

ARTICLE S53

Order of Priority of Communications

MOD **S53.1** All stations in the maritime mobile service and the maritime mobile-satellite service shall be capable of offering four levels of priority in the following order:

1. Distress calls, distress messages, and distress traffic.
2. Urgency communications.
3. Safety communications.
4. Other communications.

SUP **S53.1.1**

SUP **S53.1.2**

ADD **S53.1A** In a fully automated system, where it is impracticable to offer all four levels of priority, category 1 shall receive priority until such time as intergovernmental agreements[1] remove exemptions granted for such systems from offering the complete order of priority.

ADD **S53.1A.1** [1] Requirements and performance standards for radio systems and equipment for maritime distress and safety radiocommunications are developed and adopted by the International Maritime Organization.

PINK PAGES

APPENDIX S13*

Distress and Safety Communications (Non-GMDSS)

(see Article **S30**)

PART A

Part A1. General Provisions

MOD § 1. The provisions specified in this Appendix are obligatory (see Resolution **331 (Rev.WRC-97)**) in the maritime mobile service for stations using the frequencies and techniques prescribed in this Appendix and for communications between these stations and aircraft stations. However, stations of the maritime mobile service, when additionally fitted with any of the equipment used by stations operating in conformity with the provisions specified in Chapter **SVII** shall, when using that equipment, comply with the appropriate provisions of that Chapter. The provisions of this Appendix are also applicable to the aeronautical mobile service except in the case of special arrangements between the governments concerned.

NOC § 2. to § 8.

NOC § 9.

(MOD) *a)* until the full implementation of the global maritime distress and safety system (GMDSS), of transmitting preferably class A2A or H2A and receiving preferably class A2A and H2A emissions on the carrier frequency 500 kHz or, on the carrier frequency 2 182 kHz, transmitting class J3E or H3E and receiving class A3E, J3E and H3E emissions[1] or, on the carrier frequency 4 125 kHz, transmitting and receiving J3E emissions or, on the frequency 156.8 MHz, transmitting and receiving class G3E emissions (see also Resolution **331 (Rev.WRC-97)**);

NOC § 9. *b)*

MOD § 10. All provisions of the Radio Regulations pertaining to the distress, urgency and safety communications using the techniques and frequencies described in this Appendix shall be maintained in force for all stations using these techniques and frequencies for distress, urgency and safety communications (see Resolution **331 (Rev.WRC-97)**).

PINK PAGES

Part A2. Frequencies for Distress and Safety

Section I. Availability of Frequencies

C. 2 182 kHz

MOD

§ 2. (1) The carrier frequency 2 182 kHz is an international distress frequency for radiotelephony (see also Nos. **S5.108** and **S5.111**); it shall be used for this purpose by ship, aircraft and survival craft stations and by emergency position-indicating radiobeacons using frequencies in the authorized bands between 1 605 kHz and 4 000 kHz when requesting assistance from the maritime services. It is used for distress calls and distress traffic, for signals of emergency position-indicating radiobeacons, for the urgency signal and urgency messages and for the safety signal. Safety messages shall be transmitted, where practicable, on a working frequency after a preliminary announcement on 2 182 kHz. The class of emission to be used for radiotelephony on the frequency 2 182 kHz shall be J3E. The class of emission to be used by emergency position-indicating radiobeacons shall be as specified in Appendix **S19** (see also Part A5, paragraph 3). Distress traffic on 2 182 kHz following the reception of a distress call using digital selective calling should take into account that some shipping in the vicinity may not be able to receive this traffic (see also Appendix **S15** and Resolution **331 (Rev.WRC-97)**).

Section II. Protection of Distress and Safety Frequencies

B. 500 kHz

MOD

§ 15. (1) Apart from the transmissions authorized on 500 kHz, and taking account of No. **S52.28**, all transmissions on the frequencies included between 495 kHz and 505 kHz are forbidden. Until 1 February 1999, this applies to frequencies between 490 kHz and 510 kHz.

PINK PAGES

Section III. Watch on Distress Frequencies

A. 500 kHz

(MOD) § 19. (1) In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorized bands between 415 kHz and 526.5 kHz which employ Morse telegraphy shall, during their hours of service, take the necessary measures to ensure watch on the international distress frequency 500 kHz for three minutes twice an hour beginning at x h 15 and x h 45, Coordinated Universal Time (UTC), by an operator using headphones or loudspeaker (see also Resolution **331 (Rev.WRC-97)**).

NOC § 19. (2)

MOD *a)* transmissions shall cease in the band between 490 kHz and 510 kHz. From 1 February 1999, this band is reduced to the band between 495 kHz and 505 kHz;

ADD § 20A. The provisions of paragraphs 19 to 20 remain mandatory until 1 February 1999.

B. 2 182 kHz

MOD § 21. (1) Coast stations which are open to public correspondence and which form an essential part of the coverage of the area for distress purposes using the techniques and frequencies described in this Appendix on 2 182 kHz should, during their hours of service, maintain a watch on 2 182 kHz (see also Resolution **331 (Rev.WRC-97)**). Such watch should be indicated in the List of Coast Stations.

MOD (2) These stations should maintain this watch by means of an operator using some aural method, such as headphones, split headphones or loudspeaker.

MOD (3) In addition, ship stations should keep the maximum watch practicable on the carrier frequency 2 182 kHz for receiving by any appropriate means the radiotelephone alarm signal described in Part A5, paragraph 6(1), and the navigational warning signal described in Part A5, paragraphs 12(1), (2) and (3), as well as distress, urgency and safety signals. (See also Resolution **331 (Rev.WRC-97)**.)

MOD § 22. Ship stations open to public correspondence should, as far as possible during their hours of service, keep watch on 2 182 kHz (see also Resolution **331 (Rev.WRC-97)**).

PINK PAGES

MOD § 23. In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorized bands between 1 605 kHz and 2 850 kHz using the techniques described in this Appendix for distress purposes, should during their hours of service, and as far as possible, take steps to keep watch on the international distress carrier frequency 2 182 kHz for three minutes twice each hour beginning at x h 00 and x h 30, Coordinated Universal Time (UTC) (see also Resolution **331 (Rev.WRC-97)**). Such watch, in the case of coast stations, should be indicated in the List of Coast Stations.

ADD § 23B The provisions of paragraphs 21 to 23A remain mandatory until 1 February 1999.

MOD *C. 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz and 16 420 kHz*

MOD § 24. (1) All coast stations which are open to public correspondence and which form an essential part of the coverage of the area for distress purposes may, during their hours of service, maintain a watch on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz and 16 420 kHz (see paragraphs 4(1) and 6 above, as well as Table **S15.1** of Appendix **S15**). Such watch should be indicated in the List of Coast Stations.

D. 156.8 MHz

MOD § 25. (1) A coast station providing an international maritime mobile radiotelephone service in the band 156 - 174 MHz and which forms an essential part of the coverage of the area for distress purposes using the techniques and frequencies described in this Appendix should, during its working hours in that band, maintain an efficient aural watch on 156.8 MHz (see also Resolution **331 (Rev.WRC-97)** and Recommendation **306**). Such watch should be indicated in the List of Coast Stations.

MOD (2) Ship stations should, where practicable, maintain watch on 156.8 MHz when within the service area of a coast station providing international maritime mobile radiotelephone service in the band 156 - 174 MHz, using the techniques and frequencies described in this Appendix. Ship stations fitted only with radiotelephone equipment operating in the authorized bands between 156 MHz and 174 MHz, should maintain watch on 156.8 MHz when at sea (see also Resolution **331 (Rev.WRC-97)**).

PINK PAGES

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(3) Ship stations, when in communication with a port station, using the techniques and frequencies described in this Appendix may, on an exceptional basis and subject to the agreement of the administration concerned, continue to maintain watch, on the appropriate port operations frequency only, provided that watch on 156.8 MHz is being maintained by the port station (see also Resolution **331 (Rev.WRC-97)**). Such watch by port stations should be indicated in the List of Coast Stations.

MOD

(4) Ship stations, when in communication with a coast station in the ship movement service using the techniques and frequencies described in this Appendix, and subject to the agreement of the administrations concerned, may continue to maintain watch on the appropriate ship movement service frequency only, provided the watch on 156.8 MHz is being maintained by the coast station (see also Resolution **331 (Rev.WRC-97)**). Such watch by coast stations in the ship movement service should be indicated in the List of Coast Stations.

PINK PAGES

RESOLUTION COM5-1 (WRC-97)

CONSIDERATION BY A FUTURE COMPETENT WORLD RADIOCOMMUNICATION CONFERENCE OF ISSUES DEALING WITH ALLOCATIONS TO SCIENCE SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that WRC-97 recognized the importance of proper consideration of science service issues based on technical and operational criteria developed in ITU-R study groups;

b) that circumstances did not enable the completion of all necessary studies relating to a number of proposals concerning science services;

c) that a deficiency in telecommand (uplink) frequency allocations exists, compared to available telemetry (downlink) allocations in the 100 MHz to 1 GHz range;

d) that additional frequency bands above 71 GHz are needed to satisfy user requirements for passive sensing of the Earth's environmental conditions,

resolves

that, on the basis of proposals from administrations and taking into account the results of studies in ITU-R study groups and the Conference Preparatory Meeting (CPM-99), the [1999] World Radiocommunication Conference should consider the following matters:

1) provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operations services in the frequency range 100 MHz to 1 GHz;

2) allocation of frequency bands above 71 GHz to the earth exploration-satellite (passive) and space research (passive) services and the radio astronomy service,

invites ITU-R study groups

to complete the necessary studies, as a matter of urgency, taking into account the present use of allocated bands, with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference,

instructs the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned.

PINK PAGES

RESOLUTION COM5-2 (WRC-97)

POSSIBLE BROADENING OF THE SECONDARY ALLOCATION TO MOBILE-SATELLITE SERVICE (EARTH-TO-SPACE) IN THE BAND 14.0 - 14.5 GHz TO COVER AERONAUTICAL APPLICATIONS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 14.0 - 14.5 GHz was allocated to the land mobile-satellite service (Earth-to-space) on a secondary basis prior to WRC-97;

b) that WRC-97 replaced this by an allocation to the mobile-satellite service (Earth-to-space) except aeronautical mobile-satellite, on a secondary basis;

c) that the band 14.0 - 14.5 GHz is also allocated to the fixed-satellite (Earth-to-space), radionavigation, fixed and mobile except aeronautical mobile services;

d) that there is a demand for use on board aircraft, in order to provide location and two-way messaging functions, of the same type of terminals now used for land and maritime applications;

e) that such demand justifies the consideration of possible broadening of the allocation to include aeronautical applications at a future competent conference;

f) that studies on the feasibility of such a broadening of the allocation must be completed before the aforementioned competent conference, with the participation of relevant entities and organizations;

g) that Recommendation **34 (WRC-95)** states that future world radiocommunication conferences, whenever possible, should allocate frequency bands to the most broadly defined services with a view to providing maximum flexibility in spectrum use,

resolves

that [WRC-99] should examine the possibility of broadening the secondary allocation to the mobile-satellite service (Earth-to-space) except aeronautical mobile-satellite in the 14.0 - 14.5 GHz band to include aeronautical use, subject to the satisfactory outcome of technical compatibility studies,

invites ITU-R

to complete in time for [WRC-99] the technical and operational studies on the feasibility of sharing of the band 14.0 - 14.5 GHz between the services referred to in *considering* c) above and the aeronautical mobile-satellite service, with the latter service on a secondary basis,

instructs the Director of BR

to invite relevant entities and organizations to participate in these studies.

PINK PAGES

MOD

RESOLUTION 339 (Rev.WRC-97)

COORDINATION OF NAVTEX SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the Voluntary Group of Experts (VGE) suggested that, in the interests of simplification, WRC-95 might decide that it is no longer necessary for ITU to continue frequency coordination of NAVTEX services in addition to the operational coordination undertaken by the International Maritime Organization (IMO);

b) that IMO has established a Coordinating Panel on NAVTEX to, *inter alia*, coordinate the operational aspects of NAVTEX services, such as allocation of transmitter identification character (B1) and time schedules, in the planning stages for transmissions on the frequencies 490 kHz, 518 kHz or 4 209.5 kHz;

c) that coordination in the frequencies 490 kHz, 518 kHz and 4 209.5 kHz is essentially operational;

d) that Article **14A** of the Radio Regulations was deleted by WRC-95 with effect from 18 November 1995;

e) that the frequency band around 518 kHz is also allocated to the aeronautical radionavigation service on a primary basis;

f) that WRC-95 resolved in its Resolution **23 (WRC-95)** that, with effect from 18 November 1995, the Bureau shall not examine with respect to Nos. **1241** to **1245** of the Radio Regulations, and shall not apply the related provisions to, frequency assignment notices in the non-planned bands below 28 000 kHz,

resolves

to invite administrations to apply the procedures established by IMO, taking into account the IMO's NAVTEX Manual, for coordinating the use of the frequencies 490 kHz, 518 kHz and 4 209.5 kHz,

instructs the Secretary-General

1. to invite IMO to provide ITU with information on a regular basis on operational coordination for NAVTEX services on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz;

2. to publish this information in the List of Coast Stations (see **S20.7**).

SUP ANNEX TO RESOLUTION 339 (WRC-95)

PINK PAGES

MOD

RECOMMENDATION 7 (Rev.WRC-97)

ADOPTION OF STANDARD FORMS FOR SHIP STATION AND SHIP EARTH STATION LICENCES AND AIRCRAFT STATION AND AIRCRAFT EARTH STATION LICENCES[1, 2]

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the standardization of the licence forms issued to stations installed on board ships and aircraft making international voyages and flights would greatly facilitate the task of inspection of such stations;

b) that standard licence forms for ship stations and for aircraft stations would serve as a useful guide to those administrations desiring to improve their existing national licences;

c) that standard licence forms could be advantageously used by these administrations as the form of certification specified in No. **S18.8** of the Radio Regulations,

considering further

that the Administrative Radio Conference (Geneva, 1959), formulated:

a) a set of principles for the draft of a standard licence form (see Annex 1);

b) specimens of a ship station licence and of an aircraft station licence (see Annexes 2 and 3),

considering also

changes in radio systems and shipborne radiocommunication equipment introduced in connection with the implementation of the Global Maritime Distress and Safety System (GMDSS),

recommends

1. that administrations which find these forms practicable and acceptable should adopt them for international use;

2. that administrations should, as far as possible, endeavour to bring their national licence forms into line with these standard forms.

---

[1] Replaces Recommendation 17 of the Administrative Radio Conference (Geneva, 1959).

[2] Throughout this Recommendation, references to ship stations may include references to ship earth stations and references to aircraft stations may include references to aircraft earth stations.

PINK PAGES

MOD

ANNEX 1 TO RECOMMENDATION 7 (Rev.WRC-97)

Principles for the Formulation of Standard Ship and Aircraft Station Licences

The Administrative Radio Conference (Geneva, 1959), considered that, in formulating standard ship and aircraft station licences, the following set of principles should be applied:

1. The licence should, as far as possible, be prepared in tabular form, and each line and column of the table clearly numbered or lettered.

2. The licence for ship stations and the licences for aircraft stations should be as similar as possible.

3. The size of the licence should be international standard A4.

4. The licence should be designed in a form which facilitates its exhibition on board a ship or an aircraft.

5. The licence should be printed in Latin characters in the national language of the country which issues it. Those countries whose national language cannot be written in Latin characters should use their national language and, in addition, English, Spanish or French.

6. The title “Ship Station Licence” or “ Aircraft Station Licence” should appear at the top of the licence in the national language as well as in English, Spanish and French.

These principles were used in formulating the two standard forms which are given in Annexes 2 and 3.

PINK PAGES

MOD

ANNEX 2 TO RECOMMENDATION 7 (Rev.WRC-97)

(Full name of the authority issuing the licence,
in the national language)

.....*

SHIP STATION LICENCE
LICENCE DE STATION DE NAVIRE
LICENCIA DE ESTACIÓN DE BARCO

No. .....

Period of validity .....

In accordance with *(Title of the National Regulation)* and with the Radio Regulations which complement the Constitution and the Convention of the International Telecommunication Union now in force, this authorization is herewith issued for the installation and for the use of the radio equipment described below:

1	2			3	4
	Identification of the ship station				
Name of ship	Call sign	MMSI	Other identification (optional)	Holder of licence	Accounting authority identification code, or additional information including accounting information if required

	Equipment	Type or description of equipment	Frequencies
5	Transmitters		**
6	Other equipment (optional)		

For the Issuing Authority:

.....

Place Date Authentication

---

* The words “Ship Station Licence” written in the national language, if this is not English, Spanish or French.

** Specifically or by reference to List V, columns 8 and 9.

PINK PAGES

(MOD)

ANNEX 3 TO RECOMMENDATION 7 (Rev.WRC-97[1])

(Full name of the authority issuing the licence,
in the national language)
.....*

AIRCRAFT STATION LICENCE
LICENCE DE STATION D'AÉRONEF
LICENCIA DE ESTACIÓN DE AERONAVE

No. .....
Period of validity .....

In accordance with (*Title of the National Regulation*) and with the Radio Regulations which complement the Constitution and the Convention of the International Telecommunication Union now in force, this authorization is herewith issued for the installation and for the use of the radio equipment described below:

1	2	3	4
Nationality and registration mark of the aircraft	Call sign or other identification	Type of aircraft	Owner of aircraft

		a	b	c	d
	Equipment	Type	Power (watts)	Class of emission	Frequency bands or assigned frequencies
5	Transmitters				**
6	Survival craft transmitters (when applicable)				**
7	Other equipment	(Optional)			

For the Issuing Authority:

.....

Place Date Authentication

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[1] Note by the Editorial Committee - Annex 3 to Recommendation 7 (Rev.WRC-97) was not modified by Committee 4. It is included here by Committee 6 with the editorial modifications as introduced by Committee 4 to Annex 2 to that Recommendation.

* The words "Aircraft Station Licence" written in the national language, if this is not English, Spanish or French.

** Specifically or by reference.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 231-E
18 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 5

(ALLOCATIONS AND ASSOCIATED ISSUES)

Monday, 10 November 1997, at 1430 hours

Chairman: Mrs. V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Fourth and fifth reports of Working Group 5A`	205, 214
2	Fourth report of Working Group 5B	211
3	Reports of Working Group 5C	171(Rev.2), 173(Rev.1), 199, 206, 207

1 Fourth and fifth reports of Working Group 5A (Documents 205, 214)

1.1 The **Chairman of Working Group 5A** said that the proposals in the Working Group's fourth report (Document 205), which related to frequency allocations in the bands 50.2 - 71 GHz, had been unanimously approved by the Working Group.

1.2 The **Chairman** invited the Committee to take up the proposals in Document 205.

MOD Table 42.5 - 54.25 GHz

1.3 **Approved**.

MOD Table 54.25 - 71 GHz

1.4 The **Chairman** recalled that Working Group 5C was also dealing with allocations in the 56.9 - 57 GHz band. Further amendments might therefore be necessary with respect to that frequency range to take into account the outcome of Working Group 5C's deliberations.

1.5 On that understanding, the modifications to the allocations in the 54.25 - 71 GHz band were **approved**.

MOD S5.340, ADD S5.555A, ADD S5.556A, ADD S5.556B, ADD S5.557A, MOD S5.557 and MOD S5.558

1.6 **Approved**.

1.7 The **Chairman** invited the Committee to take up the proposals in Working Group 5A's fifth report (Document 214).

NOC Table 5 580 - 7 450 MHz

1.8 The **delegate of Russia** said that the reference to footnote "S5.459", should be amended to read "MOD S5.459". In consequence, NOC 5 580 - 7 450 MHz should be amended to read MOD 5 580 - 7 450 MHz.

1.9 It was so **agreed**.

MOD S5.459

1.10 **Approved.**

MOD Table 7 450 - 8 175 MHz

1.11 The **Chairman of Working Group 5A** made the following statement and requested that the Chairman of the Conference should be asked to reflect the statement in the minutes of the Plenary:

"Considering that an allocation to the meteorological-satellite service has been made in the frequency band 7 750 - 7 850 MHz, limited to non-GSO satellite systems, and that an allocation has been made to the earth exploration-satellite service in the frequency band 8 025 - 8 400 MHz in Regions 1 and 3, the attention of ITU-R is drawn to the need to review the adequacy of the power flux-density limit shown in Table S21-4 to protect fixed service systems operating in these bands."

1.12 The modifications to the allocations in the band 8 025 - 8 175 MHz were **approved**.

MOD Table 8 175 - 8 750 MHz

1.13 **Approved**.

ADD S5.462A

1.14 The **delegate of France** proposed that the footnote should be amended to read "In Regions 1 and 3 (except for Japan), in the band …". The **delegates of the United Arab Emirates**, **Finland** and **Italy** supported that proposal.

1.15 ADD S5.462A, as amended, was **approved**.

MOD S5.463, MOD Table 24.45 - 27 GHz

1.16 **Approved**.

ADD S5.536A, ADD S5.536B

1.17 The **Chairman** recalled that there had been extensive discussion on the two new footnotes. Agreement had not been reached on ADD S5.536B and the names of the countries had therefore been placed in square brackets.

1.18 The **Vice-Chairman of Committee 5** said that ADD S5.536B contained a long list of countries whose earth stations operating in the earth exploration-satellite service would not claim protection from fixed and mobile services. The footnote was essentially of a domestic nature and it would be difficult to delete country names in the future. He therefore proposed the addition of the following wording at the end of the first sentence of ADD S5.536A: "and shall give due regard to the principle of geographical sharing when installing the stations within their own territory". As a consequence, ADD S5.536B could be deleted. The **delegate of Mexico** supported that proposal.

1.19 The **delegates of Finland**, **the United Kingdom** and **Sweden** opposed the proposal.

1.20 ADD S5.536A was **approved** as it stood.

1.21 The **delegates of Italy**, **Moldova**, **Portugal**, **India**, **Uganda**, **Viet Nam**, **Liechtenstein**, **Lithuania**, **Norway**, **Oman** and **Switzerland** requested that the names of their countries should be included in ADD S5.536B.

1.22 The **delegates of Mexico** and **Argentina** requested that their countries' names be deleted from the footnote.

1.23 The **Chairman** suggested that the square brackets should be deleted and that the list of countries should be amended in accordance with the requests made at the meeting.

1.24 It was so **agreed**.

1.25 ADD S5.536B, as amended, was **approved**.

Draft Resolution [COM5-9]

1.26 The **Chairman** invited the Committee to consider draft Resolution [COM5-9] concerning the protection of the fixed services in the frequency band 8 025 - 8 400 MHz sharing with geostationary-satellite systems of the earth exploration-satellite service (space-to-Earth).

1.27 The **delegate of Japan** suggested that *considering* d) should be amended to read "… adopted provisional power flux-density limits…" in order to align the wording with that of No. S5.462A.

1.28 It was so **agreed.**

1.29 Draft Resolution [COM5-9], as amended, was **approved**.

Draft Resolution [COM5-13]

1.30 The **Chairman** invited the Committee to consider draft Resolution [COM5-13] on the use of the frequency band 420 - 470 MHz by the earth exploration-satellite service (active).

1.31 The **delegate of the United Kingdom** pointed out an error in *recognizing* d): the last phrase should have been deleted.

1.32 The **Chairman** said that all references to WRC-99 should be placed in square brackets, pending a decision by Working Group PLEN-1.

1.33 Draft Resolution [COM5-13], as amended, was **approved**.

Review of resolutions and recommendations in accordance with Conference agenda item 4

1.34 The **Chairman of Working Group 5A**, drawing attention to the table at the end of Document 214, said that the Working Group had agreed to delete Resolution 211 (WARC-92), Resolution 643 (WRC-95) and Resolution 710 (WARC-92) in view of the action taken by ITU-R and WRC-97, but had not been able to reach an agreement on the action to be recommended in respect of Resolution 711 (WARC-92). Furthermore, no action could be recommended with regard to Resolution 712 (Rev.WRC-95) and Recommendation 706 (WARC-79) until a decision had been taken on passive sensors in the band 18.6 - 18.8 GHz. The word "Suppress" under the action recommended for Resolution 712 should be deleted.

1.35 The deletion of Resolutions 211 (WARC-92), Resolution 643 (WRC-95) and Resolution 710 (WARC-92) was **approved**.

1.36 After a brief exchange of views concerning the action to be recommended with respect to Resolution 711 (WARC-92), the **Chairman** suggested that a small ad hoc Group, to be chaired by the Chairman of Working Group 5A, should be established with a view to reconciling the diverging opinions that persisted.

1.37 It was so **agreed**.

1.38 The **Chairman** suggested that Resolution 712 (Rev.WRC-95) and Recommendation 706 (WARC-79) should be placed in square brackets pending the outcome of the work on passive sensors in the band 18.6 - 18.8 GHz.

1.39 It was so **agreed**.

1.40 The **Chairman of Working Group 5A** said that the Working Group had completed its work and briefly summarized the results achieved. He noted that the issue of a change in the allocation status of the earth exploration-satellite service (passive) and space research service (passive) in Regions 1 and 3 in the 18.6 - 18.8 GHz band had not yet been resolved and depended, *inter alia*, on the identification of appropriate power flux-density limits. He therefore urged the Chairman of Working Group 5B to take into account the needs of those services when establishing the power flux-density limits to apply in the band. With respect to the frequency band 35.5 - 36 GHz approved for allocations to the earth exploration-satellite service, he said that a footnote was required to protect fixed service operations in that band. The outcome of the work of Working Group 5C on Conference agenda item 1.9.6 was awaited in that regard.

1.41 The **Chairman** suggested that an ad hoc group should be established to consider expanding the current allocations to the earth exploration-satellite service (passive) in Regions 1 and 3 in the band 18.6 - 18.8 GHz, with a view to resolving the issue at the present Conference.

1.42 It was so **agreed**.

2 Fourth report of Working Group 5 B (Document 211)

2.1 The **Chairman of Working Group 5B**, introducing Document 211, said that the Working Group was continuing its discussions on the difficult matter of non-GSO FSS. A sub-working group had considered the range below 1 GHz and a document was forthcoming. Another sub-working group had dealt with the 1 - 3 GHz range; most issues had been cleared and the results were reflected in Document 211. He hoped that the outstanding problems, including the MSS feeder link issue, would soon be resolved. Regarding non-GSO FSS systems, a drafting group had been set up to prepare a text based on three categories: the Ku-band; the parts of the Ka-band not covered by Resolution 118 (WRC-95); and the parts of the Ka-band covered by Resolution 118.

2.2 Drawing attention to the proposals set out in Document 211, he explained that in Annex 1 to Appendix S5 (WRC-95) the proposed method for determination of the need for coordination, based on fractional degradation in performance (suggested in § 1.2.3.1), made it unnecessary to retain "Maximum long-term interference" in the table in § 1.2.2.2.1. Some errors in the table of threshold values in § 1.2.3.1 would be corrected in a revised text. He observed that approval of Resolution 716 (WRC-95), dealing with the use of the frequency bands in the 2 GHz range, would mean that Resolution 717 (WRC-95), on a review of allocations to MSS in the 2 GHz range, was no longer needed. Similarly, Recommendation 717 (Rev. WRC-95), dealing with the use of the frequency range below 3 GHz, could be deleted. The essence of Recommendation 721 (WRC-95), on frequency sharing in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz, had been incorporated in draft Resolution [COM5-10], hence the proposal to delete Recommendation 721. Regarding the allocation to non-GSO MSS feeder links in the 15.4 - 15.7 GHz band (Article S5), he observed that both edges of that spectrum were being used by the aeronautical radionavigation service. A proposal was therefore made to modify the allocation at the edges, thereby changing the power flux-density limits there. Finally, Resolutions 116 (WRC-95) and 117 (WRC-95) would become redundant with the approval of draft Resolution [COM5-8] on the feasibility of implementing feeder links of non-geostationary satellite MSS networks in the band 15.43 - 15.63 GHz (space-to-Earth) while taking into account the protection of the radio astronomy service in the band 15.35-15.4 GHz.

2.3 The **Chairman** invited the Committee to consider the proposals in Document 211.

MOD S5.369, MOD Table 2 450 - 2 520 MHz, MOD Table 2 520 - 2 670 MHz, MOD Table 2 670 - 3 300 MHz, ADD S5.403A, S5.420A

2.4 Approved.

Annex 1 to Appendix S5 (WRC-95)

2.5 Approved.

MOD Resolution 215 (WRC-95)

2.6 The **delegate of the United Arab Emirates** recalled that Working Group 5B, in discussing Resolution 215 (concerning the coordination process among non-geostationary mobile-satellite systems and efficient use of the allocations to the mobile-satellite service in the 1 - 3 GHz range), had considered removing the word "non-geostationary" from the Resolution. He therefore proposed that the words "non-geostationary" or "non-GSO" should be deleted from the title of the Resolution, as well as from *considering* a), b) and c). The scope of the Resolution would thus be broadened to cover all mobile-satellite systems, both geostationary and non-geostationary.

2.7 The **delegate of Canada**, referring to *considering* e), said that he had understood that the term "spread-spectrum" was to be removed.

2.8 The **Chairman** suggested that the points raised by the two previous speakers should be discussed informally. She wondered, in particular, whether the scope of the Resolution could easily be broadened to cover geostationary mobile-satellite systems. She observed that a stylistic change to *resolves to invite ITU-R*, suggested by the **delegate of Mexico**, would be considered editorially.

2.9 Following informal discussion, the **Chairman of Working Group 5B** suggested that the words "non-geostationary" and "non-GSO" should be removed from the Resolution, but that the term "spread-spectrum" should be retained.

2.10 It was so **agreed**.

2.11 The **delegate of Syria** suggested that the references to "2 GHz" in *further resolves* 3 should be replaced by "1 - 3 GHz", for consistency.

2.12 It was so **agreed**.

2.13 The **Chairman of Working Group 5B** suggested that in *further resolves* 2 "urge their mobile-satellite operators" should be replaced by "are urged" and that in *further resolves* 3 "encourage their operators" should be replaced by "are encouraged".

2.14 MOD Resolution 215 (WRC-95), as amended, was **approved**.

NOC Resolution 716 (WRC-95)

2.15 **Approved**.

2.16 The **delegate of Syria** said that, contrary to the expectations of developing countries at WRC-95, the implementation of Resolution 716 had been too slow. He wished it to be brought to the attention of all concerned that the Resolution had not been implemented as it should have been.

SUP Resolution 717 (WRC-95), SUP Recommendation 717 (Rev. WRC-95), SUP Recommendation 721 (WRC-95)

2.17 **Approved**.

Draft Resolution [COM5-10]

2.18 The **Chairman** invited the Committee to consider draft Resolution [COM5-10] which dealt with frequency sharing in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz between the mobile-satellite service and the radio astronomy service.

2.19 The **delegate of the United States**, referring to *considering* a), suggested that "land" should be put into square brackets.

2.20 The **Legal Adviser** pointed out that, in *resolves*, "shall" should be replaced by "should".

2.21 Draft Resolution [COM5-10], as amended, was **approved.**

SUP Resolution 115 (WRC-95)

2.22 The deletion of Resolution 115 (WRC-95) was **approved** on the understanding that *resolves* 3, which was still applicable, would be incorporated in Annex 2A and Annex 2B to Appendix S4.

MOD Table 14.8 - 17.3 GHz, MOD S5.511A, SUP S5.511B, MOD S5.511C

2.23 **Approved**, subject to a correction to MOD S5.511A: the first frequency band mentioned should read 15.43 - 15.63 GHz.

ADD S5.511D

2.24 The **representative of BR** said that, in the first sentence, "advance publication information" should be replaced by "complete information for advance publication" and, for consistency, "under Resolution 46 (Rev.WRC-95)/S9.11A" should be inserted in the third sentence, after "it shall coordinate". The **delegate of Finland** suggested that, in the same sentence, "all angles" should be replaced by "any angle".

2.25 ADD S5.511D, as amended, was **approved**.

MOD Table S21-4

2.26 **Approved**, with the following correction: "$(\delta\text{-}2)^2$" should read "$(\delta\text{-}20)^2$".

Draft Resolution [COM5-8]

2.27 The **Chairma**n invited the Committee to consider draft Resolution [COM5-8] which dealt with the feasibility of implementing feeder links of non-geostationary satellite networks in the mobile-satellite service in the band 15.43 - 15.63 GHz (space-to-Earth) taking into account the protection of passive services in the band 15.35 - 15.4 GHz.

2.28 The **delegate of the United States** proposed that the title of the draft Resolution should be amended to make reference to the two other passive services covered in addition to the radio astronomy service, namely the earth exploration-satellite service and the space research service.

2.29 It was so **agreed**.

2.30 In response to a query by the **Chairman**, the **delegate of Canada** indicated that the text of *considering* d) was a compromise arrived at after extensive discussion and suggested that it should be retained even though the suppression of footnote S5.511B (WRC-95) had been approved.

2.31 It was so **agreed**.

2.32 The **delegate of the United Kingdom**, supported by the **delegate of the United States**, suggested that *considering* g) and h) should be combined since they dealt with the same matter. The **Chairman** indicated that the suggestion would be taken up editorially. In reply to a comment by the **delegate of Syria**, she suggested that in *resolves* 1 "the CPM for" should be deleted and that "WRC-99" be placed in square brackets in *resolves* 1 and 3, for consideration by Working Group PLEN-1.

2.33 It was so **agreed**.

2.34 Editorial amendments were suggested by the **Vice-Chairman** and the **delegate of Senegal**.

2.35 Draft Resolution [COM5-8], as amended, was **approved**.

SUP Resolution 116 (WRC-95), SUP Resolution 117 (WRC-95)

2.36 **Approved**.

3 Reports of Working Group 5C (Documents 171(Rev.2), 173(Rev.1), 199, 206, 207)

3.1 The **Chairman of Working Group 5C** said that the Working Group had completed its work. A revised document would be issued setting out conclusions in relation to Conference agenda item 1.1, deletion of country footnotes or deletion of country names from footnotes. In response to the request from a group of APT countries that a footnote referring to Region 3 should be deleted, the Working Group had suggested that approval should be contingent on the agreement of all the countries from that Region present at the Conference. With regard to agenda item 1.3, the Working Group had not considered the text of Resolution 60 (WARC-79). In his opinion, that Resolution should be maintained to ensure continued review of Appendix 28, but some updating of the text might be necessary. He introduced Documents 171(Rev.2) and 173(Rev.1), consideration of which would complete the Working Group's tasks in relation to spurious emissions (agenda item 1.7). The outstanding issue relating to agenda item 1.8 had been resolved and would be introduced when the Committee resumed its discussion on the second report of Working Group 5C (Document 199). He introduced Document 207 which contained the Working Group's proposals concerning agenda item 1.9.3. The Working Group had proposed a new draft Resolution [COM5-5] on the implementation of wind profiler radars. If that draft Resolution was approved, the Working Group proposed the deletion of Recommendation 621 (WARC-92). The Working Group had made a number of proposals in relation to agenda item 1.9.6, the identification of suitable frequency bands above 30 GHz for use by the fixed service for high-density applications, which were set out in Document 206. He suggested that an ad hoc group should be set up to consider the outstanding questions which had not been resolved owing to lack of time. He was preparing a final report of the Working Group, which would mention a request he had received from one administration that additional frequency allocations and coordination with other existing services for high-altitude platform stations should be discussed at WRC-99.

3.2 In reply to a comment by the **delegate of Indonesia**, the **Chairman of Working Group 5C** confirmed that during its consideration of agenda item 1.1 the Working Group had taken into account Document 178(Rev.1), which contained a note from the Chairman of Working Group 5B concerning footnote S5.221.

Document 173(Rev.1)

3.3 The **Chairman** invited the Committee to consider the proposals related to the revision of Recommendation 66 (Rev. WARC-92) set out in Document 173(Rev.1) which had been approved unanimously by Working Group 5C.

3.4 The proposed revision of Recommendation 66 (Rev. WARC-92) was **approved**.

Document 171(Rev.2)

3.5 The **Chairman** drew attention to Document 171(Rev.2) which listed items identified by Working Group 5C, during its work on agenda item 1.7, to be considered by Working Group PLEN-1 for inclusion on the agenda of WRC-99.

3.6 Items 3.3 and 3.4 were **approved**.

3.7 The **Vice-Chairman** suggested that, on the basis of informal discussions on the two options for item 3.4*bis*, shown in square brackets, the first option should be deleted and the second option should be amended by deleting "its appropriateness and" and inserting "in particular with regard to whether the inclusion of such limits is appropriate" after "studies". That would enable the matter to be discussed at a future competent conference on the basis of sound technical information.

3.8 The **delegate of the United Kingdom** said that, although he had not had time to study the suggested amendment, it appeared that the proposed procedure might allow the matter to be blocked at the ITU-R level, thus preventing it being considered by a future conference, even though more than 60 countries had expressed unqualified support for the inclusion, in the Radio Regulations, of general limits for out-of-band emissions. He suggested that informal consultations should be continued to consider the matter further.

3.9 It was so **agreed**.

Second report of Working Group 5C (continued) (Document 199)

3.10 The **Chairman** announced that following an editorial amendment received in respect of ADD S5.203A, after its approval at the previous meeting, the proposed text had been split into two separate footnotes, with the agreement of the administrations concerned.

MOD S5.202

3.11 Approved.

MOD S5.203

3.12 The **delegate of Sweden** said that MOD S5.203, which had been approved at the previous meeting, was no longer an allocation footnote but an integral part of the Radio Regulations and the words "and shall gradually cease operations of existing stations until that date" in the final sentence might therefore not be appropriate. The **Chairman** suggested that the sentence should be deleted.

3.13 It was so **agreed**.

SUP Resolution 408 (Mob-87)

3.14 Approved.

The meeting rose at 1740 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

SUMMARY RECORD

OF THE

SIXTH MEETING OF COMMITTEE 4

(REGULATORY AND ASSOCIATED ISSUES)

Friday, 7 November 1997, at 1440 hours

Chairman: Mr. E. GEORGE (Germany)

Subject discussed		**Documents**
1	Planning parameters and related issues for use in the revision of Appendices 30 and 30A (continued)	56, 160(Add.2); DT/57, DT/80

1 Planning parameters and related issues for use in the revision of Appendices 30 and 30A (continued) (Documents 56, 160(Add.2); DT/57, DT/80)

1.1 The **delegate of Algeria** failed to understand why, after almost two weeks of meetings, Document 76 submitted by the Arab countries had not yet been discussed in depth by Committee 4. The document contained proposals for additions to the Radio Regulations that were of general interest and would help administrations to understand the simplification of the Radio Regulations, as well as the work of the Radio Regulations Board in that area.

1.2 The **Chairman of Working Group 4D** said that the most important proposals contained in Document 76 would be taken up in connection with Document DT/80, giving his assurance that any remaining issues would be considered by Working Group 4D in due course.

1.3 The **Chairman** introduced Document DT/80 which set forth the conclusions reached during informal consultations held that morning in which he, the Chairman of the Conference, the delegates of Australia, India, the Islamic Republic of Iran, Japan, Syria, the United Kingdom, Russia, Senegal and South Africa, as well as the Director and other representatives of BR had taken part. Notwithstanding the vote taken at the previous Committee 4 meeting, it had been agreed that a fresh start should be made on planning issues relating to the revision of Appendices 30 and 30A, on the basis of Document DT/80. The intent was to allow planning exercises to get under way without further delay so that Committee 4 would have sufficient time to consider the draft Plan carefully and suggest any necessary adjustments.

1.4 There had been little problem reaching consensus on paragraph 1, which was based on Document 160(Add.2), although the wording had been slightly amended so as to make it quite clear that any decision already taken by Committee 4 would remain valid. However, there had been extensive discussion of paragraph 2 - the main contentious issue at the previous Committee 4 meeting - which was a blueprint for a proposed resolution. Given the time constraints at the Conference, it had been agreed that the possibility of providing additional channels in the Plan should be taken up at a future conference. As that would require adequate preparation, an Intersessional Group of Experts was proposed. The group should be composed of representatives of administrations and the Bureau. There should be only one group, with overall control of the preparatory work; it should also deal with any policy or regulatory issues that might arise. Although technical expertise was required, some participants had not wished Joint Working Party 10/11S to be entrusted with carrying out the technical work so as to avoid a situation where two groups were working independently of each other.

1.5 The planning principles listed as sub-paragraphs 2a), 2b) and 2c) were based on proposals by the Arab countries contained in Document 76. He drew attention to the reference in sub-paragraph 2a) to RR 2674, a matter of great concern to a number of countries, giving his assurance that broadcasts over the territory of other countries would not be possible without their consent. As for paragraph 3, since no consensus had been reached on the date of the possible future conference for completion of replanning, two alternative dates had been given in square brackets. Some countries were in favour of the earlier date, fearing that on account of the continuous processing of Article 4 modifications, all available frequencies and orbital positions would be exhausted before any planning could take place. The intent of *noting* was to draw attention to the fact that Working Group 4D needed more time to consider all proposals relating to Article 4 issues.

1.6 In conclusion, he hoped that Document DT/80, although drafted by only a few of the participants in the informal consultations, reflected the consensus reached and took account of all concerns expressed. He urged delegations to display a spirit of compromise and approve the text, so that the Bureau could start work on the Plan without further delay.

1.7 The **delegate of Syria** said that he could agree to Document DT/80 in principle, but had a number of important comments to make. Without wishing to delay any further the start of work on the Plan, he expressed his reservation regarding the exceptions allowed in paragraph 1 of the document, which, in his view, were tantamount to favouritism towards certain administrations. Moreover, he expressed surprise that the planning principles set out in paragraph 2 did not reflect those recommended by the Arab countries in Document 76. In particular, he questioned the appropriateness of sub-paragraph 2b), preferring the wording used in Document 76, namely "the avoidance of a high fill factor in the plan …". As for sub-paragraph 2c), it concerned Article 4 issues and should therefore be dealt with as an independent item. Regarding paragraph 3, he wondered why there was no reference to the year 1999 - the date for replanning proposed by the Arab countries during the informal meeting. He expressed his willingness to participate in any drafting group that might be convened to draw up the resolution proposed in Document DT/80. Furthermore, he recalled his earlier request for a resolution, along the lines of Resolution 25 (WRC-95), to ensure that broadcasting by satellite over the territory of other countries would only be possible with the consent of the countries concerned.

1.8 The **delegate of Saudi Arabia** supported the views of the delegate of Syria.

1.9 The **Chairman** explained that an effort had been made to consolidate and clarify the planning principles set out in Document 76, where necessary. For that reason, the main principles listed in sub-paragraphs 2a) to c) had not necessarily been drafted in exactly the same way as those in Document 76. A case in point was sub-paragraph 2b), where it had not been clear to the small drafting group what exactly was meant by "the avoidance of a high fill factor in the plan". The wording preferred by the delegate of Syria could, however, be reinstated, if necessary. He agreed that the avoidance of monopoly utilization, referred to in sub-paragraph 2c), was a separate issue and should be dealt with as such.

1.10 The **delegate of Senegal** commended the Chairman's efforts to reach consensus on such a contentious issue during the informal consultations, in which he had participated as the representative of the African countries. Clearly, paragraphs 2 and 3 of Document DT/80 were intended to serve as guidelines for a detailed resolution to be drafted at a later date. The African countries were not entirely satisfied with the fact that 1999 had not been chosen as the year for replanning. He had, however, accepted the year 2000, recognizing the problems involved in holding an additional conference in 1999, when the Council had already decided on the budget for 1998 and 1999. Due account would no doubt be taken of the Syrian delegate's comments when drafting the proposed resolution. He could therefore agree in principle to Document DT/80, as a compromise solution; it constituted a sound basis for the further work required, in particular on Article 4 issues. A decision had to be taken without further delay on when the resolution would be drafted and submitted for approval, otherwise the Bureau's progress with Steps 1 and 2 might be jeopardized.

1.11 The **delegates of Mali** and **South Africa** endorsed the statement by the delegate of Senegal.

1.12 The **delegate of Lebanon** welcomed Document DT/80, which reflected the consensus reached on the planning issues under discussion. He associated himself with the remarks made by the delegates of Syria and Senegal, who represented the interests of the developing world. He hoped that the special planning conference would be convened no later than the year 2000 and,

recognizing its financial implications, suggested that mention should be made in the proposed resolution of the need for the forthcoming Plenipotentiary Conference to make adequate budgetary provision for the implementation of the Plan.

1.13 The **Chairman** invited the Committee to consider Document DT/80 paragraph by paragraph.

Paragraph 1

1.14 The **Chairman** suggested that paragraph 1 be approved by Committee 4 and then should be forwarded to the Plenary for consideration.

1.15 It was so **agreed**.

Paragraph 2

1.16 The **delegate of the United Kingdom** concurred with the views expressed by the delegate of Senegal. Bearing in mind that Document DT/80 was intended for guidance only, he supported the text of paragraph 2, which could be amended during the drafting of the resolution.

1.17 The **delegate of Indonesia** supported Document DT/80 in principle, although he considered that the type and modulation of the 10 channels referred to in paragraph 2 should be specified. He proposed that the text should be amended to read: "10 analogue channels per beam". The **delegate of Qatar** supported that amendment. The **delegate of Australia** said that the words "per beam" might lead to confusion, as in some situations beams might represent equivalent capacities, while in others they might be identified with a particular area. It was understood that the number of channels mentioned was a minimum: the proposed drafting group could be entrusted with the task of determining whether the beams needed to be identified and of ensuring that there was an equitable distribution of channels among countries.

1.18 The **delegates of the Islamic Republic of Iran, India** and **Qatar** supported Document DT/80 as a basis for drafting a resolution.

1.19 The **delegate of France** endorsed Document DT/80, but said that any proposed new planning should take into consideration the provisions in Annex 7 to Appendix 30 regarding orbital position limitations.

1.20 The **delegate of Canada** proposed that, in order to reflect the fact that Region 2 would not be involved in the replanning exercise, the words "for Regions 1 and 3" should be inserted in paragraph 2 after the words "to study the possibility of a Plan".

1.21 The **delegate of Algeria** proposed that the words "assisted by the BR" should be inserted after the words "Intersessional Group of Experts".

1.22 In response to a further request by the **delegate of Algeria**, the **Technical Secretary of the Conference** said that Joint Working Group of Committee 3 and Working Group PLEN-1 would consider the financial implications of establishing the proposed group of experts and report rapidly thereon to the Plenary Meeting.

1.23 The **delegate of Syria** expressed disquiet that the words "the possibility of a Plan" could be open to varied interpretation. He was, however, prepared to leave the phrase as it stood on the understanding that it would be reviewed with the other editorial points he had raised, during the drafting of the resolution. Turning to the principles outlined in sub-paragraphs a), b) and c), he reiterated his request that "the avoidance of monopoly utilization" mentioned in sub-paragraph c)

should be considered separately. He proposed that, in examining the planning principles, the drafting group should be guided by the principles set in § 1 of proposal ARS/UAE/JOR/MTN/OMA/QAT/SYR/76/24 in Document 76.

1.24 The **delegate of Australia** agreed that the drafting group should study those principles, and proposed that Resolution 531 (WRC-95) and its annexes should also be taken into consideration.

1.25 The **delegate of France** underlined that, in replanning the services for Regions 1 and 3, the possible effect on services in Region 2 and the protection of those services should be taken into account.

1.26 The **delegate of South Africa** requested that, when drafting the planning principles, the principles contained in section 10 of Document 71(Rev.1) should be taken into account.

1.27 The **delegate of Canada** requested that consideration of the principles should also include *resolves* 2 of Resolution 524 (WARC-92).

1.28 The **Chairman** suggested that a drafting group (ad hoc Group 1 of Committee 4) should be established to draft a resolution based on Document DT/80, in particular the planning principles under paragraph 2, taking into account the principles set out in Document 76 and the provisions of Resolution 531 (WRC-95), along with the views expressed during the meeting. All interested delegations would, of course, be entitled to participate in the drafting group and request that other documents be taken into consideration. In order to accommodate the concerns expressed by the delegate of Syria in respect of sub-paragraph c), a separate resolution similar to Resolution 25 (WRC-95) could be drafted. A note should also be prepared for Working Group PLEN-1.

1.29 It was so **agreed**.

Paragraph 3

1.30 The **delegate of South Africa**, although originally in favour of replanning by 1999, was willing to accept the year 2000. He believed that with the establishment of an Intersessional Group of Experts it would be possible to complete replanning by the latter date. The **delegate of the United Kingdom** observed that setting a date of no later than 2001 for a future competent conference did not preclude that conference being held in 2000, while it allowed for budgetary constraints to be taken into account nearer the time. The **delegate of the Islamic Republic of Iran** said that he would prefer a date earlier than the year 2000.

1.31 The **delegate of Canada** proposed that the words "for Regions 1 and 3" be inserted after the phrase "to initiate a replanning".

1.32 The **Chairman** suggested that, with the addition proposed by the delegate of Canada, paragraph 3 should be forwarded to ad hoc Group 1 of Committee 4 for consideration.

1.33 It was so **agreed**.

1.34 The **Chairman,** inviting the Committee to resume its consideration of the outstanding issues in Addendum 2 to Document 160, said that an asterisked footnote would be added to the entry concerning the EuropeSat-1 network in the draft Plan, to read as follows: "pending clarification on the date of bringing into service of this satellite network". Regarding item 1.2.6b), he said that the matter had been settled by the cancellation of the LUX-SAT network. The **representative of BR** indicated that, as that network had been cancelled, the assignment in the initial Plan would be restored.

1.35 With reference to the penultimate paragraph of Addendum 2 to Document 160, the **Chairman** drew the Committee's attention to the technical parameters in Document DT/57 relating to an entry in the Plan for Palestine, upon which agreement had been reached in ad hoc Group 1 of Committee 4. After reading out a number of corrections to Document DT/57, he said that a revised version of the document would be issued later. He suggested that, as the Committee had reached consensus concerning Addendum 2 to Document 160, only the issues dealt with in Document DT/80 should be submitted to the Plenary Meeting.

1.36 It was so **agreed**.

1.37 The **Chairman of Working Group 4D** said that a number of items concerning the draft Plan still required a decision by the Committee before BR could start its work.

1.38 The **representative of BR** said that, following discussions in Working Group 4D concerning the request from Israel to move from orbital position 13° W to 4° W, a study was being conducted by the Bureau and negotiations were taking place between the parties concerned. To avoid delaying the first draft of the Plan, however, the Bureau would base its work on the present orbital position of 13° W and would enter the agreed solution later, manually. Regarding translation frequencies, two confirmations had been received from Australia and Israel. For those administrations which had not yet provided confirmation, the Bureau would have to proceed with the initial translation frequencies as contained in Document 56. For the Administration of Brunei Darussalam, however, the new translation frequency would be used because two channels had been added.

1.39 Notification of RADIOSAT-6 and RADIOSAT-7 networks had been received by 3 November from the French Administration, for which coordination had been successfully completed. However, as those networks did not yet have downlinks, on account of non-conformity with Annex 7 to Appendix 30, it had not been possible to include them in the planning exercise. The Bureau had been consulted by the French Administration concerning the possibility of creating dummy downlinks of 0 watt and providing the French Administration with the compatibility results of the EPM (Equivalent Protection Margin) feeder links only. The networks would not, however, appear in the draft Plan. He required confirmation that the French Administration agreed to that procedure. The **delegate of France** confirmed his Administration's agreement.

1.40 The **delegates of Luxembourg** and **the United States** reserved their position with regard to RADIOSAT-6 and RADIOSAT-7.

1.41 The **delegate of Israel**, referring to his Administration's request to move from 13° W to 4° W, said that he understood that the Bureau would start its planning exercise on the basis of 13° W, but that the matter would continue to be discussed in the working groups of Committee 4 before being submitted to the Committee as a whole.

1.42 The **delegate of India** requested confirmation from BR that the network parameters provided by administrations in the modifications submitted under Article 4 would be included in Step 2, not those given in Document DL/27 under the "National Preferences" variant. The **representative of BR** said that the technical parameters in the Article 4 modifications applied to RST-1, RST-2, RST-3 and RST-5, for which coordination had been successfully completed. Regarding two further networks notified by the Norwegian Administration, he indicated that as coordination with the Swedish Administration was still required for BIFROST-1, that network would not be included in the draft Plan. Regarding BIFROST-2, the Norwegian Administration had been requested to indicate whether it would agree to an e.i.r.p. reduction of 0.5 dB, as there is an excess of pfd of 0.48 dB at one test point on the territory of Sweden.

1.43 The **delegate of Norway** signified his agreement.

1.44 The **delegate of Sweden** recalled that a cut-off date had been established for submission of data for systems to be included in the Plan. It now seemed, however, that administrations had the possibility of modifying the data after the cut-off date in order to be included in the Plan. He considered that it would be possible to solve the issue of the two Norwegian systems through informal consultation between the Norwegian and Swedish delegations.

1.45 The **representative of BR** said that, in the absence of advice to the contrary for the RUS-4 network, channels 26, 28, 30, 32 and 34 would be used for the planning exercise. The orbital position of 122° E would be used for Hong Kong.

1.46 The **representative of the Lao People's Democratic Republic** reserved his position regarding the beam for Hong Kong at 122° E.

1.47 The **representative of Russia** said that, for the greater convenience of all administrations concerned, his Administration was proposing, in planning the 110° E orbital location to use the frequency channels which had been set aside for that location when this location was assigned to the former USSR. Those frequency channels, which had been taken into account in all coordination and planning exercises, covered exactly the same territory that now constituted Russia. In reply to a query by the **Chairman**, he confirmed that that settled the point which had been pending under item 1.2.8b) of Addendum 2 to Document 160.

1.48 The **Chairman of Working Group 4D**, in response to a further query by the **Chairman**, said that no decision by the Committee was required at the moment concerning Annex 7 to Appendix 30. The question of its possible deletion would be discussed later.

1.49 The **Chairman** said that an addendum to Document 187 would be issued, listing the decisions taken by the Committee in relation to the planning parameters and related issues.

The meeting rose at 1620 hours.

The Secretary:
T. GAVRILOV

The Chairman:
E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 233-E
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4
COMMITTEE 5

Kenya (Republic of), Lebanon, Namibia (Republic of), Niger (Republic of the)

PROPOSALS FOR THE WORK OF THE CONFERENCE

NGSO-FSS (WRC-97 agenda item 1.9.1)

The above-mentioned countries support the position proposed by South Africa in Addendum 1(Rev.2) to Document 71(Rev.1).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

Mauritius (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 1.9.1 - Resolution 118: Use of the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz by NGSO FSS systems

Background

In adopting Resolution 118, WRC-95 identified the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz for use by NGSO FSS. At WRC-95, the upper 400 MHz of each of these bands was made available for immediate NGSO FSS use by waiving Radio Regulations S22.2 and providing for the application of Resolution 46 coordination procedures. The remaining 100 MHz bands were reserved until WRC-97, pending the completion of technical studies, with action identified for this Conference that would designate their use for NGSO FSS. The technical studies involving NGSO FSS systems requested in Resolution 118 have been performed by the ITU-R and the conclusions are recorded in the CPM-97 Report. Noting these results, the Administration of Mauritius makes the following proposal:

MAU/234/1

The Administration of Mauritius shares the views of other administrations that the same regulations should apply to the entire 500 + 500 MHz bands identified in Resolution 118 (WRC-95). In the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz, S22.2 should be removed and Resolution 46 should apply. GSO FSS networks under coordination as of 18 November 1995 shall continue their coordination under Resolution 46.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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JOINT WORKING GROUP COM3/PL1

NOTE BY THE CHAIRMAN OF WORKING GROUP 1 OF THE PLENARY TO THE CHAIRMAN OF JOINT WORKING GROUP COM3/PL1

Working Group 1 of the Plenary has considered proposals for agenda items for WRC-99 and WRC-01 not being considered by Committee 4 and Committee 5.

This is a first list and changes may be required when all the agendas requirements of Committee 4 and Committee 5 are known.

Please find attached Annex 1 which contains items for the WRC-99 and WRC-01 agendas.

Annex: 1

ANNEX 1

On the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-97 and with due regard to the requirements of existing and planned services in the bands under consideration, to consider and take appropriate action in respect of the following topics:

Items for WRC-99 agenda

1 Review the use of the HF bands by the aeronautical mobile and maritime mobile services with a view toward meeting the changing needs of these services;

2 review the use of the frequency band 415 - 526.5 kHz by the aeronautical radionavigation and maritime mobile services;

3 consideration of the need to realign the allocations to the amateur, amateur-satellite and broadcasting services around 7 MHz on a worldwide basis, taking into account Recommendation **718 (WARC-92)**;

4 examination of the adequacy of the frequency allocations for HF broadcasting from about 4 MHz to 10 MHz taking into account the seasonal planning procedures adopted by WRC-97;

5* definition of a new category of orbit, namely the quasi-geostationary orbit, to be considered as falling under the regulations applicable to the geostationary orbit or non-geostationary orbits;

6* issues related to the International Mobile Telecommunication System (IMT-2000):

6.1* review of the spectrum requirements for the operation of terrestrial IMT-2000 with a view to identifying future expansion bands, and adjustments to the Table of Frequency Allocations as necessary;

6.2* identification of a global radio control channel to facilitate multimode terminal operation and worldwide roaming of IMT-2000;

7 issues related to the radionavigation-satellite service:

7.1 to consider new allocations to the radionavigation-satellite service required to support developments in the range from 1 to 6 GHz;

7.2 to consider the addition of the space-to-space direction to the radionavigation-satellite service allocations in the 1 215 - 1 260 MHz and 1 559 - 1 610 MHz frequency bands;

7.3 to consider the status of allocations to services other than the radionavigation-satellite (RR S5.355 and S5.359) in the 1 559 - 1 610 MHz band;

8 to consider regulatory and technical provisions to enable earth stations of the maritime mobile-satellite service to operate in the fixed-satellite service networks in the bands 3 700 - 4 200 MHz and 5 925 - 6 425 MHz, including their coordination with other services allocated in these bands;

9 to examine the spectrum requirements for telemetry, tracking, and control of fixed-satellite service networks operating with service links in the frequency bands above 17 GHz;

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* The text of this item has not yet been finalized.

10 allocation of frequency bands above 71 GHz to the earth exploration-satellite (passive) and radio astronomy services.

Items for WRC-01 agenda

1 Consideration of Article **S25** concerning the amateur and amateur-satellite services;

2 review of the frequency and channel arrangements in the MF and HF bands allocated on a primary basis to the maritime-mobile service, taking into account the use of new digital technology;

3 to review in Appendix **S2 [7]** the Table of Transmitter Frequency Tolerances taking into account frequency tolerance limits specified in Recommendation ITU-R SM.1045;

4* to consider allocations to the mobile service in the frequency range around 5 300 MHz to facilitate worldwide use of broadband radio access networks;

5* to consider the status of allocations to the radiolocation service in the bands around 3.0 GHz and around 5.5 GHz; [the date of a conference is under discussion]

6* to consider the allocation of the frequency band 14.5 - 14.8 GHz to the fixed-satellite service (Earth-to-space) in Region 3 (expansion of FSS to include other than feeder links of the BSS);

7* sharing between the FSS and FS in the 19 GHz band when used bidirectionally by the FSS to provide feeder links for non-geostationary-satellite systems in the mobile-satellite service, in accordance with Resolution **119 (WRC-95)**;

8* to consider the provision within the mobile service of a worldwide broadband aeronautical telemetering allocation below 30 GHz;

9 review of allocations to the space research service (deep space) (space-to-Earth) and the inter-satellite service in the frequency range 32 - 32.3 GHz with a view to improving the sharing conditions between these services;

10 to consider the provisions of Chapter IX/Appendix **S13** and Chapter N IX/SVII of the Radio Regulations and additional changes to other parts of the Radio Regulations as stipulated in Resolution **331 (Mob-87)** taking into account the continued transition to the Global Maritime Distress and Safety System (GMDSS);

11 to consider the results of the following studies with a view to include in the agendas of the future conferences:

11.1 review of Resolution No. **528 (WARC-92)**;

11.2 possible allocations in the frequency bands above 275 GHz;

11.3 examination of potential for sharing around 4 300 MHz between radio altimeters and space-based passive earth sensors.

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* The text of this item has not yet been finalized.

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COMMITTEE 5

INFORMATION NOTE BY THE CHAIRMAN OF COMMITTEE 5

As a result of concerns expressed by some administrations, the text of ADD S5.501A as shown in Document 215 has been reviewed editorially to more clearly express the situation in the band 13.4 - 13.75 GHz. In consequence, the text now concerns two footnotes, having taken the example of the notes used for the band 5 250 - 5 350 MHz in the same document. This **editorial** change is given below. It has been communicated to Committee 6.

In Document 215, replace:

ADD S5.501A In the band 13.4 - 13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, nor constrain the use and development of, the radiolocation service. Other uses of the band by the space research service are on a secondary basis.

by the following two footnotes:

ADD S5.501A The allocation of the band 13.4 - 13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

ADD S5.501B In the band 13.4 - 13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, nor constrain the use and development of, the radiolocation service.

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WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

Nepal

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 1.9.1 - Resolution 118, Use of the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz by non-geostationary fixed-satellite service systems (NGSO/FSS)

At WRC-95, 400 MHz was available for the immediate NGSO/FSS by waiving RR S22.2 and envisaging the application of Resolution 46 coordination procedures with an additional 100 MHz frozen until WRC-97. Technical studies were also called for to ascertain the extent to which sharing of the frequency band 20/30 GHz is possible between GSO and NGSO systems.

NGSO broadband systems will enable high-speed access to rural areas and particularly for delivery of low-cost services to schools, hospitals, clinics and commercial and governmental centres to disseminate information that cannot be adequately served by other means and also help disaster mitigation and relief operations at the time of a disaster that might frequently occur due to floods, landslides and earthquakes in a country like Nepal. It will also help as a guide to the mountaineering teams and tourists who go tracking in the Himalayan areas.

Taking account of the ITU-R studies, the Nepalese Administration shares the view of other Administrations that in order to achieve cost-effective performance, NGSO/FSS systems require an adequate amount of spectrum.

Noting the information in the CPM Report (Section 4.4.1.2), the Nepalese Administration supports the availability of 500 MHz between 18.8 - 19.3 GHz and 28.6 - 29.1 GHz by the non-geostationary fixed-satellite service system, with the application of Resolution 46 and the waiving of provision S22.2 [2613], provided that there is no harmful interference into GSO/FSS systems and incumbent terrestrial systems in Nepalese territory.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 238-E
11 November 1997
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WORKING GROUP 1
OF THE PLENARY

NOTE BY THE CHAIRMAN OF COMMITTEE 5

Committee 5 identified the following items, consequential to work on WRC-97 agenda item 1.7, for consideration by WG PL1, for inclusion in the WRC-99 agenda.

"3.3 to finalize remaining issues in the review of Appendix S3 to the Radio Regulations with respect to spurious emissions for space services, taking into account Recommendation 66 (Rev.WRC-97) and the decisions of WRC-97 on adoption of new values of spurious emissions for space services taking effect at a future time;

3.4 to consider the results of studies regarding the boundary between spurious and out-of-band emissions;

3.4*bis* to consider the inclusion of general limits for out-of-band emissions into the Radio Regulations, in particular with regard to whether it is appropriate to do so, taking into account the results of ITU-R studies."

In this respect, please see also the revised text for Recommendation 66, approved by Committee 5.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

FOURTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has continued its consideration of *resolves* 4 of Resolution 712 under agenda item 1.9.2 as well as agenda item 1.9.4.2. It has also completed its work with respect to agenda item 1.8. Proposed modifications to Recommendation 66 concerning the maximum permitted levels of unwanted emissions have also been approved. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

ARTICLE S5

MOD

MHz
75.2 – 137

Allocation to Services		
Region 1	Region 2	Region 3
117.975 – 136	AERONAUTICAL MOBILE (R) S5.111 MOD S5.198 S5.199 S5.200 S5.201	
136 – 137	AERONAUTICAL MOBILE (R) ~~Fixed~~ ~~Mobile except aeronautical mobile (R)~~ ~~S5.198~~ MOD S5.202 MOD S5.203 S5.203A	

MOD S5.198 *Additional allocation:* the band 117.975 - ~~137~~136 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis, subject to agreement obtained under Article **14**/No. **S9.21**.

MOD S5.203 ~~*Additional allocation:* the band 136 - 137 MHz is also allocated to the space operation service (space-to-Earth), meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) on a secondary basis (see Resolution **408 (Mob-87)**).~~In the band 136 - 137 MHz existing operational meteorological satellites may continue to operate, under the conditions defined in **S4.4**, relative to the aeronautical mobile service until 1 January 2002. Administrations shall not authorize new frequency assignments in this band to stations in the meteorological-satellite service.

ADD S5.203A *Additional allocation:* in ~~Saudi Arabia, United Arab Emirates,~~ Israel, ~~Jordan,~~ Mauritania, ~~Oman,~~ Qatar~~, Syria, Zambia~~ and Zimbabwe, the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis until 1 January 2005.

ADD S5.203B *Additional allocation:* in Saudi Arabia, United Arab Emirates, Jordan, Oman and Syria the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis until 1 January 2005.

MOD S5.202 ~~*Different category of service*~~*Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, United Arab Emirates, Georgia, Iran (Islamic Republic of), Jordan, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Oman, Uzbekistan, Poland, Syria, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan, Turkey and Ukraine, the ~~allocation of the~~ band 136 - 137 MHz is also allocated to the aeronautical mobile (OR) service ~~is~~ on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

MOD

MHz
5 580 – 7 450

Allocation to Services		
Region 1	Region 2	Region 3
7 075 – 7 250	FIXED MOBILE S5.458 MOD S5.459 S5.460	

MOD S5.459 *Additional allocation:* in ~~Region 2, the band 7.125 - 7.155 MHz is~~Russia, the frequency bands 7 100 - 7 155 MHz and 7 190 - 7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD

MHz
7 450 – 8 175

Allocation to Services		
Region 1	Region 2	Region 3
8 025 - 8 175	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ADD S5.462A S5.463	

MOD **MHz**
8 175 – 8 750

Allocation to Services		
Region 1	Region 2	Region 3
8 175 - 8 215	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ ADD S5.462A S5.463	
8 215 - 8 400	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ~~Earth Exploration Satellite (space-to-Earth)~~ ~~S5.462 S5.464~~ ADD S5.462A S5.463	

ADD S5.462A In Regions 1 and 3 (except for Japan), ~~and in Kuwait, Oman and Qatar,~~ in the band 8 025 - 8 400 MHz, the earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival (θ°), without the consent of the affected administration.

-174 dB(W/m^2) in a 4 kHz band	for	$0° \le \theta < 5°$
-174 + 0.5 (θ - 5) dB(W/m^2) in a 4 kHz band	for	$5° \le \theta < 25°$
-164 dB(W/m^2) in a 4 kHz band	for	$25° \le \theta \le 90°$

These values are subject to study under Resolution [COM5-9].

MOD S5.463 ~~In Region 2, a~~Aircraft stations are not permitted to transmit in the band 8 025 - 8 400 MHz.

MOD

GHz
24.45 – 27

Allocation to Services		
Region 1	Region 2	Region 3
25.5 – 27	EARTH EXPLORATION-SATELLITE (space-to Earth) ADD S5.536A ADD S5.536B FIXED INTER-SATELLITE S5.536 MOBILE ~~Earth Exploration-Satellite (space-to-Earth)~~ Standard Frequency and Time Signal-Satellite (Earth-to-space)	

ADD S5.536A Administrations installing earth exploration-satellite earth stations cannot claim protection from fixed and mobile stations operated in neighbouring administrations. In addition, earth stations operating in the earth exploration-satellite service should ~~comply with ITU-R~~ take into account Recommendation ITU-R SA.1278.

ADD S5.536B In Germany, Austria, Belgium, Brazil, China, the Republic of Korea, Denmark, Spain, Estonia, Finland, France, Hungary, India, Ireland, Italy, Kenya, Liechtenstein, Lithuania, Moldova, Norway, New Zealand, Oman, Uganda, Pakistan, the Netherlands, the Philippines, Poland, Portugal, Slovakia, Romania, the United Kingdom, Sweden, Switzerland, Turkey, Viet Nam and Zimbabwe earth stations operating in the earth exploration-satellite service in the band 25.5 - 27.0 GHz shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services.

RESOLUTION [COM5-9]

PROTECTION OF THE FIXED SERVICES IN THE FREQUENCY BAND 8 025 - 8 400 MHz SHARING WITH GEOSTATIONARY-SATELLITE SYSTEMS OF THE EARTH EXPLORATION-SATELLITE SERVICE (SPACE-TO-EARTH)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that previous to WRC-97, the band 8 025 - 8 400 MHz was allocated secondary to the earth exploration-satellite service (space-to-Earth) in Regions 1 and 3 except for those countries listed in footnote No. **S5.464** of the Radio Regulations;

b) that the power flux-density limits given in Table S21.4 of the Radio Regulations apply to emissions from space stations of the earth exploration-satellite service (space-to-Earth);

c) that for those administrations where the secondary allocation applied before WRC-97, geostationary orbital avoidance was not required for fixed services and therefore, the power flux-density limits given in Table S21.4 of the Radio Regulations may give excessive interference to the fixed service;

d) that those administrations identified by footnote No. **S5.462A** of the Radio Regulations have adopted provisional power flux-density limits lower that those shown in Table S21.4 to protect the fixed service;

~~d~~e) that no studies have been conducted in this frequency band by the ITU-R on the power flux-density values to apply to space stations of geostationary earth exploration-satellite services where no geostationary orbital avoidance has been implemented by stations of the fixed service,

considering further

that the band 8 025 - 8 400 MHz is used extensively by the fixed service~~s~~ in accordance with ITU-R channel arrangements for the 8 GHz band (see Recommendation ITU-R ~~Recommendation~~ F.386) and is also used by some countries for television outside broadcast services,

resolves ~~to invite ITU-R~~

to invite ITU-R to ~~urgently~~ study as matter of urgency the required power flux-density limits to be applied to space stations of geostationary earth exploration-satellite services (space-to-Earth) in the frequency band 8 025 - 8 400 MHz where no orbital avoidance has been implemented by fixed services sharing the band.~~,~~

urges administrations

to provide ITU-R with the necessary technical parameters of fixed service links requiring protection in this frequency band.

RESOLUTION [COM5-13]

THE USE OF THE FREQUENCY BAND 420 - 470 MHz BY THE EARTH EXPLORATION-SATELLITE SERVICE (ACTIVE)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 1992, identified an urgent need for assessment and systematic observations of forest cover and rate of forest degradation in tropical and temperate regions;

b) that during ~~WRC-97~~this Conference, many countries agreed to the principle that ITU should take action in response to the need identified by UNCED;

c) that frequencies around 450 MHz have been identified as having the unique capability to penetrate the canopy of forests and to determine the ground-trunk interaction;

d) that a bandwidth of about 6 MHz is considered necessary to provide the required resolution,

recognizing

~~e~~a) that this Conference considered a proposal for a secondary allocation for the earth exploration-satellite service (active) within the frequency band 432 - 438 MHz;

~~f~~b) that the Report of the Conference Preparatory Meeting (CPM-97) stated that WRC-97 may deem it appropriate to defer consideration of this agenda item to WRC-99, by which time all relevant studies should be completed;

~~g~~c) that CPM-97 concluded that the spaceborne sensors cannot be considered technically compatible with terrestrial tracking radars without restriction upon the spaceborne sensors;

~~h~~d) that measures may be needed to minimize interference to fixed, mobile, mobile satellite, amateur ~~and,~~ amateur satellite and space operation services ~~in countries where primary allocations to those services are provided by the Radio Regulations~~,

resolves

1 ~~that~~to invite ITU-R to study, as a matter of urgency, emission criteria, specific sharing criteria, and operational characteristics for spaceborne sensors in the frequency band 420 - 470 MHz, and develop a relevant Recommendation;

2 ~~that~~to invite ITU-R to develop ~~a report to CPM-99~~an ITU-R Report by the date of CPM-99 on the specific emission and operational characteristics used by the earth exploration-satellite service (active) in order to minimize the potential interference to existing services, and in order to support the selection of a frequency band having the optimal sharing scenarios;

3 that, based on proposals from administrations, and taking into account the results of the ITU-R studies, the ITU-R ~~r~~Report mentioned in *resolves* 2, and the CPM-99 Report, [WRC-99] ~~shall~~should consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency band 420 - 470 MHz.

RECOMMENDATION No. 66 (Rev.~~WARC-92~~WRC-97)

STUDIES OF THE MAXIMUM PERMITTED LEVELS OF S~~PURIOUS~~UNWANTED EMISSIONS

The World ~~Administrative~~ Radiocommunication Conference ~~for Dealing with Frequency Allocations in Certain Parts of the Spectrum~~ (~~Malaga-Torremolinos~~Geneva, ~~1992~~1997),

considering

a) that Appendix **~~8~~S3** to the Radio Regulations [Rev.WRC-97] specifies the maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line~~, for the frequency bands below 17.7 GHz~~;

b) that the principal objective of Appendix **~~8~~S3** is to specify the maximum permitted levels of spurious emissions that, while being achievable, provide protection against harmful interference;

c) that excessive levels of ~~spurious~~ unwanted emissions may give rise to harmful interference;

d) that while out-of-band emissions can also give rise to harmful interference, the Radio Regulations do not provide general limits for these emissions;

~~*d*~~*e)* that while Appendix **~~8~~S3** applies ~~only~~generally to the mean power of ~~the~~a transmitter and ~~the~~its spurious emissions, ~~there are a~~it also accounts for the variety of emissions where the interpretation of the term "mean power" and its consequential measurement ~~are~~would be difficult, particularly in the cases of digital modulation, broadband systems, pulsed modulation, and narrow-band high power transmitters;

~~*e*~~*f)* that ~~whilst the CCIR is studying this problem, it has not yet furnished adequate Recommendations pertaining to Appendix **8** for frequency bands above 960 MHz~~while Appendix S3 covers spurious emissions for all radio services, those listed for space services are included only as design objectives;

~~*f*~~*g)* that ~~spurious~~unwanted emissions from transmitters operating in space stations may cause harmful interference, particularly in regard to ~~intermodulation components~~emission characteristics from wide-band amplifiers which cannot be adjusted after launch;

~~*g*~~*h)* that ~~spurious~~unwanted emissions may cause harmful interference to ~~passive services, including the radio astronomy service in bands above 17.7 GHz~~safety services and radio astronomy and space services using passive sensors;

~~*h*~~*i)* that ~~spurious emissions from earth stations also require particular study;~~, for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect specific services, such as safety services and passive services in specific bands;

~~*i) that no information is available from the CCIR regarding spurious emissions from stations employing digital modulation techniques;~~

~~*j) that transmitters operating in space stations are increasingly employing spread-spectrum and other wideband digital modulation techniques that can produce out-of-band and spurious emissions at frequencies far removed from the carrier frequency;~~

j) that broadband digital modulation may cause unwanted emissions at frequencies far from the carrier frequency,

and noting

1. that the safety and passive services are in many cases allocated frequencies adjacent or close to those services employing high power transmitters;

2. that some administrations have adopted more stringent limits for spurious emissions than those specified in Appendix **S3**,

recommends that ~~the CCIR~~ITU-R

1. study as a matter of urgency the question of spurious emissions resulting from space services transmissions, and, on the basis of those studies, develop Recommendations for maximum permitted levels of spurious emissions in terms of mean power of spurious components supplied by the transmitter to the antenna transmission line;

~~5~~2. submit a report to ~~the next competent conference~~[WRC-99] on the results of its studies with a view to reviewing and including spurious ~~and out-of-band~~ emission limits for space services in Appendix ~~**8**~~**S3** of the Radio Regulations~~, principally for the protection of the radio astronomy and other passive services.~~;

~~2~~3. continue the study of spurious emission levels in all frequency bands, emphasizing the study of those frequency bands, services and modulation techniques not presently covered by Appendix ~~**8**~~**S3**;

~~4. study the categorizing of emissions and spurious emissions in terms of "mean power" and develop appropriate Recommendations to facilitate the interpretation and measurement of "mean power" as it applies to the various classes of emissions;~~

4. study the question of unwanted emissions resulting from transmitters of all services and all modulation methods, and on the basis of those studies, develop a Recommendation(s) for maximum permitted levels of spurious emissions and out-of-band emissions;

~~3~~5. establish appropriate measurement techniques for ~~spurious~~unwanted emissions, where those techniques do not currently exist, including the determination of reference levels for wideband transmissions as well as the applicability of reference measurement bandwidths;

6. study the reasonable boundary of spurious emissions and out-of-band emissions with a view to defining such a boundary in S1;

7. study those frequency bands and instances where for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect safety services and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

8. study those frequency bands and instances where for technical or operational reasons, out-of-band limits may be required to protect safety services, and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

9. report to a future competent conference the results of studies under *recommends* 3, 4 and 5 above, with a view to recommending whether or not it is appropriate to include within the Radio Regulations general limits for out-of-band emissions;

10. report the results of studies, under *recommends* 6, 7 and 8 above, to a competent conference(s).

SUP

RESOLUTION 408 (Mob-87)

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 240-E
11 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5
AD HOC 2

RECOMMENDATION [COM5-A] (WRC-97)

USE OF THE FREQUENCY BANDS 2 025 - 2 110 MHz AND 2 200 - 2 290 MHz BY THE SPACE RESEARCH, SPACE OPERATION, EARTH EXPLORATION-SATELLITE, FIXED AND MOBILE SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz are allocated on a primary basis to the space research, space operation, earth exploration-satellite, fixed and mobile services;

b) that, in response to Resolutions from WARC-92, studies have resulted in a number of ITU-R Recommendations, which when adhered to by the services will result in a stable, long-term sharing environment, (Recommendations ITU-R SA.364, SA.1019, F.1098, F.1247, F.1248, SA.1154, SA.1273, SA.1274 and SA.1275);

c) that WRC-97 adopted RR **S5.391** which states that high-density mobile systems shall not be introduced into these frequency bands,

considering further

that enhancements in technology may enable the services mentioned in *considering* a) to minimize the total bandwidth requirement in these frequency bands,

noting

that WARC-92 considered that it is desirable to review the present and planned use of the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, with the intent, when practicable, of satisfying some space mission requirements in bands above 20 GHz,

recognizing

that this Conference noted increasing requirements for emerging communication systems that need to be satisfied in the frequency range below 3 GHz,

recommends

that administrations planning to introduce new systems in the space research, space operation, earth exploration-satellite, fixed or mobile services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz take into account the ITU-R Recommendations in *considering* b) above when making assignments to these services, and implement enhancements in technology as early as practicable with a view to minimizing the total bandwidth required by systems of each service.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 241-E
12 November 1997
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COMMITTEE 6

FIFTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Please replace page 11 by the attached page.

MOD S5.448 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan,~~ Libya, ~~Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.

MOD S5.450 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, the Islamic Republic of Iran, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD S5.453 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, ~~Malawi, Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650 -5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.454 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **S5.33**).

MOD S5.466 *Different category of service:* in ~~Belgium,~~ Israel, ~~Luxembourg,~~ Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400 - 8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**).

MOD S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, ~~Guinea,~~ Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia,

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 6

FIFTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has completed its consideration, with one exception, of proposals submitted concerning country footnotes to be treated in accordance with agenda item 1.1. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

MOD S5.55 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Kazakstan,~~ Moldova,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 - 17 kHz is also allocated to the radionavigation service on a primary basis.

MOD S5.56 The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan,~~ Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

MOD S5.58 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Kazakstan,~~ Moldova,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 67 - 70 kHz is also allocated to the radionavigation service on a primary basis.

SUP S5.63 In the band 90 - 110 kHz, the United Kingdom may continue to use its coast radiotelegraph stations in operation on 14 September 1987, on a secondary basis.

MOD S5.67 *Additional allocation:* in~~ Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Romania,~~ Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.

MOD S5.91 *Additional allocation:* in ~~Australia,~~ the Philippines,~~ Singapore~~ and Sri Lanka, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.

MOD S5.98 *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, ~~France,~~ Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, ~~Luxembourg, Malawi,~~ Moldova,~~ Uzbekistan,~~ the Netherlands, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan,~~ Tanzania,~~ Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.99 *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq,~~ The Former Yugoslav Republic of Macedonia,~~ Libya, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya~~, Malawi~~, Somalia, Swaziland and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

MOD S5.112 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, Cyprus, Denmark,~~ Spain,~~ France, Greece, Iceland, Italy, Malta, Norway,~~ the United Kingdom, Singapore,~~ Sri Lanka, Turkey and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.114 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, Cyprus, Denmark,~~ Spain,~~ France, Greece, Iraq, Italy, Malta, Norway,~~ the United Kingdom,~~ Turkey and Yugoslavia, the band 2 502 - 2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.117 *Alternative allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, ~~Cameroon,~~ Cyprus, Côte d'Ivoire, Denmark, Egypt,~~ Spain,~~ France, Greece, Iceland, Italy, Liberia, Malta, Norway,~~ the United Kingdom, Singapore,~~ Sri Lanka, Togo, Turkey and Yugoslavia, the band 3 155 - 3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.128 In Afghanistan, Argentina, Armenia, ~~Australia,~~ Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakstan, Mali,~~ Moldova,~~ Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

MOD S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya~~,~~ and Madagascar~~ and Malawi~~, the band 7 000 - 7 050 kHz is allocated to the fixed service on a primary basis.

MOD S5.149 In making assignments to stations of other services to which the bands:

13 360 - 13 410 kHz,
25 550 - 25 670 kHz,
37.5 - 38.25 MHz,
73 - 74.6 MHz in Regions 1 and 3,
~~79.75 - 80.25 MHz in Region 3,~~
150.05 - 153 MHz in Region 1,
322 - 328.6 MHz*,
406.1 - 410 MHz,
608 - 614 MHz in Regions 1 and 3,
1 330 - 1 400 MHz*,
1 610.6 - 1 613.8 MHz*,
1 660 - 1 670 MHz,
1 718.8 - 1 722.2 MHz*,
2 655 - 2 690 MHz,
3 260 - 3 267 MHz*,
3 332 - 3 339 MHz*,
3 345.8 - 3 352.5 MHz*,
4 825 - 4 835 MHz*,
4 950 - 4 990 MHz,
4 990 - 5 000 MHz,
6 650 - 6 675.2 MHz*,
10.6 - 10.68 GHz,
14.47 - 14.5 GHz*,
22.01 - 22.21 GHz*,
22.21 - 22.5 GHz,
22.81 - 22.86 GHz*,
23.07 - 23.12 GHz*,
31.2 - 31.3 GHz,
31.5 - 31.8 GHz in Regions 1 and 3,
36.43 - 36.5 GHz*,
42.5 - 43.5 GHz,
42.77 - 42.87 GHz*,
43.07 - 43.17 GHz*,
43.37 - 43.47 GHz*,
48.94 - 49.04 GHz*,
72.77 - 72.91 GHz*,
93.07 - 93.27 GHz*,
97.88 - 98.08 GHz*,
140.69 - 140.98 GHz*,
144.68 - 144.98 GHz*,
145.45 - 145.75 GHz*,
146.82 - 147.12 GHz*,
150 - 151 GHz*,
174.42 - 175.02 GHz*,
177 - 177.4 GHz*,
178.2 - 178.6 GHz*,
181 - 181.46 GHz*,
186.2 - 186.6 GHz*,
250 - 251 GHz*,
257.5 - 258 GHz*,
261 - 265 GHz,
262.24 - 262.76 GHz*,
265 - 275 GHz,
265.64 - 266.16 GHz*,
267.34 - 267.86 GHz*,
271.74 - 272.26 GHz*

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **S4.5** and **S4.6** and Article **S29**).

MOD S5.152 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

MOD S5.154 *Additional allocation:* in Armenia, Azerbaijan, ~~Belarus,~~ Georgia, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18 068 - 18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.

MOD S5.160 *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, ~~South Africa,~~ Swaziland and Zaire, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD S5.174 *Alternative allocation:* in Bulgaria, Hungary, Poland~~,~~ and Romania ~~and Slovakia~~, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960).

MOD S5.177 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, ~~Hungary,~~ Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD S5.181 *Additional allocation:* in Germany, Austria~~, Belgium~~, Cyprus, Denmark, Egypt, ~~Spain,~~ France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, ~~the United Kingdom,~~ Sweden and Switzerland, the band 74.8 - 75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

MOD S5.184 *Additional allocation:* in Bulgaria~~, Hungary~~ and Romania, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).

SUP S5.186

MOD S5.190 *Additional allocation:* in ~~France, Ireland, Israel, Italy and~~ Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD S5.192 *Additional allocation:* in China~~,~~ and the Republic of Korea~~, the Philippines and Singapore~~, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.194 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus, Bulgaria,~~ Georgia, ~~Kazakstan,~~ Lebanon, ~~Moldova, Mongolia, Uzbekistan,~~ Kyrgyzstan, Syria~~, Russia~~, Somalia~~, Tajikistan,~~ and Turkmenistan~~, Turkey and Ukraine~~, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis.

MOD S5.197 *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, ~~Spain,~~ France, ~~Israel,~~ Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, ~~the United Kingdom~~ and Sweden, the band 108 - 111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. **S9.21**.

MOD S5.201 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

MOD S5.210 *Additional allocation:* in Austria~~, Belgium~~, France, Italy, Liechtenstein, ~~Luxembourg,~~ Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.

MOD S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, ~~Burkina Faso,~~ Cameroon, ~~Canada,~~ China, Cyprus, ~~Colombia,~~ Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, ~~Ecuador,~~ Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Honduras, Hungary, India, ~~Indonesia,~~ the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russia, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, ~~Suriname,~~ Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe.

MOD S5.237 *Additional allocation:* in the Congo, Eritrea, Ethiopia, Gambia, Guinea, Libya, Malawi, Mali, ~~Uganda,~~ Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 223 MHz is also allocated to the fixed and mobile services on a secondary basis.

SUP S5.244

MOD S5.259 *Additional allocation:* in Germany, Austria~~, Belgium,~~ Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria, ~~the United Kingdom,~~ and Sweden ~~and Switzerland,~~ the band 328.6 - 335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

MOD S5.271 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, Belarus, China, Estonia, Georgia, India, ~~Kazakstan,~~ Latvia, Lithuania, ~~Moldova, Uzbekistan,~~ Kyrgyzstan~~, the United Kingdom, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 420 - 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.

MOD S5.277 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ Cameroon, the Congo, Djibouti, Estonia, Gabon, Georgia, Hungary, Kazakstan, Latvia, ~~Malawi,~~ Mali, Moldova, Mongolia, ~~Niger,~~ Uzbekistan, Pakistan, Poland, Kyrgyzstan, ~~Democratic People's Republic of Korea,~~ Slovakia, the Czech Republic, Romania, Russia, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.

MOD S5.290 *Different category of service:* in Afghanistan, Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ China, Georgia, Japan, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460 - 470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.

MOD S5.296 *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland~~,~~ and Tunisia ~~and Turkey~~, the band 470 -790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

SUP **S5.310** *Additional allocation:* in Cuba, the band 614 - 890 MHz is also allocated to the radionavigation service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD **S5.312** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 645 - 862 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

SUP **S5.313** *Alternative allocation:* in Spain and France, the band 790 - 830 MHz is allocated to the broadcasting service on a primary basis.

MOD **S5.322** In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**) excluding Algeria, Egypt, Spain, Libya, ~~and~~ Morocco and South Africa, subject to agreement obtained under No. **S9.21**.

MOD **S5.330** *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, ~~Guinea,~~ Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, ~~Malawi,~~ Morocco, Mozambique, Nepal, Nigeria, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, ~~Thailand,~~ Togo and Yemen, the band 1 215 - 1 300 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.338** In ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the existing installations of the radionavigation service may continue to operate in the band 1 350 - 1 400 MHz.

MOD **S5.347** *Different category of service:* in Bangladesh, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, ~~Colombia,~~ Cuba, Denmark, Egypt, ~~Spain,~~ Greece, ~~Hungary,~~ Ireland, Italy, Jordan, Kenya~~, The Former Yugoslav Republic of Macedonia, Malawi~~, Mozambique, ~~Panama,~~ Portugal, Sri Lanka, ~~Sweden,~~ Swaziland, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1 452 - 1 492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007.

MOD **S5.349** *Different category of service:* in Saudi Arabia~~, Armenia~~, Azerbaijan, Bahrain, ~~Belarus,~~ Bosnia and Herzegovina, ~~Bulgaria,~~ Cameroon, Egypt, the United Arab Emirates, France, Georgia, the Islamic Republic of Iran, Iraq, Israel, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, ~~Moldova,~~ Mongolia, Oman, ~~Uzbekistan,~~ Qatar, Syria, Kyrgyzstan, Romania~~, Russia, Tajikistan~~, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 525 - 1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).

MOD S5.350 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Georgia, ~~Kazakstan, Moldova,~~ Kyrgyzstan~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 1 525 - 1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.

MOD S5.355 *Additional allocation:* in ~~Saudi Arabia,~~ Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, ~~Niger,~~ Oman, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo, Yemen and Zambia, the bands 1 540 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a secondary basis.

MOD S5.369 *Different category of service:* in Angola, Australia, Burundi, ~~Côte d'Ivoire,~~ Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD S5.381 *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, the Islamic Republic of Iran, Malaysia, Pakistan~~, Singapore~~ and Sri Lanka, the band 1 690 - 1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.382 *Different category of service:* in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Georgia, Guinea, Hungary, Iraq, Israel, Jordan, Kazakstan, ~~Kenya,~~ Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690 - 1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

MOD S5.384 *Additional allocation:* in India, Indonesia~~,~~ and Japan ~~and Thailand~~, the band 1 700 - 1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.

MOD S5.387 *Additional allocation:* in Armenia, Azerbaijan, Belarus, ~~Bulgaria,~~ Georgia, Kazakstan, Mali, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 1 770 - 1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD S5.400 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, ~~Côte d'Ivoire,~~ Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, ~~Senegal,~~ Sudan, Swaziland, Togo, Zaire and Zambia, the

allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD **S5.412** *Alternative allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan, Moldova,~~ Kyrgyzstan~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 2 500 - 2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD **S5.422** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, ~~Bulgaria, Cameroon,~~ the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, ~~Lithuania,~~ Malaysia, ~~Malawi,~~ Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Romania, Russia, ~~Singapore,~~ Somalia, Tajikistan, ~~Thailand,~~ Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia, Zaire and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

MOD **S5.428** *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Cuba, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Poland, Kyrgyzstan, Romania, ~~Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 3 100 - 3 300 MHz is also allocated to the radionavigation service on a primary basis.

MOD **S5.429** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea~~, Singapore~~ and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

MOD **S5.430** *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Cuba, Georgia, ~~Kazakstan, Moldova,~~ Mongolia, Poland, Kyrgyzstan, Romania, ~~Russia, Tajikistan,~~ Turkmenistan and Ukraine, the band 3 300 - 3 400 MHz is also allocated to the radionavigation service on a primary basis.

SUP **S5.434**

MOD **S5.437** *Additional allocation:* in Germany~~, Denmark~~ and Norway, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.

MOD **S5.439** *Additional allocation:* in China, the Islamic Republic of Iran~~,~~ and Libya ~~and the Philippines~~, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.

MOD S5.448 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Kazakstan,~~ Libya, ~~Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.

MOD S5.450 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, the Islamic Republic of Iran, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD S5.453 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, ~~Malawi, Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650 -5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.454 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **S5.33**).

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MOD S5.464 *Different category of service:* in Bangladesh, ~~Benin,~~ Burkina Faso, Cameroon, China, the Central African Republic, ~~Côte d'Ivoire,~~ Egypt, France, Guinea, India, the Islamic Republic of Iran, Italy, Japan, Libya, Mali, ~~Niger,~~ Pakistan, ~~Senegal,~~ Somalia, Sudan, Sweden, Tanzania, Zaire and Zambia, the allocation of the band 8 025 - 8 400 MHz to the Earth exploration-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.]

MOD S5.466 *Different category of service:* in ~~Belgium,~~ Israel, ~~Luxembourg,~~ Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400 - 8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**).

MOD S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, ~~Guinea,~~ Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia,

Swaziland, Tanzania, Chad, ~~Thailand,~~ Togo, Tunisia and Yemen, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.477 *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sweden, ~~Thailand,~~ Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

MOD S5.478 *Additional allocation:* in ~~Armenia,~~ Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, ~~Hungary,~~ Kazakstan, ~~Moldova,~~ Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 9 800 - 10 000 MHz is also allocated to the radionavigation service on a primary basis.

MOD S5.483 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, ~~Bulgaria, Cameroon,~~ China, Colombia, the Republic of Korea, Costa Rica, ~~Cuba,~~ Egypt, the United Arab Emirates, Georgia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Democratic People's Republic of Korea, Romania, Russia, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the band 10.68 - 10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

MOD S5.494 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, ~~Niger,~~ Nigeria, Qatar, Syria, Senegal, Somalia, Sudan, Chad, Togo, Yemen and Zaire, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.495 *Additional allocation:* in ~~Belgium,~~ Bosnia and Herzegovina, Croatia, Denmark, ~~Spain,~~ France, Greece~~, The Former Yugoslav Republic of Macedonia,~~ Liechtenstein, ~~Luxembourg,~~ Monaco, Norway, Uganda, Portugal, Romania, Slovenia, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

MOD S5.496 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus, Bulgaria,~~ Georgia, ~~Hungary, Kazakstan, Moldova,~~ ~~Uzbekistan,~~ Kyrgyzstan~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these

earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in Article **S21**, Table S21-4 for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.

MOD S5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, ~~Guinea,~~ Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, ~~Malawi,~~ Mali, Malta, Morocco, Mauritania, ~~Niger,~~ Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Chad and Tunisia, the band 13.4 - 14 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.501 *Additional allocation:* in ~~Armenia,~~ Austria, Azerbaijan, ~~Belarus,~~ Bulgaria, Georgia, Hungary, Japan, ~~Kazakstan, Moldova,~~ Mongolia, Kyrgyzstan, Romania, the United Kingdom~~, Russia, Tajikistan~~, Turkmenistan and Ukraine, the band 13.4 - 14 GHz is also allocated to the radionavigation service on a primary basis.

MOD S5.505 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, ~~Malawi,~~ Mali, Morocco, Mauritania, ~~Niger,~~ Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

MOD S5.508 *Additional allocation:* in Germany, Austria~~, Belgium~~, Bosnia and Herzegovina, ~~Denmark, Spain,~~ France, Greece, Ireland, Iceland, Italy, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, ~~Luxembourg, Norway,~~ Portugal, the United Kingdom, Slovenia, Switzerland, Turkey and Yugoslavia, the band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis.

MOD S5.511 *Additional allocation:* in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, the Islamic Republic of Iran, Iraq, Israel, Kuwait, ~~The Former Yugoslav Republic of Macedonia,~~ Lebanon, Libya, Pakistan, Qatar, Syria, Slovenia, Somalia and Yugoslavia, the band 15.35 - 15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.

MOD S5.512 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, the Islamic Republic of Iran, Jordan, Kuwait~~, The Former Yugoslav Republic of Macedonia~~, Libya, Malaysia, ~~Malawi,~~ Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Slovenia,

Somalia, Sudan, ~~Sweden,~~ Swaziland, Tanzania, Chad, ~~Thailand,~~ Yemen and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.514** *Additional allocation:* in Algeria, Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, ~~The Former Yugoslav Republic of Macedonia,~~ Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Slovenia, Sudan, Sweden, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply.

MOD **S5.521** *Alternative allocation:* in Germany, Denmark, the United Arab Emirates, Greece, ~~Poland,~~ Slovakia, and the Czech Republic ~~and the United Kingdom~~, the band 18.1 - 18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis (see No. **S5.33**). The provisions of No. **S5.519** also apply.

MOD **S5.524** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan, Tanzania, Chad, ~~Thailand,~~ Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

MOD **S5.542** *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, ~~Niger,~~ Pakistan, Qatar, Syria, ~~Singapore,~~ Somalia, Sudan, Sri Lanka~~,~~ and Chad ~~and Thailand~~, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.

MOD **S5.545** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, ~~Poland,~~ Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31 - 31.3 GHz to the space research service is on a primary basis (see No. **S5.33**).

MOD S5.546 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, ~~Poland,~~ Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31.5 - 31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

MOD S5.549 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, ~~Spain,~~ Gabon, ~~Guinea,~~ Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, ~~Malawi,~~ Mali, Malta, Morocco, Mauritania, Nepal, ~~Niger,~~ Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, ~~Tanzania, Thailand,~~ Togo, Tunisia, Yemen and Zaire, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.550 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, ~~Moldova,~~ Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. **S5.33**).

MOD S5.557 *Additional allocation:* in Japan ~~and the United Kingdom~~, the band 54.25 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.

MOD S5.564 *Additional allocation:* in Germany, Argentina, Spain, Finland, France, India, Italy~~,~~ and the Netherlands ~~and Sweden~~, the band 261 - 265 GHz is also allocated to the radio astronomy service on a primary basis.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 242-E
11 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 4D

NOTE BY THE SECRETARY-GENERAL

INFORMATION NOTE TO ASSIST IN THE EXAMINATION OF THE "DRAFT REVISED APPENDICES 30/30A REGION 1 AND 3 PLAN"

1 Following the decisions of Working Group 4D and Committee 4 on the assumptions to be used in preparing a "Draft revised Appendices 30/30A Regions 1 and 3 Plan" the Radiocommunication Bureau is currently performing studies to assess the above-mentioned Draft Plan with respect to:

- BSS-BSS compatibility; and
- compatibility with other services and the Region 2 Plan.

2 Definite RESULTS of these compatibility studies will not be available until [14] November 1997. Delegates may wish to prepare themselves to quickly be familiar with the results when they become available by reviewing the **STRUCTURE** of the reports presented in Addenda 1 and 2 of Conference Document 56. Because of its size, the distribution of Document 56(Add.1) has been limited to two copies per delegation. Addendum 2 has been distributed to all delegates.

3 Addenda 1 and 2 of Document 56 do not provide the results of the Bureau's compatibility calculations of the "Draft revised Plan". Delegates may however find that the reports concerning "Alternative Step 1" and "National Preferences" may be closest to the eventual results. However, it is stressed that the assumptions used in those studies differ in several important respects from those currently used in the studies performed by the Bureau. These differences are explained in Document 160 and its Addenda, which outline the decisions of Committee 4 in respect of the assumptions to be used in developing a revised Plan.

Comments concerning BSS-BSS compatibility studies

4 Addendum 1 of Document 56 presents, among other data in the column headed "New Ref", the **Overall Equivalent Protection Margin (OEPM)** for each channel, each beam and each test point. This will be an important parameter in assessing the quality of the revised Plan. In particular, delegations should note cases of negative OEPM, or cases where pre-existing negative OEPMs are further degraded by more than 0.25 dB compared to the situation contained in the column headed "Ref".

5 Attention is also drawn to the fact that some of the incompatibilities mentioned above may not need to be considered further because one or more of the following conditions apply:

a) negative OEPMs were inherited from either the initial WARC-77 or WARC ORB-88 Plans;

b) negative OEPMs resulting from the successful application of the modification procedure of the Plan. The negative OEPMs emanate then from the agreement obtained (explicitly or tacitly) to coordination requests;

c) single-entry C/I values lower than 28 dB due to the fact that this criteria was not used when the WARC-77 and WARC ORB-88 Plans were established.

Comments concerning compatibility studies between Regions 1 and 3 BSS and other services and the Region 2 Plan

6 With respect to the analyses of compatibility with other services and with the Region 2 Plan, while the exact situation for individual administrations might vary somewhat; the general scope of the results of the compatibility studies will not be dramatically different from those presented in Addendum 2 of Document 56. For each of the different compatibility cases, these results are presented as lists of administrations/satellite networks that are identified when the criteria explained in the first part of the Addendum 2 document are not met. It will be important for the Conference to consider how identified situations of incompatibilities between the "Draft revised Appendices 30/30A Plan" and other services and the Region 2 Plan will be dealt with. Section 3.15 of Document 56 suggests several alternative approaches that the Conference might wish to consider to deal with the identified incompatibilities.

7 In some cases, compatibility with other services and the Region 2 Plan may be assured by virtue of agreements tacitly contained in the original Appendices 30/30A Plans. In some cases administrations may extend these agreements to new countries using the same channels and orbital positions as the former assignments. It should also be noted that for assignments that have entered the Appendices 30/30A Plans through the application of Article 4, compatibility studies with other services and the Region 2 Plan are not required because agreements (either explicitly or tacitly) were already obtained at the time of completing the Article 4 process.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

SIXTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has completed its consideration of agenda items 1.9.3 and 1.9.6 (with respect to the use of high altitude platform stations). As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

ARTICLE S1

Terms and Definitions

ADD S1.X *High Altitude Platform Station*: A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.

ARTICLE S4

Assignment and Use of Frequencies

ADD S4.15A Transmissions to or from high altitude platform stations shall be limited to bands specifically mentioned in Article **S5**.

ARTICLE S5

MOD

MHz
40.98 – 68

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td>44 – 47</td><td colspan="2">FIXED
MOBILE
S5.162 ADD S5.162A</td></tr>
<tr><td rowspan="4">47 – 68
BROADCASTING

S5.163 S5.164 S5.165
S5.169 S5.171
ADD S5.162A</td><td>47 – 50
FIXED
MOBILE</td><td>47 – 50
FIXED
MOBILE
BROADCASTING</td></tr>
<tr><td colspan="2">50 – 54
AMATEUR
S5.166 S5.167 S5.168 S5.170</td></tr>
<tr><td>54 – 68
BROADCASTING
Fixed
Mobile

S5.172</td><td>54 – 68
FIXED
MOBILE
BROADCASTING</td></tr>
</table>

ADD S5.162A *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, Netherlands, Poland, Portugal, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Switzerland and Turkey, the band 46 - 68 MHz is also allocated to the radiolocation service on a secondary basis. The use is limited to the operation of wind profiler radars in accordance with Resolution [COM5-5] (WRC-97).

MOD

MHz
470 – 890

Allocation to Services		
Region 1	Region 2	Region 3
470 – 790 BROADCASTING S5.149 S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312 ADD S5.291A	**470 – 512** BROADCASTING Fixed Mobile S5.292 S5.293	**470 – 585** FIXED MOBILE BROADCASTING S5.291 S5.298

ADD S5.291A *Additional allocation:* in Germany, Austria, Denmark, Estonia, Finland, Liechtenstein, the Netherlands, the Czech Republic~~, Sweden~~ and Switzerland, the band 470 - 494 MHz is also allocated to the radiolocation service on a secondary basis. Its use is limited to the operation of wind profiler radars in accordance with Resolution [COM5-5] (WRC-97).

ARTICLE S5

Frequency Allocations

MOD **GHz**
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
47.2 – 50.2	FIXED FIXED-SATELLITE (Earth-to-space) S5.552 MOBILE S5.149 S5.340 ADD S5.552A S5.555	

ADD **S5.552A** The allocation to the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is subject to the provisions of Resolution [COM5-7].

ARTICLE S11

Notification and Recording of Frequency Assignments[1]

ADD **S11.26** Notices relating to assignments for high altitude platform stations in the fixed service in the 47.2 - 47.5 GHz and 47.9 - 48.2 GHz bands shall reach the Bureau not earlier than five years before, preferably not later than three months before, and in no case later than one month before the assignments are brought into use.

MOD **S11.24** Notices relating to assignments for stations of terrestrial services, except for those referred to in No. **S11.25** or **ADD S11.26**, shall reach the Bureau not earlier than three months before, preferably not later than one month before, and in no case later than one month after the assignments are brought into use.

ADD

RESOLUTION [COM5-7]

USE OF THE BANDS 47.2 - 47.5 GHz AND 47.9 - 48.2 GHz BY HIGH ALTITUDE PLATFORM STATIONS IN THE FIXED SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 47.2 - 50.2 GHz is allocated to the fixed, mobile and fixed-satellite services on a co-primary basis;

b) that WRC-97 has made provision for operation of high altitude platform stations, also known as stratospheric repeaters, within the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz;

c) that the ITU has among its purposes "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. 6 of the Constitution of the ITU (Geneva, 1992));

d) that systems based on new technologies using high altitude platforms will be able to provide high capacity, competitive services to urban and rural areas;

e) that high altitude platform systems are in an advanced stage of development and some countries have notified such systems to the ITU;

f) that the Radio Regulations Board issued a provisional rule of procedure concerning notification periods in **S11.24** (RR 1228) in February 1997, pending a final decision by WRC-97;

g) that in spite of the urgency attached to the development of such systems, technical, sharing and regulatory issues should be studied in order to achieve the most efficient use of the spectrum available for these systems;

h) that technical studies are required in order to ascertain the extent to which sharing of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is feasible between systems using high altitude platforms in the fixed service and those systems in the fixed, fixed-satellite and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;

i) that the radio astronomy service has primary allocations in the bands 42.5 - 43.5 GHz and 48.94 - 49.04 GHz;

j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude relay platforms and the sharing feasibility between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4);

k) that No. **S5.552** urges administrations to reserve fixed-satellite service use of the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service and that preliminary ITU-R studies indicate that high altitude platforms stations in the fixed service may share with broadcasting-satellite feeder links;

l) that the development of services using high altitude platforms in these bands requires major investment and that the manufacturers and operators should be given the confidence to make the necessary investment in these applications,

resolves

1 to urge administrations to facilitate coordination between high altitude platforms in the fixed service operating in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz and other co-primary services in their territory and adjacent territories;

2 that, on a provisional basis, the procedures of Article **S9** shall be used for coordination between satellite systems and high altitude platform systems;

3 to request the ITU-R to urgently carry out studies on the appropriate technical sharing criteria for the situations referred to in *considering* h), with priority given to the sharing with other systems in the fixed and fixed-satellite services, in particular the determination of the appropriate geographic separation from feeder links in the broadcasting-satellite service;

4 that [WRC-99] should review the results of these studies and consider the possible refinement of the regulatory provisions that might facilitate a broader application of these high altitude platform technologies,

instructs the Director of the Radiocommunication Bureau

1 that notices concerning high altitude platform stations that were received by the Bureau prior to 22 November 1997, and provisionally recorded in the ITU Master International Frequency Register in accordance with the provisional rule of procedure issued by the Radio Regulations Board shall be maintained;

2 that from 22 November 1997, and pending the review of the sharing studies in *considering* h) and the review of the notification process by [WRC-99], the Bureau shall accept notices in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz only for high altitude platform stations in the fixed service and for feeder links for the broadcasting-satellite service and shall continue to process notices for FSS networks (except for feeder links for the broadcasting-satellite service) for which complete information for advance publication has been received prior to 27 October 1997, and shall inform the notifying administrations accordingly.

DRAFT RESOLUTION [COM5-5] (WRC-97)

IMPLEMENTATION OF WIND PROFILER RADARS

The World Radiocommunication Conference (Geneva, 1997),

having noted

a request to the ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars,

considering

a) that wind profiler radars are vertically directed Doppler radars exhibiting characteristics similar to radiolocation systems;

b) that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;

c) that it is necessary to use frequencies in different ranges in order to have options for different performance and technical characteristics;

d) that in order to conduct measurements up to a height of 30 km it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km) respectively;

~~d~~e) that some administrations have either already deployed, or plan to expand their use of wind profiler radars in operational networks for studies of the atmosphere and to support weather monitoring, forecasting and warning programs;

~~e~~f) that the ITU Radiocommunication Study Groups have studied the technical and sharing considerations between wind profiler radars and other services allocated in bands near 50 MHz, 400 MHz and 1 000 MHz,

considering further

a) that some administrations have addressed this matter nationally by assigning frequencies for use by wind profiler radars in existing radiolocation bands or on a non-interference basis in other bands;

b) the work of the Voluntary Group of Experts on the Allocation and Improved Use of the Radio Frequency Spectrum and Simplification of the Radio Regulations supports increased flexibility in the allocation of frequency spectrum,

noting in particular

a) that wind profilers operating within the 400.15 - 406.0 MHz meteorological aids service interfere with satellite emergency position-indicating radio beacons operating in the 406.0 - 406.1 MHz mobile-satellite service, which is used under the Table of Frequency Allocations footnote **S5.266**;

b) that under the Table of Frequency Allocations footnote **S5.267**, any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited,

resolves

1 to urge administrations to implement wind profiler radars as radiolocation service systems in the following bands, giving due regard to the potential for incompatibility with other services and assignment to stations within these services, thereby taking due account of the principle of geographical separation, in particular with regard to neighbouring countries and keeping in mind the category of service which each of these services has:

46 - 68 MHz in accordance with **S5.162A**

440 - 450 MHz

470 - 494 MHz in accordance with **S5.291A**

904 - 928 MHz in Region 2 only

1 270 - 1 295 MHz

1 300 - 1 375 MHz;

1a) in case compatibility between wind profiler radars and other radio applications operating in the band 440 - 450 MHz or 470 - 494 MHz cannot be achieved, the bands 420 - 435 MHz or 438 - 440 MHz could be considered for use;

2 to urge administrations to implement wind profiler radars in accordance with Recommendations ITU-R M.1226, ITU-R M.1085-1 and ITU-R M.1227 for the frequency bands around 50 MHz, 400 MHz and 1 000 MHz respectively;

3 to urge administrations not to implement wind profiler radars in the band 400.15 - 406 MHz; and

4 to urge administrations currently operating wind profiler radars in the band 400.15 - 406.0 MHz to discontinue them as soon as possible,

instructs the Secretary-General

to bring this Resolution to the attention of the ICAO, IMO and WMO.

SUP

RECOMMENDATION 621 (WARC-92)

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 244-E
11 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 6

SEVENTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 is continuing its consideration of agenda item 1.9.1. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

MOD S5.369 *Different category of service:* in Angola, Australia, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD

MHz
2 450 – 2 520

Allocation to Services		
Region 1	Region 2	Region 3
2 500 – 2 520	**2 500 – 2 520**	**2 500 – 2 520**
FIXED S5.409 S5.410 S5.411	FIXED S5.409 S5.411	FIXED S5.409 S5.411
MOBILE except aeronautical mobile	FIXED-SATELLITE (space-to-Earth) S5.415	FIXED-SATELLITE (space-to-Earth) S5.415
MOBILE-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
	MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)
S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	S5.403 S5.404 S5.407 S5.414	S5.403 S5.404 S5.407 S5.414 S5.403A

MOD

MHz
2 520 – 2 670

Allocation to Services		
Region 1	Region 2	Region 3
2 520 – 2 655 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	**2 520 – 2 655** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403	**2 520 – 2 535** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.403 S5.403A **2 535 – 2 655** FIXED S5.409 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.418

MOD **MHz**
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
2 670 – 2 690 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420 S5.420A

ADD **S5.403A** *Additional allocation*: in Japan, subject to agreement obtained under No. **S9.21**, the band 2 515 - 2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within its national boundary from 1 January 2000.

ADD **S5.420A** *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2 670 - 2 690 MHz may also be used for the aeronautical mobile-satellite service (Earth-to-space) for operations limited to within its national boundary from 1 January 2000.

ANNEX 1 TO APPENDIX S5 (WRC-95)

1. Coordination thresholds for sharing between MSS (space-to-Earth) and terrestrial services in the same frequency bands and between non-GSO/MSS feeder links (space-to-Earth) and terrestrial services in the same frequency bands

…

1.2.2 General considerations

…

1.2.2.2 Characteristics of reference systems in the fixed service

The following parameters represent the set of reference parameters of the fixed service.

1.2.2.2.1 Characteristics of reference digital point-to-point systems

Three different digital systems are described in the following table:

– 64 kbit/s capacity used, for example, for outside-plant (individual subscriber connection);

– 2 Mbit/s capacity used, for example, for business subscriber connections for the local part of the inside-plant;

– 45 Mbit/s capacity used, for example, for trunk networks.

Capacity	64 kbit/s	2 Mbit/s	45 Mbit/s
Modulation	4-PSK	8-PSK	64-QAM
Antenna gain (dB)	33	33	33
Transmit power (dBW)	7	7	1
Feeder/multiplexer loss (dB)	2	2	2
e.i.r.p. (dBW)	38	38	32
Receiver IF bandwidth (MHz)	0.032	0.7	10
Receiver noise figure (dB)	4	4.5	4
Receiver input level for a BER of 10^{-3} (dBW)	–137	–120	–106
~~Maximum long-term interference Total power (dBW)~~	~~–165~~	~~–151~~	~~–136~~
~~Maximum long-term interference Power spectral density (dB(W/4 kHz))~~	~~–174~~	~~–173~~	~~–170~~

Antenna pattern:

$$G(\varphi) = G_{max} - 2.5 \times 10^{-3} \left(\frac{D\varphi}{\lambda} \right)^2 \qquad \text{for } 0 < \varphi < \varphi_m$$

~~$G(\varphi) = G_1$ for $\varphi_m \leq \varphi < 75.86(\lambda/D)$~~

~~$G(\varphi) = 49 - 10 \log (D/\lambda) - 25 \log \varphi$ for $75.86(\lambda/D) \leq \varphi < 48°$~~

~~$G(\varphi) = 7 - 10 \log (D/\lambda)$ for $48° \leq \varphi$~~

$$G(j) = 39 - 5 \log (D / l) - 25 \log j \qquad \text{for } \varphi_m \leq \varphi < 48°$$

$$G(j) = -3 - 5 \log (D / l) \qquad \text{for } 48° \leq \varphi \leq 180°$$

where:

$G(\varphi)$: gain relative to an isotropic antenna (dBi)

φ: off-axis angle (degree)

D: antenna diameter

λ: wavelength expressed in the same unit as D

G_1: gain of the first side-lobe $= 2 + 15 \log (D/\lambda)$

(D/λ may be estimated from $20 \log D/\lambda \approx G_{max} - 7.7$)

G_{max}: main lobe antenna gain (dBi)

$\varphi_m = 20 (\lambda/D) \times \sqrt{(G_{max} - G_1)}$ (degrees)

It should be noted that the above antenna radiation pattern corresponds to the average side-lobe pattern and it is recognized that individual side-lobes may exceed it by up to 3 dB.

1.2.2.2.2 Characteristics of reference analogue point-to-point systems

Reference circuit	12 hops with 50 km distance between stations
Antenna gain (dBi)	33
e.i.r.p. (dBW)	36
Feeder/multiplexer loss (dB)	3
Receiver noise figure (referred to input of receiver) (dB)	8
Maximum short- and long-term interference ~~per link~~in the reference circuit ~~(20% of time) (dB(W/4 kHz))~~	~~–170~~
• baseband interfering signal power level not to be exceeded for more than 20% of the time	240 pW0p
• baseband interfering signal power level not to be exceeded for more than 0.01% of the time	50 000 pW0p

Antenna pattern: Use antenna pattern of section 1.2.2.2.1.

1.2.2.2.3 Characteristics of reference point-to-multipoint systems

NOTE - In application of the SCP, the use of the point-to-multipoint reference FS system parameters for the 2 170 - 2 200 MHz band is not required.

Parameter	Central station	Outstation
Antenna type	Omni/Sectoral	Dish/Horn
Antenna gain (dBi)	10/13	20 (analogue) 27 (digital)
e.i.r.p. (max) (dBW) analogue digital	 12 24	 21 34
Noise figure (dB)	3.5	3.5
Feeder/multiplexer loss (dB)	2	2
IF bandwidth (MHz)	3.5	3.5
~~Maximum permissible long-term interference power (20% time)~~ ~~Total (dBW)~~ ~~dB (W/4 kHz)~~ ~~dB (W/MHz)~~	 ~~-142~~ ~~-170~~ ~~-147~~	 ~~-142~~ ~~-170~~ ~~-147~~

Antenna pattern:

For the outstation antenna pattern, the reference pattern described in section 1.2.2.2.1 ~~has~~is to be used.

The reference radiation pattern for omnidirectional or sectoral antennas is the following:

$$G(\theta) = G_0 - 12\,(\theta/\varphi_3)^2, \text{ dBi} \qquad 0 \le \theta < \varphi_3$$

$$G(\theta) = G_0 - 12 - 10\log(\theta/\varphi_3), \text{ dBi} \qquad \varphi_3 \le \theta < 90°$$

where:

G_0 = maximum gain in the horizontal plane (dBi)

θ is the radiation angle above the horizontal plane (degrees)

φ_3 (degrees) is given by:

$$j_3 = \frac{1}{a^2 - 0.818}\text{degrees}$$

where:
$$\alpha = \frac{10^{0.1G_0} + 172.4}{191}$$

~~It should be noted that the above antenna pattern is provisional and that further study is under way in the ITU-R.~~

1.2.3 Determination of the need for coordination between MSS space stations (space-to-Earth) and terrestrial stations

1.2.3.1 Method for the determination of the need for coordination between MSS space stations (space-to-Earth) and other terrestrial services sharing the same frequency band in the 1 to 3 GHz range

Coordination of assignments for transmitting space stations of the mobile-satellite service ~~downlink~~ with respect to terrestrial services is not required if the power flux-density produced at the Earth's surface or the fractional degradation in performance (FDP) of a station in the fixed service does not exceed the threshold values shown in the following table.

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
1 492 - 1 525	analogue FS telephony (NOTE 5)	~~–152~~-146 dB(W/m2) in 4 kHz and ~~–152~~-128 dB(W/m2) in 1 MHz	0.5	~~–152~~-146 dB(W/m2) in 4 kHz and -128 dB(W/m2) in 1 MHz	0.5	
	~~digital FS~~all other cases (NOTE 4)	~~–152~~-128 dB(W/m2) in 1 MHz	0.5	-128 dB(W/m2) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–152~~	~~0.5~~	~~–152~~	~~0.5~~	
1 525 - 1 530	analogue FS telephony (NOTE 5)	~~–152~~-146 dB(W/m2) in 4 kHz and ~~–152~~-128 dB(W/m2) in 1 MHz	0.5	~~–152~~-146 dB(W/m2) in 4 kHz and -128 dB(W/m2) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~–152~~-128 dB(W/m2) in 1 MHz	0.5	-128 dB(W/m2) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–152~~	~~0.5~~	~~–152~~	~~0.5~~	
2 160 - 2 200	analogue FS telephony (NOTE 5)	~~–152~~-146 dB(W/m2) in 4 kHz and ~~–152~~-128 dB(W/m2) in 1 MHz	0.5	~~–147~~-141 dB(W/m2) in 4 kHz and -123 dB(W/m2) in 1 MHz (NOTE 6)	0.5	

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
(NOTE 3)	~~digital FS~~all other cases	~~−152~~-128 dB(W/m²) in 1 MHz	0.5	-123 dB(W/m²) in 1 MHz (NOTE 6)	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~−152~~	~~0.5~~	~~−147~~	~~0.5~~	
2 483.5 - 2 500	~~fixed~~all other cases	~~−152~~-128 dB(W/m²) in 1 MHz and -146 dB(W/m²) in 4 kHz	~~0.5~~	~~−150~~-126 dB(W/m²) in 1 MHz and -144 dB(W/m²) in 4 kHz (NOTE 7)	0.65	
	~~other terrestrial services (NOTE 4)~~	~~−152~~	~~0.5~~	~~−150~~	~~0.65~~	
2 500 - 2 520	analogue FS telephony (NOTE 5)	~~−152~~-146 dB(W/m²) in 4 kHz and ~~−152~~-128 dB(W/m²) in 1 MHz	0.5	~~−152~~-146 dB(W/m²) in 4 kHz and -123 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~−152~~-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~−152~~	~~0.5~~	~~−152~~	~~0.5~~	

Frequency band (MHz)	Terrestrial Service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	*P* ~~dB(W/m²) in 4 kHz~~	*r* dB/deg	
2 520 - 2 535	analogue FS telephony (NOTE 5)	~~–160~~-154 dB(W/m2) in 4 kHz and ~~–160~~-136 dB(W/m2) in 1 MHz	0.75	~~–152~~-146 dB(W/m2) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	
	~~digital FS~~all other cases	~~–160~~-136 dB(W/m2) in 1 MHz	0.75	-128 dB(W/m2) in 1 MHz	0.5	25
	~~other terrestrial services (NOTE 4)~~	~~–160~~	~~0.75~~	~~–152~~	~~0.5~~	

NOTE 1 - The calculation of FDP (fractional degradation in performance) is contained in section 1.2.2.1, using reference FS parameters contained in sections 1.2.2.2.1 and 1.2.2.2.3. The use of FDP threshold is limited to the case of digital fixed service systems.

NOTE 2 - The following formula should be used for deriving the coordination threshold in terms of power flux-density:

P ~~dB(W/m²/4 kHz)~~ for $0° \le \delta \le 5°$

$P + r(\delta - 5)$ ~~dB(W/m²/4 kHz)~~ for $5° < \delta \le 25°$

$P + 20r$ ~~dB(W/m²/4 kHz)~~ for $25° < \delta \le 90°$

where δ is the angle of arrival (degrees).

The threshold values are obtained under assumed free-space propagation conditions.

NOTE 3 - The coordination threshold in the band 2 160 - 2 270 MHz (Region 2) and 2 170 - 2 200 MHz (all regions) to protect other terrestrial services does not apply to the ~~terrestrial component of the Future Public Land Mobile Telecommunication Systems (FPLMTS)~~International Mobile Telecommunication-2000 (IMT-2000), as the satellite and the terrestrial components are not intended to operate in the same area or on common frequencies within these bands.

~~NOTE 4 – The coordination threshold factors applicable to other terrestrial services may be reviewed at a future conference, as necessary.~~

NOTE 4 - Exceptions for the band 1 492 - 1 525 MHz are as follows:

4.1 For the land mobile service on the territory of Japan (No. **S5.348A**): -150 dB(W/m^2) in 4 kHz at all arrival angles is applicable to all satellite space-to-Earth emissions.

4.2 For the aeronautical mobile service for telemetry (No. **S5.343**), the requirement for coordination is determined by frequency overlap (No. **S5.348**).

NOTE 5 - In all cases involving sharing with analogue systems for telephony in the fixed service, further coordination is only required when the power flux-density values are greater than or equal to the coordination threshold values in both reference bandwidths.

NOTE 6 - The power flux-density values specified for the 2 160 - 2 200 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with a non-GSO MSS system employing narrow-band TDMA/FDMA techniques.

NOTE 7 - The power flux-density values specified for the 2 483.5 - 2 500 MHz band provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non-GSO MSS systems employing CDMA techniques. The power flux-density values specified will not provide full protection for existing digital fixed systems in all cases. However, these power flux-density values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high power ISM and possible low power applications are expected to produce a relatively high interference environment.

MOD

RESOLUTION 215 (~~WRC-95~~WRC-97)

COORDINATION PROCESS AMONG ~~NON-GEOSTATIONARY~~ MOBILE-SATELLITE SYSTEMS AND EFFICIENT USE OF THE ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 1 - 3 GHz RANGE

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that space-to-Earth transmissions of ~~non-geostationary (non-GSO)~~ mobile-satellite systems are constrained to limit their power flux-density over areas where the frequency band is shared with terrestrial systems;

b) that a number of proposed ~~non-GSO~~ mobile-satellite systems can provide a good service to users within the power flux-density limits given in Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 to Appendix **S5**;

c) that when maximum communication capacity is achieved by ~~non-GSO~~ systems in the mobile-satellite service a major portion of the interference into each of these systems will come from the other mobile-satellite systems sharing the frequency band, and, consequently, if one system starts to transmit at higher power, all others need to do the same in order to overcome mutual interference;

d) that the ITU-R is studying the efficient use of the radio spectrum and frequency sharing within the mobile-satellite service, that Recommendations ITU-R M.1186 and M.1187 are a basis for further study, and that additional preliminary texts are available or can be provided by administrations on this matter~~,~~;

e) that capacities in a codirectional, co-frequency and co-coverage sharing environment of systems using spread-spectrum multiple access techniques are affected by technical and operational characteristics of other mobile-satellite service systems using similar multiple access techniques;

f) that in many parts of the world and in certain frequency bands in the 1 - 3 GHz range, significant congestion already exists due to use by other terrestrial and space services;

g) the need to make most efficient use of frequencies in the MSS allocations,

recognizing

that, as a means to ensure that the frequency bands allocated to the mobile-satellite service can be used in an efficient manner, there is an urgent demand for:

1. criteria to be established by the ITU-R to be used in determining the need to coordinate between mobile-satellite systems; and

2. detailed methods of interference calculation to be used by administrations in the coordination process~~,~~;

3. ITU-R studies that should not impede the timely deployment of any mobile-satellite service systems,

resolves to invite ITU-R

1. to continue its studies on this subject and develop, as a matter of urgency, criteria for determining the need to coordinate and calculation methods for determining levels of interference, as well as the required protection ratios between networks in the mobile-satellite service~~,~~;

2. to urgently study the use of technically and operationally feasible techniques to allow for improvements in spectrum efficiency in MSS systems,

further resolves

1. to focus the ITU studies on the technical and operational characteristics of systems using spread-spectrum multiple access techniques that can allow co-frequency, co-coverage, codirectional sharing but which involve the cooperation among systems' operators to maximize the efficient use of spectrum by multiple mobile-satellite service systems using such access techniques;

2. that administrations responsible for the introduction of mobile-satellite systems are urged to implement, as practicable, the latest available technologies to improve spectrum efficiency consistent with the requirement to offer viable MSS services;

3. to recommend that administrations are encouraged to use the most advanced technology available when preparing to implement their global MSS systems in the 1 - 3 GHz range so that they may operate, if necessary, in different frequency bands in different regions, in accordance with the MSS allocations in the 1 - 3 GHz range decided by the World Radiocommunication Conference (WRC-97).

~~*invites the Council*~~

~~to include this Resolution in the agenda of WRC-97 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum.~~

A note to GTPLEN-1 will be prepared to this Resolution in the agenda of WRC-99 in order that that Conference consider the results of these studies and take such action as may be appropriate with a view to achieving an efficient use of the spectrum in the context of frequency coordination using existing Resolution 46 procedures.

NOC

RESOLUTION 716

USE OF THE FREQUENCY BANDS 1 980 - 2 010 MHz AND 2 170 - 2 200 MHz IN ALL THREE REGIONS AND 2 010 - 2 025 MHz AND 2 160 - 2 170 MHz IN REGION 2 BY THE FIXED AND MOBILE-SATELLITE SERVICES AND ASSOCIATED TRANSITION ARRANGEMENTS

SUP

RESOLUTION 717

REVIEW OF ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 2 GHz RANGE

SUP

RECOMMENDATION 717

FREQUENCY SHARING IN BANDS SHARED BY THE MOBILE-SATELLITE SERVICE AND THE FIXED, MOBILE AND OTHER TERRESTRIAL SERVICES BELOW 3 GHz

SUP

RECOMMENDATION 721

FREQUENCY SHARING IN THE BANDS 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

SUP

RESOLUTION 115 (WRC-95)

CALCULATION OF THE POWER FLUX-DENSITY AT THE GEOSTATIONARY-SATELLITE ORBIT IN THE BAND 6 700 - 7 075 MHz USED FOR FEEDER LINKS OF NON-GEOSTATIONARY-SATELLITE SYSTEMS IN THE MOBILE-SATELLITE SERVICE IN THE SPACE-TO-EARTH DIRECTION

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 245-E
11 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 6

SECOND SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

At its seventh meeting (11 November 1997), Committee 4 approved the following texts which are submitted to Committee 6 for consideration and for subsequent transmittal to the Plenary Meeting:

- Articles S1, S5, S18, S19, S30, S31, S32, S47 and S48 of the Simplified Radio Regulations (Attachment 1).
- Appendix S18 of the Simplified Radio Regulations (Attachment 2).
- Resolutions 310 (Rev.WRC-97) and 331 (Rev.WRC-97) (Attachment 3).
- New Resolutions [COM4-1], [COM4-2], [COM4-3], [COM4-4], [COM4-5], [COM4-7] and [COM4-8] (Attachment 4).
- List of Resolutions and Recommendations approved for suppression (Attachment 5).

All these texts were approved unanimously by Committee 4.

E. GEORGE
Chairman of Committee 4

ATTACHMENT 1

ARTICLE S1

ADD S1.109A *Adaptive System:* A radiocommunication system which varies its radio characteristics according to channel quality.

ARTICLE S5

Frequency Allocations

MOD S5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174 (see Resolution [**COM4-2**]).

ARTICLE S18

Licences

NOC S18.1

ARTICLE S19

Identification of Stations

Section I. General Provisions

S19.1 § 1. All transmissions shall be capable of being identified either by identification signals or by other means[1].

S19.1.1 [1] In the present state of the technique, it is recognized nevertheless that the transmission of identifying signals for certain radio systems (e.g. radiodetermination, radio relay systems and space systems) is not always possible.

S19.2 § 2. (1) All transmissions with false or misleading identification are prohibited.

S19.3 (2) Where practicable and in appropriate services, identification signals should be automatically transmitted in accordance with relevant ITU-R Recommendations.

S19.4 (3) All transmissions in the following services should, except as provided in Nos. **S19.13** to **S19.15**, carry identification signals:

S19.5 *a)* amateur service;

S19.6 *b)* broadcasting service;

S19.7 *c)* fixed service in the bands below 28 000 kHz;

S19.8 *d)* mobile service;

S19.9 *e)* standard frequency and time signal service.

S19.10 (4) All operational transmissions by radiobeacons shall carry identification signals. However, it is recognized that, for radiobeacons and for certain other radionavigation services that normally carry identification signals, during periods of malfunction or other non-operational service the deliberate removal of identification signals is an agreed means of warning users that the transmissions cannot safely be used for navigational purposes.

S19.11 (5) All transmissions by satellite emergency position- indicating radiobeacons (EPIRBs) operating in the band 406 - 406.1 MHz or the band 1 645.5 - 1 646.5 MHz, or by EPIRBs using digital selective calling techniques, shall carry identification signals.

S19.12 (6) When identification signals are transmitted they shall comply with the provisions of this Article.

S19.13 (7) However, the requirements for certain transmissions to carry identification signals need not apply to:

S19.14 *a)* survival craft stations when transmitting distress signals automatically;

S19.15 *b)* emergency position-indicating radiobeacons (except for those in No. **S19.11**).

S19.16 § 3. In transmissions carrying identification signals a station shall be identified by a call sign, by a maritime mobile service identity or by other recognized means of identification which may be one or more of the following: name of station, location of station, operating agency, official registration mark, flight identification number, selective call number or signal, selective call identification number or signal, characteristic signal, characteristic of emission or other clearly distinguishing features readily recognized internationally.

S19.17 § 4. For transmissions carrying identification signals, in order that stations may be readily identified, each station shall transmit its identification as frequently as practicable during the course of transmissions, including those made for tests, adjustments or experiments. During such transmissions,

however, identification signals shall be transmitted at least hourly, preferably within the period from five minutes before to five minutes after the hour (UTC) unless to do so would cause unreasonable interruption of traffic, in which case identification shall be given at the beginning and end of transmissions.

S19.18 § 5. Identification signals shall wherever practicable be in one of the following forms:

S19.19 *a)* speech, using simple amplitude or frequency modulation;

S19.20 *b)* international Morse code transmitted at manual speed;

S19.21 *c)* a telegraph code compatible with conventional printing equipment;

S19.22 *d)* any other form recommended by the Radiocommunication Sector.

S19.23 § 6. To the extent possible the identification signal should be transmitted in accordance with relevant ITU-R Recommendations.

S19.24 § 7. Administrations should ensure that wherever practicable superimposed identification methods be employed in accordance with ITU-R Recommendations.

S19.25 § 8. When a number of stations work simultaneously in a common circuit, either as relay stations, or in parallel on different frequencies, each station shall, as far as practicable, transmit its own identification or those of all the stations concerned.

S19.26 § 9. Administrations shall ensure, except in the cases mentioned in Nos. **S19.13** to **S19.15**, that all transmissions not carrying identification signals can be identified by other means when they are capable of causing harmful interference to the services of another administration operating in accordance with these Regulations.

S19.27 § 10. Administrations shall, having regard to the provisions of these Regulations relating to the notification of assignments for recording in the Master Register, adopt their own measures to ensure compliance with the provisions of No. **S19.26**.

MOD **S19.28** § 11. Each Member State reserves the right to establish its own measures for identifying its stations used for national defense. However, it shall use, as far as possible, call signs recognizable as such, and containing the distinctive characters of its nationality.

Section II. Allocation of International Series and Assignment of Call Signs

ADD **S19.28A** § 11A.(1) For the purpose of the supply of identification signals, a "territory or geographical area" shall be understood to mean the territory within the limits of which the station is located. For mobile stations, it shall be understood to

mean the territory within the limits of which the responsible administration is located. A territory which does not have full responsibility for its international relations shall also be considered as a geographical area for this purpose.

ADD S19.28B § 11A.(2) In all documents of the Union where the terms "***allocation of call sign series***" and "***assignment of call signs***" are to be used, they shall be used with the following meaning:

Identification means	Terms used in these Regulations
International series of call signs (including MIDs and selective call numbers)	Allocation to the administration of a Member State (see definition in CS No. 1002)
Call signs (including MIDs and selective call numbers)	Assignment by any administration to stations operating in a territory or geographical area (see S19.28A)

MOD S19.29 § 12. (1) All stations open to international public correspondence, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of the ~~country to~~ territory or geographical area in which they ~~belong~~ are located, shall have call signs from the international series allocated to ~~each country~~ its administration as given in the Table of Allocation of International Call Sign Series in Appendix **S42**.

S19.30 (2) As the need arises, ship stations and ship earth stations to which the provisions of Chapter **SIX** apply, and coast stations or coast earth stations capable of communicating with such ship stations, shall have assigned to them maritime mobile service identities in accordance with Section VI of this Article.

S19.31 (3) It is not compulsory to assign call signs from the international series to stations identified by maritime mobile service identities or which are easily identified by other means (see No. **S19.16**) and whose signals of identification or characteristics of emission are published in international documents.

S19.32 § 13. Should the available call sign series in Appendix **S42** be exhausted, new call sign series may be allocated according to the principles set out in Resolution **13** relating to the formation of call signs and the allocation of new international series.

S19.33 § 14. Between radio conferences, the Secretary-General is authorized to deal with questions relating to changes in the allocation of series of call signs, on a provisional basis, and subject to confirmation by the following conference (see also No. **S19.32**).

MOD S19.34 § 15. The Secretary-General shall be responsible for allocating maritime identification digits to ~~countries~~[1] administrations and shall regularly publish information regarding allocated maritime identification digits (MID).

SUP **S19.34.1**

MOD **S19.35** § 16. The Secretary-General shall be responsible for allocating additional maritime identification digits to ~~countries~~[2] administrations within the limits specified[3], provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations (see Resolution **27 (WRC-95)**).

SUP **S19.35.1**

MOD **S19.35.2** [3] In no circumstances may a ~~country~~administration claim more MIDs than the total number of its ship stations shown in the ITU List of Ship Stations (List V) divided by 1000.

MOD **S19.36** § 17. A single MID has been allocated initially to each ~~country~~ administration. A second MID should not be requested unless the MID first allocated is more than 80% exhausted in the basic category of three trailing zeros and the rate of assignments is such that 90% exhaustion is foreseen. The same criteria should be applied to subsequent requests for MIDs.

S19.37 § 18. The Secretary-General shall be responsible for supplying series of selective call numbers or signals (see Nos. **S19.92** to **S19.95**) at the request of the administrations concerned.

MOD **S19.38** § 19. (1) Each ~~country~~administration shall choose the call signs and, if the selective calling system used is in accordance with Recommendation ITU-R M.257-3, the ship station selective call numbers and the coast station identification numbers of its stations from the international series allocated or supplied to it; and shall notify this information to the Secretary-General together with the information which is to appear in Lists I, ~~II,~~ IV, V, VI and VIIIA. These notifications do not include call signs assigned to amateur and experimental stations.

MOD **S19.39** (2) Each ~~country~~administration shall choose the maritime mobile service identities of its stations from the maritime identification digits allocated to it and notify this information to the Secretary-General for inclusion in the relevant lists, as provided for in Article **S20**.

S19.40 (3) The Secretary-General shall ensure that the same call sign, the same maritime mobile service identity, the same selective call number or the same identification number is not assigned more than once and that call signs which might be confused with distress signals, or with other signals of the same nature, are not assigned.

S19.41 § 20. (1) When a fixed station uses more than one frequency in the international service, each frequency may be identified by a separate call sign used solely for this frequency.

S19.42 (2) When a broadcasting station uses more than one frequency in the international service, each frequency may be identified by a separate call sign used solely for this frequency or by some other appropriate means, such as announcing the name of the place and frequency used.

S19.43 (3) When a land station uses more than one frequency, each frequency may, if desired, be identified by a separate call sign.

S19.44 (4) Where practicable, coast stations should use a common call sign for each frequency series[4].

S19.44.1 [4] By "frequency series" is meant a group of frequencies each of which belongs to one of the different bands between 4 000 kHz and 27 500 kHz that are allocated exclusively to the maritime mobile service.

Section III. Formation of Call Signs

S19.45 § 21. (1) The twenty-six letters of the alphabet, as well as digits in the cases specified below, may be used to form call signs. Accented letters are excluded.

S19.46 (2) However, the following combinations shall not be used as call signs:

S19.47 *a)* combinations which might be confused with distress signals or with other signals of a similar nature;

S19.48 b) combinations reserved for the abbreviations to be used in the radiocommunication services (see Recommendation ITU-R M.1172).

S19.49 *c)* for amateur stations, combinations commencing with a digit when the second character is the letter O or the letter I.

S19.50 § 22. Call signs in the international series are formed as indicated in Nos. **S19.51** to **S19.71**. The first two characters shall be two letters or a letter followed by a digit or a digit followed by a letter. The first two characters or in certain cases the first character of a call sign constitute the nationality identification[1].

S19.50.1 [1] For call sign series beginning with B, F, G, I, K, M, N, R and W, only the first character is required for nationality identification. In the cases of half series, the first three characters are required for nationality identification.

S19.51 *Land and fixed stations*

S19.52 § 23. (1)
– two characters and one letter, *or*
– two characters and one letter followed by not more than three digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

S19.53 (2) However, it is recommended that, as far as possible, the call signs of fixed stations consist of:

– two characters and one letter followed by two digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

S19.54 *Ship stations*

S19.55 § 24. (1) – two characters and two letters, *or*

– two characters, two letters and one digit (other than the digits 0 or 1).

S19.56 (2) However, ship stations employing only radiotelephony may also use a call sign consisting of:

– two characters (provided that the second is a letter) followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter), *or*

– two characters and one letter followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter).

S19.57 *Aircraft stations*

S19.58 § 25. – two characters and three letters.

S19.59 *Ship's survival craft stations*

S19.60 § 26. – the call sign of the parent ship followed by two digits (other than the digits 0 or 1 in cases where they immediately follow a letter).

S19.61 *Emergency position-indicating radiobeacon stations*

S19.62 § 27. – the Morse letter B and/or the call sign of the parent ship to which the radiobeacon belongs.

S19.63 *Aircraft survival craft stations*

S19.64 § 28. – the complete call sign of the parent aircraft (see No. **S19.58**), followed by a single digit other than 0 or 1.

S19.65 *Land mobile stations*

S19.66 § 29. – two characters (provided that the second is a letter) followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter), *or*

– two characters and one or two letters followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter).

S19.67 *Amateur and experimental stations*

S19.68 § 30. (1) – one character (see No. **S19.50.1**) and a single digit (other than 0 or 1), followed by a group of not more than three letters, *or*

– two characters and a single digit (other than 0 or 1), followed by a group of not more than three letters.

S19.69 (2) However, the prohibition of the use of the digits 0 and 1 does not apply to amateur stations.

S19.70 *Stations in the space service*

S19.71 § 31. When call signs for stations in the space service are employed, it is recommended that they consist of:

– two characters followed by two or three digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

Section IV. Identification of Stations Using Radiotelephony

S19.72 § 32. Stations using radiotelephony shall be identified as indicated in Nos. **S19.73** to **S19.82**.

S19.73 § 33. (1) *Coast stations*

– a call sign (see No. **S19.52**); *or*

– the geographical name of the place as it appears in the List of Coast Stations, followed preferably by the word RADIO or by any other appropriate indication.

S19.74 (2) *Ship stations*

– a call sign (see Nos. **S19.55** and **S19.56**); *or*

– the official name of the ship preceded, if necessary, by the name of the owner on condition that there is no possible confusion with distress, urgency and safety signals; *or*

– its selective call number or signal.

S19.75 (3) *Ship's survival craft stations*

– a call sign (see No. **S19.60**); *or*

– a signal of identification consisting of the name of the parent ship followed by two digits.

S19.76 (4) *Emergency position-indicating radiobeacon stations*

When speech transmission is used (see Appendix **S13**):

– the name and/or the call sign of the parent ship to which the radiobeacon belongs.

S19.77 § 34. (1) *Aeronautical stations*

– the name of the airport or geographical name of the place followed, if necessary, by a suitable word indicating the function of the station.

S19.78 (2) *Aircraft stations*

– a call sign (see No. **S19.58**), which may be preceded by a word designating the owner or the type of aircraft; *or*

– a combination of characters corresponding to the official registration mark assigned to the aircraft; *or*

– a word designating the airline, followed by the flight identification number.

S19.79 (3) In the exclusive aeronautical mobile frequency bands, aircraft stations using radiotelephony may use other methods of identification, after special agreement between governments, and on condition that they are internationally known.

S19.80 (4) *Aircraft survival craft stations*

– a call sign (see No. **S19.64**).

S19.81 § 35. (1) *Base stations*

– a call sign (see No. **S19.52**); *or*

– the geographical name of the place followed, if necessary, by any other appropriate indication.

S19.82 (2) *Land mobile stations*

– a call sign (see No. **S19.66**); *or*

– the identity of the vehicle or any other appropriate indication.

Section V. Selective Call Numbers in the Maritime Mobile Service

S19.83 § 36. When stations of the maritime mobile service use selective calling devices in accordance with Recommendations ITU-R M.476-5, M.625-3, M.627-1 and M.257-3, their call numbers shall be assigned by the responsible administrations in accordance with the provisions below.

S19.84 *Formation of ship station selective call numbers and coast station identification numbers*

S19.85 § 37. (1) The ten digits from 0 to 9 inclusive shall be used to form selective call numbers.

S19.86 (2) However, combinations of numbers commencing with the digits 00 (zero, zero) shall not be used when forming the identification numbers for coast stations.

S19.87 (3) Ship station selective call numbers and coast station identification numbers in the series are formed as indicated in Nos. **S19.88**, **S19.89** and **S19.90**.

S19.88 (4) *Coast station identification numbers*

– four digits (see No. **S19.86**).

S19.89 (5) *Ship station selective call numbers*

– five digits.

S19.90 (6) *Predetermined groups of ship stations*

– five digits consisting of:

– the same digit repeated five times; *or*

– two different digits repeated alternately.

S19.91 *Assignment of ship station selective call numbers and coast station identification numbers*

S19.92 § 38. (1) In cases where selective call numbers for ship stations and identification numbers for coast stations are required for use in the maritime mobile service and the selective calling system is in accordance with Recommendation ITU-R M.257-3, the selective call numbers and identification numbers shall be supplied by the Secretary-General on request. Upon notification by an administration of the introduction of selective calling for use in the maritime mobile service:

S19.93 *a)* selective call numbers for ships will be supplied as required in blocks of 100 (one hundred);

S19.94 *b)* coast station identification numbers will be supplied in blocks of 10 (ten) to meet actual requirements;

S19.95 *c)* selective call numbers for selective calling of predetermined groups of ship stations in accordance with No. **S19.90** will be supplied as required as single numbers.

MOD **S19.96** (2) Each administration shall choose the selective call numbers to be assigned to its ship stations from the blocks of the series supplied to it. Administrations shall notify the Radiocommunication Bureau immediately in accordance with **S20.16** when assigning selective call numbers to ship stations.

S19.97 (3) Each administration shall choose the coast station identification numbers to be assigned to its coast stations from the blocks of the series supplied to it.

Section VI. Maritime Mobile Service Identities in the Maritime Mobile Service and the Maritime Mobile-Satellite Service

S19.98 *A. General*

MOD **S19.99** § 39. When a station[1] in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Nos. **S19.100** to **S19.126**, in accordance with relevant ITU-R and ITU-T Recommendations (see Resolution **27(WRC-95)**). Administrations shall notify the Radiocommunication Bureau immediately in accordance with **S20.16** when assigning maritime mobile service identities.

S19.99.1 [1] In this Section a reference to a ship station or a coast station may include the respective earth stations.

S19.100 § 40. (1) Maritime mobile service identities are formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations and group calls.

S19.101 (2) These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically in the shore-to-ship direction.

S19.102 (3) There are four kinds of maritime mobile service identities:

S19.103 i) ship station identities;

S19.104 ii) group ship station call identities

S19.105 iii) coast station identities;

S19.106 iv) group coast station call identities.

SUP **S19.107**

S19.108 *B. Maritime Identification Digits (MID)*

S19.109 § 42. These provisions do not require an administration to assign numerical identities until it determines that such identities are necessary. They do not concern the assignment of ship station identities without trailing zeros, since it is assumed that there is enough capacity inherent in the system to provide for the assignment of such identities to all ship stations which an administration may wish to identify in this manner.

S19.110 *C. Ship Station Identities*

S19.111 § 43. (1) Administrations should:

S19.112 *a)* follow the guidelines contained in the relevant ITU-R and ITU-T Recommendations for the assignment of ship station identities;

S19.113 *b)* make optimum use of the possibilities of forming identities from the single MID allocated to them;

S19.114 *c)* take particular care in assigning ship station identities with six significant digits (three-trailing-zero identities), which should be assigned only to ship stations which can reasonably be expected to require such an identity for automatic access on a world-wide basis for public switched networks;

S19.115 *d)* assign one-trailing-zero or two-trailing-zero identities to vessels when they require automatic access only on a national or regional level, as defined in the relevant ITU-T Recommendations;

S19.116 *e)* assign ship station identities without trailing zeros to all other vessels requiring a numerical identification.

S19.117 (2) The 9-digit code constituting a ship station identity is formed as follows:

$$M_1I_2D_3X_4X_5X_6X_7X_8X_9$$

wherein

$$M_1I_2D_3$$

represent the Maritime Identification Digits and X is any figure from 0 to 9.

S19.118 *D. Group Ship Station Call Identities*

S19.119 § 44. (1) Group ship station call identities for calling simultaneously more than one ship are formed as follows:

$$0_1M_2I_3D_4X_5X_6X_7X_8X_9$$

where the first figure is zero and X is any figure from 0 to 9.

MOD **S19.120** (2) The particular MID represents only the ~~country~~territory or geographical area of the administration assigning the group ship station call identity and so does not prevent group calls to fleets containing more than one ship nationality.

S19.121 *E. Coast Station Identities*

S19.122 § 45. (1) Coast station identities are formed as follows:

$$0_10_2M_3I_4D_5X_6X_7X_8X_9$$

where the first two figures are zeros and X is any figure from 0 to 9.

MOD **S19.123** (2) The MID reflects the ~~country~~territory or geographical area in which the coast station or coast earth station is located.

S19.124 *F. Group Coast Station Call Identities*

S19.125 § 46. (1) Group coast station call identities for calling simultaneously more than one coast station are formed as a subset of coast station identities, as follows:

$$0_10_2M_3I_4D_5X_6X_7X_8X_9$$

where the first two figures are zeros and X is any figure from 0 to 9.

MOD **S19.126** (2) The particular MID represents only the ~~country~~territory or geographical area of the administration assigning the group coast station call identity. The identity may be assigned to stations of one administration which are located in only one geographical region as indicated in the relevant ITU-T Recommendation.

Section VII. Special Provisions

S19.127 § 47. (1) In the aeronautical mobile service, after communication has been established by means of the complete call sign, the aircraft station may use, if confusion is unlikely to arise, an abbreviated call sign or identification consisting of:

S19.128 *a)* in radiotelegraphy, the first character and last two letters of the complete call sign (see No. **S19.58**);

S19.129 *b)* in radiotelephony:

– the first character of the complete call sign; *or*

– the abbreviation of the name of the owner of the aircraft (company or individual); *or*

– the type of aircraft;

followed by the last two letters of the complete call sign (see No. **S19.58**) or by the last two characters of the registration mark.

S19.130 (2) The provisions of Nos. **S19.127**, **S19.128** and **S19.129** may be amplified or modified by agreement between administrations concerned.

S19.131 § 48. The distinguishing signals allotted to ships for visual and aural signalling shall, in general, agree with the call signs of ship stations.

ARTICLE S30

General Provisions

Section I. Introduction

MOD **S30.1** § 1. This Chapter contains the provisions for the operational use of the Global Maritime Distress and Safety System (GMDSS) which is fully defined in the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. Distress, urgency and safety transmissions may also be made, using Morse telegraphy or radiotelephony techniques, in accordance with the provisions of Appendix **S13** and relevant ITU-R Recommendations. Stations of the maritime mobile service, when using frequencies and techniques in conformity with Appendix **S13**, shall comply with the appropriate provisions of that Appendix.

ARTICLE S31

Frequencies for the Global Maritime Distress and Safety System (GMDSS)

Section I. General

MOD S31.1 § 1. The frequencies to be used for the transmission of distress and safety information under the GMDSS are contained in Appendix **S15**. In addition to the frequencies listed in Appendix **S15**, coast stations should use other appropriate frequencies for the transmission of safety messages.

ADD S31.16 *C. Ship Stations*

MOD S31.17 § 8. (1) Ship stations ~~complying with the provisions of this Chapter~~ where so equipped shall, while at sea, maintain an automatic digital selective calling watch on the appropriate distress and safety calling frequencies in the frequency bands in which they are operating. Ship stations, where so equipped, ~~should~~ shall also maintain watch on the appropriate frequencies for the automatic reception of transmissions of meteorological and navigational warnings and other urgent information to ships. However, ship stations shall also continue to apply the appropriate watch-keeping provisions of Appendix **S13** (see Resolution **331 (~~Mob-87~~Rev.WRC-97)**).

NOC S31.18

MOD S31.20 § 9. Ship earth stations ~~in use for the reception of shore-to-ship distress alert relays should~~ complying with the provisions of this Chapter shall, while at sea, maintain watch except when communicating on a working channel.

ARTICLE S32

Operational Procedures for Distress and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section I. General

ADD S32.5A § 4A. Each administration shall ensure that suitable arrangements are made for assigning and registering identities used by ships participating in the GMDSS, and shall make registration information available to rescue coordination centres on a 24-hour day, 7-day week basis. Where appropriate, administrations shall notify responsible organizations immediately of additions, deletions and other changes in these assignments (see Nos. **S19.39, S19.96** and **S19.99**). Registration information shall be in accordance with Resolution [~~4B-N1~~**COM4-1**].

ADD S32.5B Any GMDSS shipboard equipment which is capable of transmitting position coordinates as part of a distress alert message, and not having an integral electronic position fixing system receiver, shall be interconnected to a separate navigation receiver to automatically provide that information, if one is installed.

MOD S32.9 § 7. (1) The transmission of a distress alert indicates that a mobile unit[1] or person[2] is ~~in distress~~threatened by grave and imminent danger and requests immediate assistance. The distress alert is a digital selective call using a distress call format[3] in the bands used for terrestrial radiocommunication or a distress message format, in which case it is relayed through space stations.

ADD S32.10A § 7A. A distress alert is false if it was transmitted without any indication that a mobile unit or person was in distress and required immediate assistance (see No. **S32.9**). Administrations receiving a false distress alert shall report this infringement in accordance with Section V of Article **S15**, if that alert:

a) was transmitted intentionally;

[b) was not cancelled in accordance with ~~Nos. **S32.38A - S32.38N**~~**Resolution [COM4-12]**;]

c) could not be verified as a result of either the ships failure to keep watch on appropriate frequencies in accordance with Nos. **S31.16 - S31.20**, or its failure to respond to calls from an authorized rescue authority;

d) was repeated; or

e) was transmitted using a false identity.

Administrations receiving such a report shall take appropriate steps to ensure that the infringement does not recur. No action should normally be taken against any ship or mariner for reporting and cancelling a false distress alert.

ARTICLE S47

Operator's Certificates

Section II. Categories of Operator's Certificates

NOC S47.19

NOC S47.23

NOC S47.24

NOC TABLE S47-1

Requirements for Radio Electronic and Operator's Certificates

ARTICLE S48

Personnel

NOC S48.5

NOC S48.6

MOD S48.7 § 5. The personnel of ship stations and ship earth stations for which a radio installation is not compulsory under international agreements or national regulations and which use the frequencies and techniques prescribed in Chapter **SVII** shall be adequately qualified and certificated in accordance with the administration's requirements. Guidance concerning appropriate qualifications and certification, is provided in Resolution [**COM4-4**]. This Resolution describes two appropriate certificates, for use by personnel of ship stations and ship earth stations for which a radio installation is not compulsory.

ATTACHMENT 2

MOD

APPENDIX S18

Table of Transmitting Frequencies in the VHF Maritime Mobile Band

(see Article **S52**)

Note ~~1~~: For assistance in understanding the Table, see notes *a)* to ~~*p)*~~*n)* below.

~~*Note 2:* Channels 01 to 28, except 15 and 17, correspond to the channels of Appendix 18 to the Radio Regulations, Geneva, 1959, and channels 15, 17, and 60 to 88 correspond to those additional channels made available for assignment in accordance with the provisions of Appendix 18 Mar to the Radio Regulations, Geneva, 1967.~~

~~*Note 3:* Channel designators 60 to 88 were chosen for the additional channels in order to separate them clearly from the original channels.~~

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	~~Port Operations~~		Port Operations and Ship movement		Public correspondence
		Ship Stations	Coast stations		~~Single frequency~~	~~Two frequency~~	Single frequency	Two frequency	
60	~~*h)*~~	156.025	160.625			~~17~~		~~09~~ x	~~25~~ x
01		156.050	160.650			~~10~~		~~15~~ x	~~08~~ x
61		156.075	160.675			~~23~~		~~03~~ x	~~19~~ x
02		156.100	160.700			~~08~~		~~17~~ x	~~10~~ x
62		156.125	160.725			~~20~~		~~06~~ x	~~22~~ x
03		156.150	160.750			~~09~~		~~16~~ x	~~09~~ x
63		156.175	160.775			~~18~~		~~08~~ x	~~24~~ x
04		156.200	160.800			~~11~~		~~14~~ x	~~07~~ x
64		156.225	160.825			~~22~~		~~04~~ x	~~20~~ x
05		156.250	160.850			~~06~~		~~19~~ x	~~12~~ x
65		156.275	160.875			~~21~~		~~05~~ x	~~21~~ x
06	~~*g)*~~ *f)*	156.300		~~01~~ x					
66		156.325	160.925			~~19~~		~~07~~ x	~~23~~ x
07		156.350	160.950			~~07~~		~~18~~ x	~~01~~ x
67	~~*k) h)*~~	156.375	156.375	~~09~~ x	~~10~~		~~09~~ x		
08		156.400		~~02~~ x					
68	~~*m)*~~	156.425	156.425		~~06~~		~~02~~ x		
09	~~*l)*~~ *i)*	156.450	156.450	~~05~~ x	~~05~~		~~12~~ x		
69	~~*m)*~~	156.475	156.475	~~08~~ x	~~11~~		~~04~~ x		
10	~~*k)*~~ *f)*	156.500	156.500	~~03~~ x	~~09~~		~~10~~ x		
70	~~*o)*~~ *j)*	156.525	156.525	Digital Selective calling for distress, safety and calling					
11	~~*m)*~~	156.550	156.550		~~03~~		~~01~~ x		
71	~~*m)*~~	156.575	156.575		~~07~~		~~06~~ x		
12	~~*m)*~~	156.600	156.600		~~01~~		~~03~~ x		
72	~~*l)*~~ *i)*	156.625		~~06~~ x					
13	~~*p)*~~ *k)*	156.650	156.650	~~04~~ x	~~04~~		~~05~~ x		
73	~~*k)*~~ *h)*	156.675	156.675	~~07~~ x	~~12~~		~~11~~ x		
14	~~*m)*~~	156.700	156.700		~~02~~		0~~7~~ x		
74	~~*m)*~~	156.725	156.725		~~08~~		~~08~~ x		
15	~~*j)*~~ *g)*	156.750	156.750	~~11~~ x	~~14~~		~~14~~ x		
~~75~~		~~156.775~~	~~Guardband 156.7625 - 156.7875 MHz~~						
75	*n)*	156.775					x		
16		156.800	156.800	DISTRESS, SAFETY AND CALLING					

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	~~Port Operations~~		Port Operations and Ship movement		Public correspondence
		Ship Stations	Coast stations		~~Single frequency~~	~~Two frequency~~	Single frequency	Two frequency	
~~76~~		~~156.825~~	~~Guardband 156.8125 - 156.8375 MHz~~						
76	*n*	156.825					x		
17	~~*j)*~~*g)*	156.850	156.850	~~12~~ x	~~13~~		~~13~~ x		
77		156.875		~~10~~ x					
18	~~*f)*~~*m)*	156.900	161.500			~~03~~	x	~~22~~ x	x
78		156.925	161.525			~~12~~		~~13~~ x	~~27~~ x
19	~~*f)*~~	156.950	161.550			~~04~~		~~21~~ x	x
79	~~*f) m)*~~	156.975	161.575			~~14~~		~~01~~ x	x
20	~~*f)*~~	157.000	161.600			~~01~~		~~23~~ x	x
80	~~*f) m)*~~	157.025	161.625			~~16~~		~~02~~ x	x
21	~~*f)*~~	157.050	161.650			~~05~~		~~20~~ x	x
81		157.075	161.675			~~15~~		~~10~~ x	~~28~~ x
22	~~*f)*~~	157.100	161.700			~~02~~		~~24~~ x	x
82	*m)*	157.125	161.725			~~13~~	x	~~11~~ x	~~26~~ x
23		157.150	161.750					x	~~05~~ x
83	*m)*	157.175	161.775				x	x	~~16~~ x
24		157.200	161.800					x	~~04~~ x
84	*m)*	157.225	161.825			~~24~~	x	~~12~~ x	~~13~~ x
25		157.250	161.850					x	~~03~~ x
85	*m)*	157.275	161.875				x	x	~~17~~ x
26		157.300	161.900					x	~~01~~ x
86	~~*n)*~~*m)*	157.325	161.925				x	x	~~15~~ x
27		157.350	161.950					x	~~02~~ x
87		157.375	~~161.975~~				x		~~14~~
28		157.400	162.000					x	~~06~~ x
88	~~*h)*~~	157.425	~~162.025~~				x		~~18~~
AIS 1	*l)*	161.975	161.975						
AIS 2	*l)*	162.025	162.025						

NOTES REFERRING TO THE TABLE

General notes

~~*a)* The figures in the column headed "Intership" indicate the normal sequence in which channels should be taken into use by mobile stations.~~

~~*b)* The figures in the columns headed "Port operations", "Ship movement" and "Public correspondence" indicate the normal sequence in which channels should be taken into use by each coast station. However, in some cases, it may be necessary to omit channels in order to avoid harmful interference between the services of neighbouring coast stations.~~

~~*c)*~~*a)* Administrations may designate frequencies in the intership, port operations and ship movement services for use by light aircraft and helicopters to communicate with ships or participating coast stations in predominantly maritime support operations under the conditions specified in Nos. **S51.69**, **S51.73**, **S51.74**, **S51.75**, **S51.76**, **S51.77** and **S51.78**. However, the use of the channels which are shared with public correspondence shall be subject to prior agreement between interested and affected administrations.

~~*d)*~~*b)* The channels of the present Appendix, with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may also be used for highspeed data and facsimile transmissions, subject to special arrangement between interested and affected administrations.

~~*e)*~~*c)* The channels of the present Appendix, preferably ~~two adjacent~~ channels ~~from the series 87,~~ 28~~, 88,~~ with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may be used for direct-printing telegraphy and data transmission, subject to special arrangement between interested and affected administrations.

d) The frequencies in this table may also be used for radiocommunications on inland waterways in accordance with the conditions specified in No. **S5.226**.

e) Administrations having an urgent need to reduce local congestion may apply 12.5 kHz channel interleaving on a non-interference basis to 25 kHz channels, provided:

1) Recommendation ITU-R M.1084-2 shall be taken into account when migrating to 12.5 kHz;

2) it shall not affect the 25 kHz channels of the Appendix **S18** maritime mobile distress and safety frequencies, especially the channels 6, 13, 15, 16, 17, and 70, nor the technical characteristics mentioned in Recommendation ITU-R M.489-2 for these channels;

3) implementation of 12.5 kHz channel interleaving and consequential national requirements shall be subject to prior agreement between the implementing administrations and administrations whose ship stations or services may be affected.

Specific notes

~~*f)* The two-frequency channels for port operations (18, 19, 20, 21, 22, 79 and 80) may be used for public correspondence, subject to special arrangement between interested and affected administrations.~~

~~*g)*~~*f)* The frequency 156.300 MHz (channel 06) (see Appendix **S13**, Appendix **S15** and **S51.79**) may also be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. Ship stations shall avoid harmful interference to such communications on channel 06 as well as to communications between aircraft stations, ice-breakers and assisted ships during ice seasons.

~~*h)* Channels 60 and 88 can be used subject to special arrangements between interested and affected administrations.~~

~~*i)* The frequencies in this Table may also be used for radiocommunications on inland waterways in accordance with the conditions specified in No. **S5.226**.~~

~~*j)*~~*g)* Channels 15 and 17 may also be used for on-board communications provided the effective radiated power does not exceed 1 W, and subject to the national regulations of the administration concerned when these channels are used in its territorial waters. ~~(However, see Recommendation **305**).~~

~~*k)*~~*h)* Within the European Maritime Area and in Canada these frequencies (channels 10, 67, 73) may also be used, if so required, by the individual administrations concerned, for communication between ship stations, aircraft stations and participating land stations engaged in coordinated search and rescue and anti-pollution operations in local areas, under the conditions specified in Nos. **S51.69, S51.73, S51.74, S51.75, S51.76, S51.77** and **S51.78**.

~~*l)*~~*i)* The preferred first three frequencies for the purpose indicated in note ~~*c)*~~*a)* are 156.450 MHz (channel 09), 156.625 MHz (channel 72) and 156.675 MHz (channel 73).

~~*m)* These channels (68, 69, 11, 71, 12, 14, 74, 79 and 80) are the preferred channels for the ship movement service. They may, however, be used for the port operations service until required for the ship movement service if this should prove to be necessary in any specific area.~~

~~*n)* This channel (86) may be used as a calling channel if such a channel is required in an automatic radiotelephone system when such a system is recommended by the ITU-R.~~

~~*o)*~~*j)* This channel (70) is to be used exclusively for digital selective calling for distress, safety and calling ~~(see Resolution **323 (Mob-87)**)~~.

~~*p)*~~*k)* Channel 13 is designated for use on a world-wide basis as a navigation safety communication channel, primarily for intership navigation safety communications. It may also be used for the ship movement and port operations service~~s~~ subject to the national regulations of the administrations concerned.

l) The channels will be used for an automatic ship identification and surveillance system capable of providing worldwide operation on high seas unless other frequencies are designated on a regional basis for this purpose.

m) These channels (18, 82 to 86) may be operated as single frequency channels, subject to special arrangement between interested or affected administrations.

n) The use of these channels should be restricted to navigation related communications only and all precautions should be taken to avoid harmful interference to channel 16, e.g. by limiting the output power to 1 W or by geographical separation.

ATTACHMENT 3

MOD

RESOLUTION No. 310 (Rev.~~Mob-87~~WRC-97)

FREQUENCY PROVISIONS FOR DEVELOPMENT AND FUTURE IMPLEMENTATION OF SHIP MOVEMENT TELEMETRY, TELECOMMAND AND DATA EXCHANGE SYSTEMS

The World ~~Administrative~~ Radiocommunication Conference ~~for the Mobile Services, Geneva, 1987~~(Geneva, 1997),

considering

a) the need to specify radio frequencies which may be used by the maritime mobile service on a world-wide basis for ship movement requirements including transmission of electronic nautical chart data corrections, using digital automated data exchange, telemetry and telecommand techniques;

b) the developments now in progress in different portions of the frequency spectrum which will require common frequency bands in the future for efficient frequency utilization;

c) the importance of these systems in the safe and efficient operations of ships;

d) the advantages to port authorities for safe and efficient port management and operations;

noting

a) that the ~~CCIR~~ ITU-R is considering this matter particularly within its Question 55/8;

b) that further operational and technical information is needed in deciding the most effective frequency utilization and sharing criteria;

c) that the International Maritime Organization (IMO) has identified a need for data exchange, using digital transmission techniques, between shore and ship for ship's position and movement data, correction data of radionavigation systems and electronic nautical charts ~~(see CCIR Report 1044)~~;

resolves

that ~~the next~~a future competent world ~~administrative~~ radiocommunication conference ~~shall~~should review possible frequency provisions in the light of additional studies;

request administrations

to review the requirements relating to future ship movement telemetry, telecommand and data exchange systems and submit relevant results to the ITU-R,

requests ~~the CCIR~~ITU-R

to examine and advise on modulation techniques such as spread spectrum, frequency bands, bandwidths and data formats in coordination with administrations developing and testing these digital transmission systems;

invites the ~~Administrative~~ Council

to include this Resolution in the agenda of a forthcoming competent world ~~administrative~~ radiocommunication conference;

instructs the Secretary-General

to communicate this Resolution to ~~the~~ IMO and the International Hydrographic Organization (IHO).

MOD

RESOLUTION No. 331 (~~Mob-87~~Rev.WRC-97)

~~INTRODUCTION OF PROVISIONS FOR~~ TRANSITION TO THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) AND CONTINUATION OF THE ~~EXISTING~~ DISTRESS AND SAFETY PROVISIONS IN APPENDIX S13

The World ~~Administrative Radio Conference for the Mobile Services, Geneva, 1987~~Radiocommunication Conference (Geneva, 1997),

noting

~~that the International Maritime Organization (IMO):~~

~~– has reached the final stage of development of the Global Maritime Distress and Safety System (GMDSS);~~

~~– is preparing a revision of the International Convention for the Safety of Life at Sea (SOLAS), 1974, with a view to introducing the GMDSS;~~

~~– will decide on the dates of initial and full implementation of the GMDSS, including any intermediate dates of application for various classes of ships subject to the above-mentioned Convention;~~

that the International Convention for the Safety of Life at Sea, SOLAS, 1974, as amended, prescribes that all ships subject to this Convention shall be fitted for the GMDSS by 1 February 1999,

noting further

~~*a)* that to ensure compatibility between ships following Chapter **IX** and those following Chapter **N IX** of the Radio Regulations, all ships subject to the 1974 SOLAS Convention will continue to use applicable existing distress and safety provisions until the GMDSS has been implemented fully;~~

a) that a number of administrations have taken steps to implement the GMDSS also for classes of vessels not subject to SOLAS, 1974 as amended;

b) that an increasing number of vessels not subject to SOLAS, 1974 as amended, are making use of the techniques and frequencies of the GMDSS prescribed in Chapter **SVII**;

~~*b)*~~*c)* that some administrations and ~~ships~~vessels, not subject to ~~the 1974~~ SOLAS ~~Convention~~, 1974, as amended, may wish to continue to use provisions of ~~[Chapter **IX**] on~~Appendix **S13** for Distress and Safety Communications ~~after the GMDSS has been implemented fully~~for some time after 1 February 1999;

~~*c)*~~*d)* that it would be costly for administrations to maintain in parallel for an excessive period of time shore-based facilities necessary to support both the ~~existing~~old and new distress and safety system~~s and the GMDSS~~;

~~*d)*~~*e)* that ~~it is necessary~~there may be a need to continue existing shore-based distress and safety services for a certain period after 1 February 1999 so that ~~ships~~vessels not subject to the 1974 SOLAS Convention and not yet using the techniques and frequencies of the GMDSS will be able to obtain assistance from these services until such time as they are able to participate in the GMDSS;

f) that separate provisions of the existing Radio Regulations designate VHF channel 16 and 2 182 kHz as the international channels for general calling by radiotelephony;

g) that IMO has already decided for GMDSS vessels that:

– listening watches on 2 182 kHz will no longer be mandatory after 1 February 1999;

– listening watches on VHF channel 16 will be continued and a final date for the cessation of mandatory watchkeeping on channel 16 is yet to be determined;

h) that the Radio Regulations require GMDSS ships to keep watch on the appropriate DSC distress frequencies;

i) that the Radio Regulations requests ship stations to keep watch on VHF channel 13 where practicable;

j) that several administrations have established Vessel Traffic Service (VTS) systems and require ships to keep watch on local VTS channels;

k) that ships that are required by SOLAS to carry a radio station are being equipped with DSC, but the majority of vessels that carry a radio station on a voluntary basis might not have DSC equipment;

l) that similarly, many administrations have established distress and safety service based on DSC watchkeeping, but the majority of port stations, pilot stations and other operational coast stations have not been equipped with DSC facilities;

m) that for the reasons listed above, it will remain necessary for stations in the maritime mobile service to call each other by radiotelephony in certain situations,

considering

~~*a)* that this Conference has placed in Chapter **N IX** the provisions which are required for the GMDSS to be implemented, and that [Chapter **IX**], as modified, retains the provisions for the existing distress and safety system;~~

~~*b)* that the introduction of the GMDSS will offer the opportunity to gain administrative, technical and operational experience with the new system;~~

~~*c)* that the experience gained from the operation of the GMDSS should be used to improve the distress and safety system;~~

a) that the operation of the GMDSS described in Chapter **SVII** and the present distress and safety system described in Appendix **S13** differ in many crucial aspects, such as means and methods of alerting, communication facilities available, announcement and transmission of maritime safety information etc.;

b) that operation of the two systems in parallel for a long period would cause ever increasing difficulties and incompatibilities between ships operating in the two different systems and may thus seriously degrade the overall safety at sea;

c) that the GMDSS overcomes the deficiencies of the aural watchkeeping on maritime distress and calling frequencies on which the distress and safety system described in Appendix **S13** relies, by replacing these watches by automatic watch, i.e., digital selective calling and satellite communication systems,

~~*recognizing*~~

~~*a)* that to assist IMO, the provisions of Chapter **N IX** should enter into force prior to the initial implementation of the GMDSS;~~

~~*b)* that some elements in the GMDSS described in Chapter **N IX**, particularly digital selective calling, will not be fully operational in all parts of the world on the date of entry into force of the Final Acts of this Conference;~~

resolves

~~1. that the entry into force of Chapter **N IX**:~~

~~*a)* implies that those administrations wishing to start using the provisions of Chapter **N IX** may do so;~~

~~*b)* does not commit any administration to install or establish GMDSS facilities or to start using the provisions of Chapter **N IX**;~~

1 that, until such time as voice calling has become obsolete, VHF channel 16 and 2 182 kHz may be used as voice calling channels;

2 to urge all administrations to assist in enhancing the safety at sea by:

– encouraging all ships to make use of the GMDSS as soon as possible;

– encouraging, where appropriate, establishment of suitable shore-based facilities for GMDSS, either on an individual basis or in cooperation with other relevant parties in the area;

~~2 that nevertheless, and in light of *resolves* 1, administrations shall be obliged to follow the provisions of Chapter **IX** until adequate measures have been taken to ensure the continuation of safety communications for ships not subject to the 1974 SOLAS Convention, until full implementation of the GMDSS and until a future competent conference decides otherwise;~~

3 that administrations may, taking account of all aspects involved, such as:

– decisions by IMO on aural watch on 2 182 kHz and VHF channel 16;

– the GMDSS radio systems available in the area concerned;

– the compatibility problems mentioned in *considering a)* and *b)* above;

– the density and classes of ships normally in the area;

– the geographical nature of the area and the general navigational conditions within the area;

– other adequate measures taken to ensure safety communications for ships sailing in the area;

at a time after 1 February 1999, when the development on transition to the GMDSS and the prevailing conditions in the area makes it reasonable to do so, release their ship stations and coast stations within the area concerned from the obligations described in Appendix **S13** on listening watch on 2 182 kHz or VHF channel 16 or both;

when doing so administrations should:

– inform IMO of their decisions and submit to IMO details on the area concerned;

– inform the Secretary-General on the necessary details for inclusion in the List of Coast Stations;

resolves further

that the Secretary-General should ensure that such arrangements and details regarding the area concerned be indicated in relevant maritime publications,

invites ~~the Administrative Council~~the next world radiocommunication conference

~~to draw this Resolution to the attention of the next Plenipotentiary Conference and request that Conference to decide on a world administrative radio conference which should be made competent to review this Resolution and Chapters **IX** and **N IX**~~to include the review of this Resolution, Appendix **S13** and Chapter **SVII** on the agenda of the World Radiocommunication Conference 2001,

~~*requests the IMO*~~

~~when it is deciding the dates of implementation of the GMDSS, to take into account:~~

~~1. Resolution **322 (Rev.MOB-87)** relating to Coast Stations and Coast Earth Stations Assuming Watch-Keeping Responsibilities on Certain Frequencies in Connection with the Implementation of Distress and Safety Communications for the GMDSS, which is concerned with the adequate geographic distribution of coast stations and coast earth stations necessary for the implementation of the GMDSS;~~

~~2. the economic repercussions and benefits of the GMDSS and the particular limitations confronting the developing countries;~~

~~3. the possibility of a progressive implementation of the GMDSS by bringing into effect component parts of the system, particularly those having maximum benefit to the safety of life at sea;~~

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO)~~.~~,

invites ITU-R Study Group 8

to review the operational and procedural incompatibilities between the old and new systems with a view to presenting the information to WRC-01.

ATTACHMENT 4

ADD

DRAFT NEW RESOLUTION [COM4-1]

RELATING TO THE NEED FOR ADDITIONAL SEARCH AND RESCUE INFORMATION IN DATABASES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the provisions of No. **S20.16** of Article **S20** of the simplified Radio Regulations require administrations to notify the Radiocommunication Bureau of ship station characteristics contained in the List of Ship Stations (List V) which currently includes:

> name of ship, call sign, selective call number, country, auxiliary installations, class of ship, nature of service, hours of service, telegraph transmission frequency bands, telephone transmission frequency bands, accounting authority and remarks (e.g. Inmarsat ~~id~~terminal number, MMSI);

b) that the provisions of No. **S20.15**, however, give the Bureau authority to change the content and form of this information in consultation with administrations; and

c) that administrations and IMO have expressed a need for additional information to be included in search and rescue databases including:

– vessel identification number (IMO number or national registration number);
– name, address and telephone number and, if applicable, telefax number of emergency contact person ashore;
– alternative 24-hour emergency telephone number;
– capacity for persons on board (passengers and crew),

resolves

to instruct the Director of the Radiocommunication Bureau to begin consultations with administrations with a view to incorporate the information contained in the Annex into the ITU maritime services database,

invites

administrations to consider also the incorporation of that information into their national databases~~.~~,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

ANNEX TO RESOLUTION [COM4-1]

REGISTRATION DATABASE FOR THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

(See Article **S32**)

1 All identities used by the GMDSS for identifying vessels in distress shall be registered in accordance with this Annex. Administrations or organizations responsible for assigning these identities shall make suitable arrangements for ensuring registrations of these identities are made and maintained. Administrations shall notify this information to the Radiocommunication Bureau in accordance with No. **S20.16**.

2 Means shall be provided by the Radiocommunication Bureau and administrations maintaining national databases to allow rescue coordination centres immediate access to this database on a 24-hour per day, 7-day per week basis.

3 Each registration database should include the following information:

1) vessel name;

2) Maritime Mobile Service Identity (MMSI);

3) radio call sign;

4) EPIRB identification code (if applicable);

5) country (vessel flag state; may be derived from MMSI and call sign);

6) vessel identification number (IMO number or national registration number);

7) brief ship description (type);

8) name, address, telephone and (if applicable) telefax number of emergency contact person ashore;

9) alternative 24-hour emergency telephone number;

10) capacity for persons on board (passengers and crew);

11) ship's radio installation (Inmarsat A, B, C, M, VHF DSC, etc.); and

12) Inmarsat ship earth station identities (if applicable).

ADD

DRAFT NEW RESOLUTION [COM4-2]

UHF FREQUENCIES USED IN THE MARITIME MOBILE SERVICE FOR ON-BOARD COMMUNICATION

The World Radiocommunication Conference (Geneva, 1997),

considering

that this Conference has adopted the introduction of channel spacing of 12.5 kHz in to maritime UHF on-board communications to be used on a voluntary basis,

noting

that the current Recommendation ITU-R M.1174 contains the characteristics of equipment used for on-board communications in the bands between 450 and 470 MHz,

resolves to invite ITU-R

to modify this Recommendation by including also the characteristics of the equipment using the new 12.5 kHz channel spacing,

urges administrations

to submit contributions to ITU-R,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

ADD

DRAFT NEW RESOLUTION [COM4-3]

REVIEW OF THE IMPROVED EFFICIENCY IN THE USE OF THE BAND 156 - 174 MHz BY STATIONS IN THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included the consideration of the use of Appendix **S18** to the Radio Regulations in respect of maritime mobile communications, and the use of new technology for maritime radiotelephony channels;

b) Recommendation **318** (Mob-87);

c) that Appendix **S18** identifies frequencies to be used for distress and safety communications on an international basis;

d) that the introduction of new technology to the maritime mobile service shall not disrupt the distress and safety communications in the VHF band including those established by the International Convention for the Safety of Life at Sea, 1974 as amended;

e) that the ITU Radiocommunication Sector is conducting studies on improving efficiency in the use of this band, and that these studies are still ongoing;

f) that changes made in Appendix **S18** should not prejudice the future use of these frequencies or the capabilities of systems or new applications required for use by the maritime mobile service;

g) that the congestion on Appendix **S18** frequencies calls for the implementation of efficient new technologies;

h) that the use of new technology on maritime VHF frequencies will facilitate the emerging needs for new services,

noting

that some administrations are considering adopting some of the above changes to their operations within Appendix **S18** frequencies,

resolves

that WRC-99 should consider the use of new technology in the band 156 - 174 MHz and consequential revision of Appendix **S18**,

~~instructs~~invites ITU-R

to continue studies on the following with a view to providing a report to the WRC-99:

i) to identify the future requirements of the maritime mobile service;

ii) to identify suitable technical characteristics of the system or interoperable systems to replace the existing technology;

iii) to identify necessary modifications to the frequency plan contained within Appendix **S18**;

iv) to recommend a timetable for the introduction of new technology and the necessary changes;

v) to study and recommend how new technology can be introduced without harming the distress and safety requirements,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

ADD

DRAFT NEW RESOLUTION [COM4-4]

MARITIME CERTIFICATION FOR PERSONNEL OF SHIP STATIONS AND SHIP EARTH STATIONS FOR WHICH A RADIO INSTALLATION IS NOT COMPULSORY

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that this Conference has considered the question of certification for personnel of ship stations and ship earth stations within the GMDSS;

b) that GMDSS will be fully implemented on the 1 February 1999 by ships subject to international agreement;

c) that ships not subject to international agreement have begun to adopt GMDSS systems and techniques;

d) that use of GMDSS equipment should be accompanied by appropriate training and certification;

e) that the Radio Regulations stipulate that service of every ship radio station working on frequencies assigned for international use shall be performed by operators holding a certificate;

f) that the present certificates described in Article **S47** of the Radio Regulations may be too demanding for radio operators of ship stations and ship earth stations on board ships for which a radio installation is not compulsory,

noting

that a number of administrations currently issue radio operator certificates specially designed for the non-compulsory sector,

resolves

that administrations wishing to implement special certification for the non-compulsory sector should implement the certificates contained in the Annex to this Resolution,

~~instructs~~invites ITU-R

to develop a Recommendation describing these certificates,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization.

ANNEX TO RESOLUTION [COM4-4]

Examination syllabus for radio operator's certificates appropriate to vessels using the frequencies and techniques of the GMDSS on a non-compulsory basis

Introduction

The introduction of the Global Maritime Distress and Safety System (GMDSS) in February 1992 made it necessary to harmonize the examination requirements for certificates for professional radio personnel. Harmonized examination procedures for the General Operator's Certificate and Restricted Operator's Certificate, based on the syllabi described in Article **S47** of the Radio Regulations, have already been introduced for maritime radio operators performing radiocommunication duties on board vessels subject to the International Convention for the Safety of Life at Sea (1974), as amended (SOLAS). The GMDSS will be fully implemented on 1 February 1999 for vessels subject to SOLAS.

For vessels not subject to SOLAS, and which install radiocommunication equipment on a voluntary basis, there are significant advantages to also using the GMDSS. However, it was foreseen by some administrations that such vessels would use some, but not all, of the frequencies and techniques of the GMDSS and that radio personnel on board such vessels would not need the same level of certification as radio personnel on board vessels which use all of the frequencies and techniques of the GMDSS on a compulsory basis. A syllabus has been developed which provides the flexibility for a depth of study, level of knowledge, and length of course appropriate to meet the certification requirements of radio personnel on board vessels which use some of the frequencies and techniques of the GMDSS on a non-compulsory basis. The syllabus also provides for certification in the use of satellite equipment where appropriate.

This Annex describes the syllabus developed to meet the certification requirements described above, and which are implemented in a number of countries under the title "Long Range Certificate" and "Short Range Certificate". The Short Range Certificate should at least contain those elements of the syllabus which are relevant to sea area A1.

Examination Syllabus

The examination should consist of theoretical and practical tests and should include at least:

A GENERAL KNOWLEDGE OF RADIOCOMMUNICATIONS IN THE MARITIME MOBILE SERVICE

A1 The general principles and basic features of the maritime mobile service.

B DETAILED PRACTICAL KNOWLEDGE AND ABILITY TO USE RADIO EQUIPMENT

B1 The VHF radio installation. Use of VHF equipment in practice.

B2 The MF/HF radio installation. Use of MF/HF equipment in practice.

B3 Purpose and use of Digital Selective Calling (DSC) facilities and techniques.

C OPERATIONAL PROCEDURES OF THE GMDSS AND DETAILED PRACTICAL OPERATION OF GMDSS SUBSYSTEMS AND EQUIPMENT

C1 Basic introduction to Global Maritime Distress and Safety System (GMDSS) procedures.

C2 Distress, urgency and safety communication procedures in the GMDSS.

C3 Distress, urgency and safety communication procedures by radiotelephony in the old distress and safety system.

C4 Protection of distress frequencies.

C5 Maritime Safety Information (MSI) systems in the GMDSS.

C6 Alerting and Locating Signals in the GMDSS.

D OPERATIONAL PROCEDURES AND REGULATIONS FOR RADIOTELEPHONE COMMUNICATIONS

D1 Ability to exchange communications relevant to the safety of life at sea.

D2 Regulations, obligatory procedures and practices.

D3 Practical and theoretical knowledge of radiotelephone procedures.

D4 Use of the international phonetic alphabet and, where appropriate, parts of the IMO Standard Marine Communication Phrases.

E OPTIONAL EXAMINATION MODULE FOR THE MARITIME MOBILE-SATELLITE SERVICE FOR VESSELS NOT SUBJECT TO A COMPULSORY FIT

E1 The general principles and basic features of the maritime mobile-satellite service.

E2 Operational procedures and detailed practical operation of ship earth stations in the GMDSS.

ADD

DRAFT NEW RESOLUTION [COM4-5]

RELATING TO THE EXHAUSTION OF THE MARITIME MOBILE SERVICE IDENTITY NUMBERING RESOURCE

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required to carry GMDSS equipment may do so, for safety purposes;

b) that Digital Selective Calling Equipment on such ships for VHF radio, and/or Inmarsat ship earth station equipment requires the assignment of a unique Maritime Mobile Service Identity;

c) that not all administrations assign these identities to users of digital selective calling-equipped VHF radios on such ships, from the numbers intended for use by vessels sailing and communicating only with domestic coast stations,

considering

a) that VHF digital selective calling distress alerts require valid identities for use by search and rescue authorities;

b) that Recommendation ITU-R M.585 contains guidance for the assignment of MMSIs, including to non-compulsory ships which communicate only with domestic radio stations; and

c) that Recommendation ITU-R M.585 was derived from ITU-T Recommendation E.210,

recognizing

a) that even domestic ships which install Inmarsat will require the assignment of MMSI numbers from those numbers reserved for ships communicating worldwide, further depleting the resource; and

b) that future growth of Inmarsat B, C, and M mobile earth station use by non-compulsory ships is not anticipated to deplete the resource, however;

c) that growth projections of Inmarsat systems by non-compulsory ships could change,

noting further

that ITU-R can monitor the status of the MMSI resource by monitoring the available spare Maritime Identification Digits (first three digits of the MMSI),

instructs the Director of the Radiocommunication Bureau

to monitor the status of the MMSI resource, and to report to each WRC as to the anticipated reserve capacity and expected exhaustion of the resource,

resolves to invite ITU-T and ITU-R

1 to keep under review the Recommendations for assigning Maritime Mobile Service Identities, with a view to identifying alternative resources before the resources are exhausted;

2 to consult each other when addressing changes to any of the Recommendations affecting the MMSI numbering resources; and

3 to complete studies on an urgent basis when a future WRC identifies the impending exhaustion of the MMSI resource,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

ADD

DRAFT RESOLUTION [COM4-7]

USE OF FREQUENCY ADAPTIVE SYSTEMS IN THE MF/HF BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the efficiency of spectrum use will be improved by the use of frequency adaptive systems in the MF and HF bands shared by the fixed and the mobile services;

b) that trials of frequency adaptive systems which have been undertaken during the past 20 years have demonstrated the feasibility of such systems and their improved spectrum efficiency;

c) that such improved efficiency is attained through:

– shorter call set-up and improved transmission quality by selection of the most suitable assigned channels;

– reduced channel occupancy, permitting same channels to be used by different networks yet decreasing the probability of harmful interference;

– minimization of the transmitter power required for each transmission;

– continued optimization of the emissions owing to the sophistication of the systems;

– simple operation by the use of intelligent peripheral equipment;

– reduced need for skilled radio operators;

d) that following Resolution **23 (WRC-95)**, the Bureau no longer undertakes examination with respect to the probability of harmful interference caused by new assignments recorded in the MIFR in the non-planned bands below 28 MHz;

e) that frequency adaptive systems will actively contribute to the avoidance of interference since, when other signals are observed on the channel, the frequency adaptive system will move to another frequency,

resolves

1 that, in authorizing the operation of frequency adaptive systems in the MF/HF bands, administrations shall:

i) make assignments in the bands allocated to the fixed and mobile services;

ii) not make assignments in the bands:

– allocated exclusively to the maritime or aeronautical mobile (R) services;

– shared on a co-primary basis with the broadcasting service, radiodetermination service or the amateur services;

– allocated to radio astronomy;

iii) avoid use which may affect frequency assignments involving safety services made in accordance with Nos. **S5.155**, **S5.155A** and **S5.155B**;

iv) take into account any footnotes applicable to the proposed bands and the implications regarding compatibility;

2 that frequency adaptive systems shall automatically limit simultaneous use of frequencies to minimum necessary for communication requirements;

3 that, with a view to avoiding harmful interference, the system should evaluate the channel occupancy prior to and during operation;

4 that frequency adaptive systems shall be notified to the Bureau in accordance with the provisions of Article **S11**,

invites ITU-R

1 to pursue its studies on the subject (see for example, Questions ITU-R 204-1/1, 147/9, 205/9 or 214/9) with a view to achieve optimum operational performance and compatibility;

2 to report on the results of these studies to a future WRC,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements, as soon as practicable, for the notification of frequency assignments to adaptive systems and for their recording in the Master International Frequency Register, taking into account the studies already undertaken.

ADD

DRAFT NEW RESOLUTION [COM4-8]

OPERATION OF GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM EQUIPMENT ON AND ASSIGNMENT OF MARITIME MOBILE SERVICE IDENTITIES (MMSI) TO NON-COMPULSORY FITTED VESSELS

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required by international agreement to carry GMDSS equipment could elect to do so for safety purposes;

b) that such vessels may only carry VHF DSC equipment;

c) that some administrations may not require operators on such vessels to have appropriate training, certification or licence;

d) that not all administrations assign and register identities to users of VHF DSC on such ships,

considering

that VHF DSC false distress alerts are a problem for rescue coordination centres, particularly when incorrect identities are used in these alerts, or when the radio is operated by persons untrained in its use,

recognizing

that administrations have different training requirements for users of VHF DSC equipment,

resolves

1 to invite the ITU-R to consider digital selective calling standards and operating procedures in order to simplify operation of this equipment;

2 to invite the ITU-T and ITU-R to review the process for assigning maritime mobile service identities for simplifying the process, taking into account cases of new installation, sale of the vessel or transfer of the equipment to a new ship;

3 to invite the ITU-T and ITU-R to undertake studies to ensure the registration and continuous accessibility and availability of identities to rescue authorities,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) for consideration and comments.

ATTACHMENT 5

List of Resolutions and Recommendations approved for suppression (seventh meeting of Committee 4 on 11 November 1997)

Resolution No.	Subject	Proposed action
39 (Mob-83)	Use of Monitoring Facilities in applying decisions of WARCs	SUP
200 (Rev.Mob-87)	Class of emission on 2 182 kHz	SUP
~~209 (Mob-87)~~	~~Enlarging the scope of GMDSS~~	~~SUP~~
210 (Mob-87)	Reducing the guardband around 500 kHz	SUP
~~300 (Rev.Mob-87)~~	~~Paired frequencies for NBDPT in HF/MMS~~	~~NOC/(MOD)~~
~~310 (Rev.Mob-87)~~	~~Ship movement telemetry~~	~~MOD~~
~~312 (Rev.Mob-87)~~	~~Group channels for Morse telegraphy~~	~~MOD~~
314 (Rev.Mob-87)	Collection of data for oceanography	SUP
315	Abolition of mobile station charges	SUP
316 (Rev.Mob-87)	Technical cooperation in Maritime Telecommunications	SUP
319 (Rev.Mob-87)	General review in 4/8 MHz (MMS/FX)	SUP
322 (Rev.Mob-87)	Watch keeping on GMDSS frequencies	SUP
323 (Mob-87)	Use of 156.525 MHz for DSC	SUP
330 (Mob-87)	Frequencies for RTF calling around 3 MHz	SUP
~~331 (Mob-87)~~	~~Entry into force of the GMDSS provisions~~	~~MOD~~
333 (Mob-87)	Use of HF for MSI	SUP
335 (Mob-87)	Non-paired frequencies, NBDP, ships	SUP
336 (Mob-87)	DSC on maritime HF	SUP
338 (WARC-92)	Provisional application of Art. 56	SUP
~~339 (WRC-95)~~	~~Coordination of NAVTEX~~	~~MOD~~
601 (Rev.Mob-87)	Standards for EPIRBs on 121.5 MHz/243 MHz	SUP
~~602 (Rev.Mob-87)~~	~~Differential data correction on maritime radiobeacons~~	~~NOC/(MOD)~~
~~705 (Mob-83)~~	~~Protection of services in 70 - 130 kHz~~	~~NOC/(MOD)~~
~~706 (Mob-83)~~	~~Operation of FX/MOB in 90 - 110 kHz~~	~~NOC/(MOD)~~

Recommendation No.	Subject	Proposed action
4	National and International Circuits in HF	SUP
5	Reducing the congestion in HF	SUP
~~7~~	~~Standard forms for licences (ship station, aeronautical station)~~	~~MOD~~
~~8~~	~~Automatic identification~~	~~NOC/(MOD)~~
~~14 (Mob-87)~~	~~Identification of special vessels~~	~~NOC/(MOD)~~
302 (Rev.Mob-87)	Improved use of HF in MMS	SUP
303 (Rev.Mob-87)	Use of 4 125 kHz and 6 215 kHz for distress and safety	SUP
304	Frequencies in Appendix 16, Section B	SUP
305	Use of CH15 and CH17 of AP18	SUP
306	Watch on 156.8 MHz	SUP
310	Automated UHF MM	SUP
312 (Rev.Mob-87)	Interconnection of MM in PSTN	SUP
~~316 (Rev.Mob-87)~~	~~Use of SES within harbours~~	~~NOC/(MOD)~~
317 (Rev.Mob-87)	Priority Indicator Signal (MMS)	SUP
~~318 (Mob-87)~~	~~Improved AP18~~	~~NOC/(MOD)~~
~~319 (Mob-87)~~	~~Adjacent channel interference in HF MMS~~	~~NOC/(MOD)~~
603 (Rev.Mob-87)	Technical provisions for maritime radiobeacon in the African area	SUP

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

EIGHTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 is continuing its consideration of agenda item 1.9.1. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

NOC

MHz
1 700 – 2 010

Allocation to Services		
Region 1	Region 2	Region 3
1 980 – 2 010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 S5.389A S5.389B S5.389F	

MHz
2 010 – 2 170

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**2 010 – 2 025** FIXED MOBILE S5.388	**2 010 – 2 025** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 MOD S5.389C S5.389D S5.389E ADD S5.390	**2 010 – 2 025** FIXED MOBILE S5.388
	…		
MOD	**2 160 – 2 170** FIXED MOBILE S5.388 S5.392A	**2 160 – 2 170** FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 MOD S5.389C S5.389D S5.389E ADD S5.390	**2 160 – 2 170** FIXED MOBILE S5.388

MOD S5.389C The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January ~~2005~~2002 and is subject to coordination under Resolution **46 (Rev.WRC-95)/**No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

ADD S5.390 In Argentina, Brazil, Chile, Colombia, Cuba, Ecuador and Suriname, the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite services shall not cause harmful interference to stations in the fixed and mobile services before 1 January 2005. After this date the use of these bands is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

NOC

MHz
2 170 – 2 450

Allocation to Services		
Region 1	Region 2	Region 3
2 170 – 2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 S5.389A S5.389F S5.392A	

MOD

GHz
14.8 – 17.3

Allocation to Services		
Region 1	Region 2	Region 3
15.4 – ~~15.7~~15.43	~~FIXED-SATELLITE (space-to-Earth) S5.511A S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~ ADD S5.511D	
~~15.4 – 15.7~~15.43 - 15.63	FIXED-SATELLITE (space-to-Earth) (Earth-to-space) MOD S5.511A ~~S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~ MOD S5.511C S5.511D	
~~15.4~~15.63 – 15.7	~~FIXED-SATELLITE (space-to-Earth) S5.511A S5.511C~~ AERONAUTICAL RADIONAVIGATION ~~S5.511B~~ ADD S5.511D	

MOD S5.511A Use of the band 15.43 - 15.~~7~~63 GHz by the fixed-satellite service (space-to-Earth) (see Resolution [COM5-8] (WRC-97)) (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. ~~Emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m^2/MHz) in the bands 15.4 - 15.45 GHz and 15.65 - 15.7 GHz, and -111 dB(W/m^2/MHz) in the band 15.45 - 15.65 GHz, for all angles of arrival. These limits relate to the power flux-density which would be obtained under assumed free-space~~

~~propagation conditions. In the band 15.45 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m^2/MHz) for all angles of arrival, it shall coordinate with affected administrations. Moreover,~~ In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. Also in the space-to-Earth direction, harmful interference shall not be caused to stations of the radio astronomy service using the band 15.35 - 15.4 GHz. The threshold levels of interference and associated power flux-density limits which are detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769-1. ~~The power flux-density limits and coordination threshold in this footnote shall apply, subject to review by ITU-R and based on the studies referred to in Resolution **116 (WRC-95)**, until changed by a future competent world radiocommunication conference.~~ Special measures will need to be employed to protect the radio astronomy service in the band 15.35 - 15.4 GHz.

SUP S5.511B

MOD S5.511C ~~*Additional allocation:* the band 15.45 - 15.65 GHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. Such use is limited to feeder links of non-geostationary systems in the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)** /No. **S9.11A**. Until such time as the studies called for in Resolution **117 (WRC-95)** are completed: 1) administrations operating s~~Stations operating in the aeronautical radionavigation service ~~are urged to~~shall limit the ~~average~~effective e.i.r.p. ~~to 42 dBW; 2) stations in the fixed-satellite service shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).~~in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **S4.10** applies) from harmful interference from feeder link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder link earth station shall be in accordance with Recommendation ITU-R S.1340.

ADD S5.511D Fixed-satellite service systems for which complete information for advance publication ~~information~~ has been received by the Bureau prior to 21 November 1997 may operate in the bands 15.4 - 15.43 GHz and 15.63 - 15.7 GHz in the space-to-Earth direction and 15.63 - 15.65 GHz in the Earth-to-space direction. In the bands 15.4 - 15.43 GHz and 15.65 - 15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m^2/MHz) for all angles of arrival. In the band 15.63 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m^2/MHz) for ~~all~~any angle~~s~~ of arrival, it shall coordinate under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63 - 15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).

MOD

GHz
18.6 – 20.2

Allocation to Services		
Region 1	Region 2	Region 3
19.3 – 19.7	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) S5.523B MOD S5.523C ADD S5.523E MOD S5.523D MOBILE ~~S5.523C~~	

MOD

GHz
27 – 29.9

Allocation to Services		
Region 1	Region 2	Region 3
29.1 – 29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOD S5.523C ADD S5.523E MOD S5.535A S5.539 MOD S5.541A MOBILE Earth Exploration-Satellite (Earth-to-space) S5.541 S5.540	

MOD S5.523C ~~The use of the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz by the FSS shall be in accordance with Resolution **120 (WRC-95)**.~~No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995.

ADD S5.523E No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.6 - 19.7 GHz and 29.4 - 29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 21 November 1997.

MOD S5.523D The use of the band 19.3 - 19.~~6~~7 GHz (space-to-Earth) by GSO/FSS systems and by the feeder links for non-geostationary satellite systems in the MSS is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A**, but not subject to the provisions of

No. **S22.2**. The use of this band for other non-GSO/FSS systems, or for the cases indicated in No. **MOD S5.523C** and **ADD S5.523E**, is not subject to the provisions of Resolution **46 (Rev.WRC-95)/**No. **S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**.

MOD S5.535A The use of the band 29.1 - 29.45 GHz (Earth-to-space) by the FSS is limited to GSO satellite systems and feeder links to non-GSO satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/**No. **S9.11A**, but not subject to the provisions of No. **S22.2**, except as indicated in No. **MOD S5.523C** and **ADD S5.523E** where such use is not subject to the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and shall continue to be subject to Articles **11/S9** (except No. **S9.11A**) and **13/S11** procedures, and to the provisions of No. **S22.2**.

MOD S5.541A Feeder links of non-GSO/MSS networks and GSO/FSS networks operating in the band 29.1 - 29.45 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix **S4** coordination information is considered as having been received by the Bureau after 17 May 1996 and until it is changed by a future competent world radiocommunication conference. Administrations submitting Appendix **S4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by the ITU-R (see Resolution **121 (WRC-95/97)**).

ARTICLE S21

MOD TABLE S21-4

Frequency band	Service	Limit in dB(W/m2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
…					
~~15.4 - 15.45 GHz~~ ~~15.65 - 15.7 GHz~~	~~Fixed-Satellite (S-E)~~	~~- 146~~			~~1 MHz~~
15.4~~5~~3 - 15.6~~5~~3 GHz	Fixed-Satellite (S-E)	-127	5° - 20°: -127 20° - 25°: -127 + 0.56 (δ-20)^2	25° - 29°: -113 29° - 31°: -136.9 + 25 log (δ-20) 31° - 90°: -111	1 MHz
…					

RESOLUTION [COM5-8]

FEASIBILITY OF IMPLEMENTING FEEDER LINKS OF NON-GEOSTATIONARY SATELLITE NETWORKS IN THE MOBILE-SATELLITE SERVICE IN THE BAND 15.43 - 15.63 GHz (SPACE-TO-EARTH) WHILE TAKING INTO ACCOUNT THE PROTECTION OF THE RADIO ASTRONOMY SERVICE, THE EARTH EXPLORATION-SATELLITE (PASSIVE) SERVICE AND THE SPACE RESEARCH (PASSIVE) SERVICE IN THE BAND 15.35 - 15.4 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 15.43 - 15.63 GHz (space-to-Earth) is allocated to the fixed-satellite service on a primary basis for use by feeder links to non-geostationary systems in the mobile-satellite service;

b) that this band is shared with aeronautical radionavigation services on a primary basis;

c) that No. **S4.10** of the Radio Regulations applies to the use of the band by aeronautical radionavigation services;

d) that aircraft stations were not permitted to transmit in the band 15.45 - 15.65 GHz in accordance with No. **S5.511B (WRC-95)**;

e) that WRC-97 recognized that airborne transmitters are operating in the aeronautical radionavigation service in the 15.43 - 15.63 GHz band;

f) that the feasibility to design and operate feeder links in the space-to-Earth direction with the power flux-density limits in Table **S21-4** of Article **S21** has not been studied by the ITU-R;

~~g) that the band 15.35 - 15.4 GHz is allocated to the radio astronomy service and other passive services and protection from harmful interference from space stations is needed;~~

~~h~~g) that the band 15.35 - 15.4 GHz is allocated on a co-primary basis for exclusively passive use by the radio astronomy service, the earth exploration-satellite service and the space research service and protection from harmful interference from space stations is needed;

~~i~~h) that No. **S5.511A** provides that harmful interference shall not be caused to the radio astronomy service by feeder links for the mobile-satellite service operated in the band 15.43 - 15.63 GHz;

~~j~~i) that out-of-band emissions from space stations in the mobile-satellite service in the band 15.43 - 15.63 GHz may cause interference to the radio astronomy service in the band 15.35 - 15.4 GHz;

~~k~~j) that Recommendation ITU-R **RA.769-1** specifies the levels of interference which are detrimental to the radio astronomy service which may not be easily met by non-GSO MSS feeder links operating in the space-to-Earth direction,

resolves

1 to invite the ITU-R to study, as a matter of urgency, ~~to carry out studies~~ in preparation for ~~the CPM for~~ [WRC-99] ~~with an objective~~ to study the feasibility of implementing non-GSO MSS feeder links in the 15.43 - 15.63 GHz band, taking into account the above *considerings*;

2 to invite ITU-R to study, as a matter of urgency, the interference potential of feeder links for NGSO satellites in the mobile-satellite service to the radio astronomy service in the 15 GHz band and develop recommendations to reduce the out-of-band interference;

3 that [WRC-99] should review the results of the above studies and take appropriate actions, including possible adjustments in spectrum allocations.

SUP

RESOLUTION 116 (WRC-95)

ALLOCATION OF FREQUENCIES TO THE FIXED-SATELLITE SERVICE (SPACE-TO-EARTH) IN THE BAND 15.4 - 15.7 GHz FOR FEEDER LINKS OF NON-GEOSTATIONARY-SATELLITE NETWORKS IN THE MOBILE-SATELLITE SERVICE

SUP

RESOLUTION 117 (WRC-95)

ALLOCATION OF FREQUENCIES TO THE FIXED-SATELLITE SERVICE (EARTH-TO-SPACE) INTHE BAND 15.45 - 15.65 GHz FOR USE BY FEEDER LINKS OF NON-GEOSTATIONARY SATELLITE NETWORKS OPERATING IN THE MOBILE-SATELLITE SERVICE

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 247-E
11 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5
AD HOC 3

DRAFT RESOLUTION [COM5-11]

USE OF THE FREQUENCY BAND 31.8 - 33.4 GHz FOR HIGH DENSITY SYSTEMS IN THE FIXED SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that in the frequency band 31.8 - 33.4 GHz, the deployment of high density systems in the fixed service might cause interference into or receive interference from stations in the existing services and that the priority and degree of protection afforded to each service is a matter for each administration to consider;

b) that the band 31.8 - 33.4 GHz is allocated on a primary basis to the radionavigation service and that portions of the band are allocated on a primary basis to the space research (deep space) and inter-satellite services;

c) that sharing criteria for the fixed and other services in the frequency band 31.8 - 33.4 GHz have not yet been developed within the ITU-R,

resolves

1 that the allocation to the fixed service in the frequency band 31.8 - 33.4 GHz shall not enter into force before 1 January 2001;

2 that [WRC-99] should review this allocation including the date of 1 January 2001, taking full account of the future requirements and development of the radionavigation service and available ITU-R studies,

request ITU-R

to conduct, as a matter of urgency, the appropriate studies in time for [WRC-99] to determine what criteria would be necessary for sharing between stations in the fixed service and stations in the other services to which the frequency band 31.8 - 33.4 GHz is allocated.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 248(Rev.1)-E
15 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

CHAIRMAN, WORKING GROUP 4A

THIRD (REVISED) REPORT FROM WORKING GROUP 4A TO COMMITTEE 4

Working Group 4A reviewed the texts of Annexes 1A and 1B of Appendix S4 of the Simplified Radio Regulations (issues related to terrestrial services), from the point of view of their consistency with other provisions of the Radio Regulations.

Pursuant to the note from Working Group 4C (Document 270 refers), Working Group 4A also included the following items that are related to HF broadcasting: 7AA, 9R, 10CA, 10CB and 10CC.

The approved texts, as reproduced below, are submitted to Committee 4 for consideration.

The text also contains the modified description of item 8B, which was already approved at the seventh meeting of the Committee.

Annex: 1

APPENDIX S4

Consolidated List and Tables of Characteristics for Use in the Application of the Procedures of Chapter SIII

ANNEX 1A

(to Appendix **S4**)

List of characteristics of stations in the terrestrial services[1]

SUP *ITEM 6C – Experimental station*

Symbol EX in this item for experimental station only.

ADD *ITEM 7AA – Type of modulation*

Modulation choice is needed to specify if the requirement is to use DSB, SSB or any new broadcasting techniques recommended by ITU-R.

MOD *ITEM 8B – Radiated power (dBW)*

The radiated power expressed in dBW in one of the forms described in Nos. **S1.161** to **S1.163**. In the case of systems where automatic power control is applied, indicate the range of power control, expressed in dB above the transmitting power indicated above.

NOC *ITEM 9E – Height of antenna*

Information on height above ground level, in metres.

MOD *ITEM 9EA – Altitude of site above sea level*

Information on the altitude of the site above mean sea level, in metres (for VHF sound broadcasting (BC) and VHF/UHF television broadcasting (BT) assignments, and for all terrestrial stations in the frequency bands above 1 GHz that are shared between space radiocommunication and terrestrial radiocommunication services).

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[1] The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences. Additional information on the items listed in this Annex together with an explanation of the symbols is to be found in the Preface to the International Frequency List.

ADD *ITEM 9R – Slew angle*

The slew angle represents the difference between the azimuth of maximum radiation and the direction of unslewed radiation.

SUP *ITEM 10C – Seasons and solar activity*

The season or month of the year and the level of solar activity, expressed by appropriate symbols.

ADD *ITEM 10CA – Start date*

It is used in the case that the requirement starts after the start of the schedule.

ADD *ITEM 10CB – Stop date*

It is used in the case that the requirement stops before the end of the schedule.

ADD *ITEM 10CC – Days of operation*

It is used when the station does not transmit in every day of the week.

ANNEX 1B

(to Appendix **S4**)

Table of characteristics to be submitted for stations in the terrestrial services

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B
SYNC									X					X				SYNC
1A	X	X	X	X	X	X	X	X	X	X	X[5)]	X	X[5)]	X	X		X	1A
1B	+	+	+	+	+	+	+	+			X[5)]				+			1B
1C				+											X	+		1C
1D											X		X					1D
1E											X		X					1E
1G															O			1G
1H															X			1H
1X																X		1X
1Y																O		1Y
1Z																+		1Z
2C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	X	X	2C
3A	X	X	X	X	X				X	O	O	O	O		X		X	3A
4A	X	X	X	X	X				X	X	X	X	X	X	X	+	X	4A
4B	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	4B
4C	X	X	X	X	X	*1)	*1)	*1)	X	X	X	X	X	X	X	+	X	4C
4D						*1)	*1)	*1)										4D
4E						*	*	*										4E
4F																	X	4F
4G									X									4G
5A				X		X	X											5A
5B				X		X	X											5B
5C				X		X	X										*	5C
5D		*2)	*2)												X	*3)	*	5D
5E	X	*	*		X											*		5E

X Mandatory * One of the items + Required in specific cases O Optional

1) (4C and 4D) or (4E).
2) (5D) or (5E and 5F).
3) (5D and 5F) or (5E and 5F).
5) May not be required with the new TerRaSys.

Table of characteristics to be submitted for stations in the terrestrial services *(cont.)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
5F	X	*	*		X											*		5F
5G	+	+	+	+	+											+	+	5G
6A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6A
6B	+	+	X	X		X	X	+								X		6B
~~6C~~	+	+	+	+	+													~~6C~~
7A	X	X	X	X	X	X	X	X	X	X[5]	X[5]	X[5]	X[5]	X	X	X	X	7A
7AA															X			7AA
7B				X					X					X				7B
7C1									X[4]		X		X					7C1
7C2											X		X					7C2
7D												X						7D
7E				+[7]														7E
7F				+[7]														7F
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8
8A	*	*	X	*	X	*	*	*	X					X	X	X	*	8A
8AB				+[7]														8AB
8B	*	*		*		*	*	*		X	X	X	X				*	8B
8BH										X	X	X	X					8BH
8BV										X	X	X	X					8BV
8D											X		X					8D
9	X	X	X	X	X				X	X	X	X	X		X	X	X	9
9A	X	X	X	X	X				X	X	X	X	X		X	X	X	9A
9AA														X				9AA
9AB	+	+	+	+	+				+						+	+	+	9AB
9B				+											X			9B
9C	+	+	+	+	+											+		9C
9CA														X				9CA
9D				+						X	X	X	X					9D
9E	+	+	+	+	+				X	X	X	X	X					9E
9EA	+	+	+	+	+					X	X	X	X					9EA
9EB										X	X	X	X					9EB
9EC										X	X	X	X					9EC

X Mandatory * One of the items + Required in specific cases O Optional

[4] For low power channels.
[5] May not be required with the new TerRaSys.
[7] This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optionally provided in a request for coordination under Nos. **S9.16**, **S9.18** and **S9.19**.

Table of characteristics to be submitted for stations in the terrestrial services *(cont.)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
9F														X				9F
9G	+	+	+	+	+			+							+	+		9G
9GH									X									9GH
9GV									X									9GV
9H									X	X[5)]	X[5)]	X[5)]		+		+		9H
9I									X					X				9I
9IA														X				9IA
9J				+, +[7)]											X	+		9J
9K				+[7)]														9K
9N												X[5)]						9N
9NA														X				9NA
9NH										X[6)]	X[6)]	X[6)]	X					9NH
9NV										X[6)]	X[6)]	X[6)]	X					9NV
9O														X	X	X		9O
9P														X				9P
9Q									X					X				9Q
9R															X			9R
9T1														X				9T1
9T2														X				9T2
9T3														X				9T3
9T4														X				9T4
9T5														X				9T5
9T6														X				9T6
9T7														X				9T7
9T8														X				9T8
9T9A														+				9T9A
9T9B														X				9T9B
9T9C														+				9T9C

X Mandatory * One of the items + Required in specific cases O Optional

5) May not be required with the new TerRaSys.

6) To be used in the future TerRaSys.

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optionally provided in a request for coordination under Nos. **S9.16**, **S9.18** and **S9.19**.

Table of characteristics to be submitted for stations in the terrestrial services *(end)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
9T9D														+				9T9D
10A				+														10A
10B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10B
~~10C~~		~~+~~		~~+~~											~~X~~			~~10C~~
10CA															O			10CA
10CB															O			10CB
10CC															O			10CC
10D																X		10D
10E																X		10E
10F																	X	10F
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	11
12A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12A
12B	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12B

X Mandatory * One of the items + Required in specific cases O Optional

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

CHAIRMAN, WORKING GROUP 4A

THIRD REPORT FROM WORKING GROUP 4A TO COMMITTEE 4

Working Group 4A reviewed the texts of Annexes 1A and 1B of Appendix S4 of the Simplified Radio Regulations (issues related to terrestrial services), from the point of view of their consistency with other provisions of the Radio Regulations.

The approved texts, as reproduced below, are submitted to Committee 4 for consideration.

The text also contains the modified description of item 8B, which was already approved at the 7th meeting of the Committee.

R.N. AGARWAL
Chairman of Working Group 4A

Annex: 1

APPENDIX S4

Consolidated List and Tables of Characteristics for Use in the Application of the Procedures of Chapter SIII

ANNEX 1A

(to Appendix **S4**)

List of characteristics of stations in the terrestrial services[1]

SUP *ITEM 6C – Experimental station*

Symbol EX in this item for experimental station only.

MOD *ITEM 8B – Radiated power (dBW)*

The radiated power expressed in dBW in one of the forms described in Nos. **S1.161** to **S1.163**. In the case of systems where automatic power control is applied, indicate the range of power control, expressed in dB above the transmitting power indicated above.

NOC *ITEM 9E – Height of antenna*

Information on height above ground level, in metres.

MOD *ITEM 9EA – Altitude of site above sea level*

Information on the altitude of the site above mean sea level, in metres (for VHF sound broadcasting (BC) and VHF/UHF television broadcasting (BT) assignments, and for all terrestrial stations in the frequency bands above 1 GHz that are shared between space radiocommunication and terrestrial radiocommunication services).

SUP *ITEM 10C – Seasons and solar activity*

The season or month of the year and the level of solar activity, expressed by appropriate symbols.

---

[1] The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences. Additional information on the items listed in this Annex together with an explanation of the symbols is to be found in the Preface to the International Frequency List.

ANNEX 1B

(to Appendix **S4**)

Table of characteristics to be submitted for stations in the terrestrial services

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B
SYNC									X					X				SYNC
1A	X	X	X	X	X	X	X	X	X	X	X[5)]	X	X[5)]	X	X		X	1A
1B	+	+	+	+	+	+	+	+			X[5)]				+			1B
1C				+											X	+		1C
1D											X		X					1D
1E											X		X					1E
1G															O			1G
1H															X			1H
1X																X		1X
1Y																O		1Y
1Z																+		1Z
2C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	X	X	2C
3A	X	X	X	X	X				X	O	O	O	O		X		X	3A
4A	X	X	X	X	X				X	X	X	X	X	X	X	+	X	4A
4B	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	4B
4C	X	X	X	X	X	*1)	*1)	*1)	X	X	X	X	X	X	X	+	X	4C
4D						*1)	*1)	*1)										4D
4E						*	*	*										4E
4F																	X	4F
4G									X									4G
5A				X		X	X											5A
5B				X		X	X											5B
5C				X		X	X										*	5C
5D		*2)	*2)												X	*3)	*	5D
5E	X	*	*		X											*		5E

X Mandatory * One of the items + Required in specific cases O Optional

1) (4C and 4D) or (4E).
2) (5D) or (5E and 5F).
3) (5D and 5F) or (5E and 5F).
5) May not be required with the new TerRaSys.

Table of characteristics to be submitted for stations in the terrestrial services *(cont.)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
5F	X	*	*		X											*		5F
5G	+	+	+	+	+											+	+	5G
6A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6A
6B	+	+	X	X		X	X	+								X		6B
~~6C~~	~~+~~	~~+~~	~~+~~	~~+~~	~~+~~													~~6C~~
7A	X	X	X	X	X	X	X	X	X	X[5]	X[5]	X[5]	X[5]	X	X	X	X	7A
7B				X					X					X				7B
7C1									X[4]		X		X					7C1
7C2											X		X					7C2
7D												X						7D
7E				+[7]														7E
7F				+[7]														7F
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8
8A	*	*	X	*	X	*	*	*	X					X	X	X	*	8A
8AB				+[7]														8AB
8B	*	*		*		*	*	*		X	X	X	X				*	8B
8BH										X	X	X	X					8BH
8BV										X	X	X	X					8BV
8D											X		X					8D
9	X	X	X	X	X				X	X	X	X	X		X	X	X	9
9A	X	X	X	X	X				X	X	X	X	X		X	X	X	9A
9AA														X				9AA
9AB	+	+	+	+	+				+						+	+	+	9AB
9B				+											X			9B
9C	+	+	+	+	+											+		9C
9CA														X				9CA
9D				+						X	X	X	X					9D
~~9E~~	~~+~~	~~+~~	~~+~~	~~+~~	~~+~~				X	X	X	X	X					~~9E~~
~~9EA~~	~~+~~	~~+~~	~~+~~	~~+~~	~~+~~					X	X	X	X					~~9EA~~
9EB										X	X	X	X					9EB
9EC										X	X	X	X					9EC

X Mandatory * One of the items + Required in specific cases O Optional

4) For low power channels.

5) May not be required with the new TerRaSys.

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optionally provided in a request for coordination under Nos. **S9.16**, **S9.18** and **S9.19**.

Table of characteristics to be submitted for stations in the terrestrial services *(cont.)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
9F														X				9F
9G	+	+	+	+	+			+							+	+		9G
9GH									X									9GH
9GV									X									9GV
9H									X	X[5)]	X[5)]	X[5)]		+		+		9H
9I									X					X				9I
9IA														X				9IA
9J				+, +[7)]											X	+		9J
9K				+[7)]														9K
9N												X[5)]						9N
9NA														X				9NA
9NH										X[6)]	X[6)]	X[6)]	X					9NH
9NV										X[6)]	X[6)]	X[6)]	X					9NV
9O														X	X	X		9O
9P														X				9P
9Q									X					X				9Q
9T1														X				9T1
9T2														X				9T2
9T3														X				9T3
9T4														X				9T4
9T5														X				9T5
9T6														X				9T6
9T7														X				9T7
9T8														X				9T8
9T9A														+				9T9A
9T9B														X				9T9B
9T9C														+				9T9C

X Mandatory * One of the items + Required in specific cases O Optional

5) May not be required with the new TerRaSys.

6) To be used in the future TerRaSys.

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optionally provided in a request for coordination under Nos. **S9.16**, **S9.18** and **S9.19**.

Table of characteristics to be submitted for stations in the terrestrial services *(end)*

Notice type	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	Notice type
Item No.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX	SM	AM, ML MA, MO	MS, OD SA	All, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. **S11**)	Item No.
9T9D														+				9T9D
10A				+														10A
10B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10B
~~10C~~		+		+											~~X~~			~~10C~~
10D																X		10D
10E																X		10E
10F																	X	10F
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	11
12A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12A
12B	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12B

X Mandatory * One of the items + Required in specific cases O Optional

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Addendum 1 to Document 249-E 17 November 1997 Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

Australia, Luxembourg, Norway, Netherlands (Kingdom of the), Sweden

AUS/LUX/ NOR/HOL/ S/249/2 ADD

DRAFT RESOLUTION [AUS/LUX/NOR/HOL/S-2]

POSSIBLE APPLICATION OF FINANCIAL DUE DILIGENCE TO CERTAIN SPACE NETWORKS OR SYSTEMS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the Kyoto Plenipotentiary Conference of 1994 identified the need for a review of the ITU coordination and notification procedures for space networks and adopted Resolution **18**;

b) that there has been an extensive review of ITU's procedures in a number of ITU fora and the Director of the Radiocommunication Bureau has submitted his report to the Conference as required under Resolution **18** (Kyoto, 1994);

c) that the number of submissions of satellite networks to ITU has increased substantially in the period 1994-1996 and continues to increase;

d) that the Conference decided that the problem of excessive filings is very serious and is becoming even more serious;

e) that it adopted some administrative due diligence measures which will have a limited effect in the near future;

f) that a number of administrations were of the view that a financial approach to due diligence might be more effective in addressing the serious problem of excessive filings but that there were some issues of principle concerning this approach raised during the Conference,

resolves

to invite the Plenipotentiary Conference of 1998 to study the issues associated with the use of financial measures and to consider the principle of the possible use of financial due diligence, including financial deposits and/or annual fees, with respect to the ITU coordination and notification process for satellite networks and adopt any provisions that it considers necessary to permit such deposits and/or annual fees to be considered by a future WRC,

invites the Secretary-General

to bring this Resolution to the attention of the 1998 Plenipotentiary Conference.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 249-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

Australia, Luxembourg, Norway, Netherlands (Kingdom of the), Sweden

PROPOSALS FOR THE WORK OF THE CONFERENCE

RESOLUTION 18

Agenda item 7 - Due diligence

As noted in the report of WG PL2 on this item, a number of administrations, having participated in the work of WG PL2, consider that adequate consideration was not given to the proposals related to financial diligence as proposed in Document 14 (Part 15C) and Document 42, and these administrations reserved the right to come back to this issue in the Plenary. As a result of further consideration of this matter, the above listed administrations wish to have this matter considered in Plenary at the same time that the report of this subject from WG PL2 is considered.

Attached is a revised proposal, which is based on the input contributions (Documents 14 (Part 15C) and 42), put forward by some of the above administrations for consideration by Plenary.

These administrations are of the view that the issue of financial due diligence shall be brought to the attention of the 1998 Plenipotentiary Conference.

**AUS/LUX/
NOR/HOL/
S/249/1
ADD**

DRAFT RESOLUTION [AUS/LUX/NOR/HOL/S-1]

APPLICATION OF FINANCIAL DUE DILIGENCE TO CERTAIN SPACE NETWORKS OR SYSTEMS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the Kyoto Plenipotentiary Conference of 1994 identified the need for a review of the ITU coordination and notification procedures for space networks and adopted Resolution **18**;

b) that there has been an extensive review of ITU's procedures in an number of ITU fora and the Director of the Radiocommunication Bureau has submitted his report to the Conference as required under Resolution **18**;

c) that the number of submissions of satellite networks to ITU has increased substantially in 1994-1996 and continues to increase rapidly;

d) that the Conference decided that the problem of excessive filings is very serious and is becoming even more serious and that it was necessary to adopt due diligence measures;

e) that various approaches to administrative due diligence have been studied and WRC-97 has adopted some administrative due diligence measures;

f) that new filings submitted after [21 November 1997] will not be subject to administrative due diligence requirements until [22 November 2002] and that it will not be possible to assess the effectiveness of such measures until WRC-2003;

g) that filings submitted prior to [21 November 1997] will not be subject to administrative due diligence for a period of [6 + 3] years from the date of the filing of the API [or 21 November 2003, which ever date comes earlier], and as a consequence the large number of filings submitted in 1994-1996 period will not be subject to administrative due diligence measures until [2003 or later];

h) a number of administrations concluded that the administrative due diligence measures will not begin to take effect until about 2003 and thus would not be effective in addressing the immediate problem of the excessive filings;

i) that the Conference has also decided to adopt a financial approach to due diligence, subject, if necessary, to confirmation by the 1998 Plenipotentiary Conference which should also consider the need for any changes to the ITU Constitution and/or Convention;

j) that the Council in 1998 will have to make changes to the financial regulations to include the fee schedule to implement financial due diligence;

k) that the application of financial due diligence measures will reduce the large number of filings made during the last five years and, therefore, substantially reduce the coordination workload for all administrations and the Bureau,

noting

that although a financial deposit approach to due diligence might be a more effective means of addressing the problem of excessive filings, there may be other implications of such a deposit approach and this approach requires more study,

resolves

1 to adopt subject to confirmation, if necessary, by the Plenipotentiary Conference of 1998, the application of an annual coordination fee and annual registration fee for those satellite networks that are subject to coordination under [Articles **S9** and **S10/Appendices 30/30A**] and the application of the annual fees shall be in accordance with the Annex to this Resolution;

2 that the new provision **[S11.48.1]** shall be provisionally applied as of [21 November 1997],

invites

1 the Council in 1998 to adopt the necessary changes to the financial regulations, to include the fee schedule, to give effect to these annual fees as of 1 January 1999 and to review the amount of the fees after three years;

2 the Plenipotentiary Conference of 1998, if it is considered necessary, to make any changes to the ITU Constitution/Convention and to provisionally implement such changes as of 1 January 1999;

3 the Plenipotentiary Conference of 1998 to consider the principle of the possible use of financial deposits with respect to the ITU coordination process for satellite networks and adopt any provisions that it considers necessary to permit such deposits to be considered by a future WRC.

4 a future WRC to review the effectiveness of the due diligence process after some years of experience with both the administrative and financial measures.

ANNEX TO DRAFT RESOLUTION [AUS/LUX/NOR/HOL/S-1]

Application of the annual coordination and registration fees

WRC-97 has adopted annual coordination and registration fees to be applicable to certain satellite networks and satellite systems that are subject to coordination. These fees shall be applied as follows as of 1 January 1999:

1) all satellite networks and satellite systems of the FSS, MSS and BSS services that are subject to coordination under **S9.7**, **S9.11**, **S9.12, [S9.xx]** or [under Resolutions **118 or 120]** shall be subject to these fee arrangements;

2) the coordination fee shall continue to be paid on an annual basis until the network frequency assignments have been notified to the ITU-BR under **S11.48** as having been brought into use, or until the notifying administration informs the Bureau that the network frequency assignments can be cancelled, or the period under **S11.44** and any extension has expired;

3) the annual registration fee shall continue to be paid as long as the network frequency assignments are recorded in the MIFR;

4) all modifications to the Plans of [Appendices **30** and **30A]** that involve the addition of new frequencies and/or orbit positions shall also be subject to this annual coordination fee as long as the new frequencies/orbit positions are still in coordination or entered in the Plan;

5) the annual coordination fee and the annual registration fee for GSO networks will be calculated on the basis of 50 Swiss francs per MHz of the frequency range (Appendix **S4** - item C1) per orbit position, including the total of the up and downlinks and any inter-satellite links. For NGSO networks, the annual coordination and registration fees will be calculated on the basis of 500 Swiss francs per MHz of the frequency range (Appendix S4- item C1) per network, including the total of the up and downlinks and any inter-satellite links;

6) if either the coordination or registration fee is currently being paid for a satellite at the identical location with the same frequency range by the same operator of the same administration, then no additional fee is required;

7) as of the date of the publication of the details of the planned network under [**S9.38** or 4.3.6 of Appendix **30**, or 4.2.7 of Appendix **30A**], the Bureau shall calculate the amount of the annual coordination fee for the balance of the calendar year and inform the notifying administration that it has four months to submit the fee. If the fee is not received within four months, the Bureau shall cancel the relevant publication and the Bureau and other administrations shall no longer take the concerned network into consideration for coordination;

8) for the subsequent years, ITU shall inform those administrations two months before the end of the year for those networks that continue to be subject to either the coordination or registration fee, that the annual fee is required before the end of February. If the annual fee is not received by that date the Bureau shall cancel the relevant publication of 7) above or the network frequencies from the MIFR, as applicable, and the concerned network shall no longer be taken into consideration for coordination;

9) as a transitional measure for those networks submitted to the ITU prior to 1 January 1999, the following measures shall be applied to those networks that are subject to the fees and that are still in coordination and have not yet been notified to ITU as having been brought into use, as well as those networks having their frequencies already recorded in the MIFR:

- as of 1 January 1999 the Bureau shall inform those administrations having such networks subject to these fees of the amount of the annual fees and request that they be submitted to ITU prior to the end of June 1999;
- any networks for which the annual fee has not been received by ITU by the end of June 1999 shall have the relevant publication cancelled or the MIFR entries deleted as appropriate by the Bureau and shall no longer be taken into consideration for coordination by the Bureau and other administrations.

InUNIÓN INTERNACIONAL DE TELECOMUNICACIONES

CMR-97 CONFERENCIA MUNDIAL DE RADIOCOMUNICACIONES

Documento 250-S
13 de noviembre de 1997

GINEBRA, 27 DE OCTUBRE – 21 DE NOVIEMBRE DE 1997

LISTA DE DOCUMENTOS

(Documentos 201 - 250)

Doc.	Origen	Título	Destino
201	SGT 5B2	Informe del Presidente del Subgrupo de Trabajo 5B-2 al Presidente del Grupo de Trabajo 5B	GT 5B
202	GT 4B	Quinto informe del Grupo de Trabajo 4B a la Comisión 4	C4
203 + Corr.1,2	CLM	Propuestas para los trabajos de la Conferencia	PL
204	C5	Resumen de los debates de la tercera sesión de la Comisión 5	C5
205	GT 5A	Cuarto informe del Grupo de Trabajo 5A a la Comisión 5	C5
206	GT 5C	Estaciones en plataformas a gran altitud	C5
207	GT 5C	Nota del Presidente del Grupo de Trabajo 5C	C5
208 + Corr.1	C5	Fecha de entrada en vigor de las atribuciones al SMS en la banda de 2 GHz en la Región 2	C5
209	PL	Acta de la tercera Sesión Plenaria	PL
210	SGT 5B1	Informe del Presidente del Subgrupo de Trabajo 5B-1	GT 5B
211	GT 5B	Cuarto informe del Grupo de Trabajo 5B a la Comisión 5	C5
212	GT 5B	Nota del Presidente del Grupo de Trabajo 5B al Presidente del Grupo de Trabajo 5C	GT 5C
213	GT PL2	Nota al Grupo de Trabajo 4A	GT 4A
214	GT 5A	Quinto informe del Grupo de Trabajo 5A a la Comisión 5	C5
215	C5	Tercera serie de textos presentados por la Comisión 5 a la Comisión de Redacción	C6

Doc.	Origen	Título	Destino
216	C5	Modificación al Artículo S18	C4
217	C4	Orden del día de la CMR-99	GT PL1
218	C4	Resumen de los debates de la quinta sesión de la Comisión 4	C4
219	GT 5A	Consideración de la banda de frecuencias 18,6-18,8 GHz	C5
220 + Add.1	GT 4B	Informe del Presidente del Grupo de Trabajo 4B sobre órdenes del día recomendados para futuras CMR y examen de Resoluciones y Recomendaciones de conformidad con la Resolución 94	C4
221	MNG	Propuestas para los trabajos de la Conferencia	C4
222	GT 4B	Sexto informe del Grupo de Trabajo 4B a la Comisión 4	C4
223	F	Propuestas para los trabajos de la Conferencia	C4
224	C5	Resumen de los debates de la cuarta sesión de la Comisión 5	C5
225	GT 5C	Informe del Grupo de Trabajo 5C a la Comisión 5	C5
226	PL	Acta de la cuarta Sesión Plenaria	PL
227	GT 5C	Informe final del Grupo de Trabajo 5C a la Comisión 5	C5
228	C5	Inclusión de un nuevo elemento en el apéndice S4	C4
229	C6	**B.2** - Segunda serie de textos sometidos por la Comisión de Redacción al Pleno de la Conferencia	PL
230	C6	**R.1** - Primera serie de textos sometidos por la Comisión de Redacción al Pleno de la Conferencia	PL
231	C5	Resumen de los debates de la quinta sesión de la Comisión 5	C5
232	C4	Resumen de los debates de la sexta sesión de la Comisión 4	C4
233	KEN,LBN, NMB, NGR	Propuestas para los trabajos de la Conferencia	C4, C5
234	MAU	Propuestas para los trabajos de la Conferencia	C5
235	GT PL1	Nota del Presidente del Grupo de Trabajo 1 de la Plenaria al Presidente del Grupo de Trabajo mixto COM3/PL1	COM3/ PL1
236	C5	Nota de información del Presidente de la Comisión 5	C5
237	NPL	Propuestas para los trabajos de la Conferencia	C5

Doc.	Origen	Título	Destino
238	C5	Nota del Presidente de la Comisión 5	C5
239	C5	Cuarta serie de textos sometidos por la Comisión 5 a la Comisión de Redacción	C6
240	C5	Recomendación [COM5-A] - Utilización de las bandas de frecuencias 2 025 - 2 110 MHz y 2 200 - 2 290 MHz por los servicios de investigación espacial, de operaciones espaciales, de exploración de la Tierra por satélite, fijo y móvil	C5
241 + Corr.1	C5	Quinta serie de textos presentados por la Comisión 5 a la Comisión de Redacción	C6
242	SG	Nota informativa para ayudar al examen del "Proyecto de Plan revisado de los apéndices 30/30A en las Regiones 1 y 3"	GT 4D
243	C5	Sexta serie de textos sometidos por la Comisión 5 a la Comisión de Redacción	C6
244	C5	Séptima serie de textos sometidos por la Comisión 5 a la Comisión de Redacción	C6
245	C4	Segunda serie de textos sometidos por la Comisión 4 a la Comisión de Redacción	C6
246	C5	Octava serie de textos sometidos por la Comisión 5 a la Comisión de Redacción	C6
247	C5	Proyecto de Resolución [COM5-11] - Utilización de la banda de frecuencias 31,8 - 33,4 GHz para sistemas de alta densidad en el servicio fijo	C5
248	GT 4A	Tercer informe del Grupo de Trabajo 4A a la Comisión 4	C4
249	AUS,LUX, HOL, NOR,S	Propuestas para los trabajos de la Conferencia	PL
250	SG	Lista de documentos (201-250)	-

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 251-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5
AD HOC 3

NOTE BY THE CHAIRMAN OF COMMITTEE 5 AD HOC 3

PROPOSAL TO MODIFY FOOTNOTE S5.546 OF THE RADIO REGULATIONS

GHz
29.9 – 31.8

Allocation to Services		
Region 1	Region 2	Region 3
31.5 – 31.8	**31.5 – 31.8**	**31.5 – 31.8**
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)
RADIO ASTRONOMY	RADIO ASTRONOMY	RADIO ASTRONOMY
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)
Fixed		Fixed
Mobile except aeronautical mobile		Mobile except aeronautical mobile
S5.149 S5.546	S5.340	S5.149

MOD S5.546 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Finland, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Romania, the United Kingdom, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31.5 - 31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 252-E
11 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

NOTE BY THE CHAIRMAN OF WORKING GROUP 1 OF THE PLENARY TO THE CHAIRMAN OF COMMITTEE 4

In order to discuss the possible date of a conference for the items detailed in Document 217, two Conference agenda items have been drafted in Document DT/70(Add.2).

The intention was that the first World Radiocommunication Conference would address item 3.36 and the next World Radiocommunication Conference, item 3.37.

Working Group 1 of the Plenary hereby seeks confirmation from Committee 4 on the wording and sequence of these items.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 253-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Gambia (Republic of the)

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 1.9.1 - RESOLUTION 118: USE OF THE BANDS 18.8 - 19.3 GHz AND 28.6 - 29.1 GHz BY NGSO FSS SYSTEMS

Background

In adopting Resolution 118, WRC-95 identified the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz for use by NGSO FSS. At WRC-95, the upper 400 MHz of each of these bands was made available for immediate NGSO FSS use by waiving Radio Regulation S22.2 and providing for the application of Resolution 46 coordination procedures. The remaining 100 MHz bands were reserved until WRC-97, pending the completion of technical studies, with action identified for this Conference that would designate their use for NGSO FSS. The technical studies involving NGSO FSS systems requested in Resolution 118 have been performed by the ITU-R and the conclusions are recorded in the CPM-97 Report. Noting these results, the Administration of the Gambia makes the following proposal.

GMB/253/1

The Administration of the Gambia shares the views of other administrations that the same regulations should apply to the entire 500 + 500 MHz bands identified in Resolution 118 (WRC-95). In the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz, S22.2 should be removed and Resolution 46 should apply. GSO FSS networks under coordination as of 18 November 1995 shall continue their coordination under Resolution 46 with NGSO FSS networks that have been notified prior to 18 November 1995.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 254-E
13 November 1997
Original: Spanish

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

El Salvador (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

SLV/254/1

Include El Salvador in:

a) RR 562 (page RR8-58 of the Radio Regulations) or MOD S5.172 (page 100 of the Final Acts of WRC-95), under "Different category of service" for allocation of the band 54 - 68 MHz (broadcasting).

b) RR 674 (page RR8-88 of the Radio Regulations) or MOD S5.292 (page 129 of the Final Acts of WRC-95), under "Different category of service" for allocation of the band 470 - 512 MHz (broadcasting).

c) RR 829 (page RR8-145 of the Radio Regulations), under "Additional allocation" for allocation of the band 10 - 10.45 GHz (radiolocation).

d) RR 830 (page RR8-145 of the Radio Regulations), under "Additional allocation" for allocation of the band 10.45 - 10.50 GHz (radiolocation).

SLV/254/2

El Salvador supports the proposal by ITU to cancel the restriction on use of the characters Q, 1 and 0.

SLV/254/3

El Salvador supports the proposal by ITU, as reflected in *resolves* 2 of Resolution 712 (Rev.WRC-95), to provide 3.5 MHz to the earth exploration-satellite service in the range 420 - 470 MHz.

a) On condition that El Salvador is included in one or another of footnotes RR 651, 653 or 672 on page RR8-82 of the Radio Regulations, depending on the sub-band in which the 3.5 MHz are allocated:

Sub-band	Footnote	Subject
420 - 430 MHz:	651	Different category of service
440 - 450 MHz:	652	Additional allocation
450 - 460 MHz:	653	Additional allocation
460 - 470 MHz:	672	Different category of service

b) If the 3.5 MHz in question are used in the band 430 - 440 MHz (radiolocation-amateur), no footnote is required.

SLV/254/4

El Salvador supports the United States with regard to the project (TELEDESIC) involving allocation of an additional 100 MHz in the Ka band in order to secure an allocation of 500 MHz, and with regard to the regulatory aspects with respect to power limitation.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED BY WORKING GROUP 1 OF THE PLENARY TO THE EDITORIAL COMMITTEE

Working Group 1 of the Plenary has concluded its consideration of Document DT/48(Rev.1) and unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

H. RAILTON
Chairman of Working Group 1 of the Plenary

Annex: 1

DRAFT NEW RESOLUTION [GTPLEN1-~~YY~~1]

GENERAL REVIEW OF THE RESOLUTIONS AND RECOMMENDATIONS OF WORLD ADMINISTRATIVE RADIO CONFERENCES AND WORLD RADIOCOMMUNICATION CONFERENCES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that it is important to keep the resolutions and recommendations of the past world administrative radio conferences and world radiocommunication conferences under constant review in order to make them up to date;

b) that the report of the Director of the Radiocommunication Bureau submitted to this Conference provided a useful basis for a general review of the resolutions and recommendations of the past conferences which was conducted by this Conference,

invites ~~each~~ future competent world radiocommunication conferences

to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation and take appropriate actions,

instructs the Director of the Radiocommunication Bureau

to conduct a general review of the resolutions and recommendations of previous conferences and submit a report which indicates their current status, and what follow-up action may be advised, ~~for any of them~~ to ~~each~~ future competent world radiocommunication conferences and if necessary after consultation with the Radiocommunication Advisory Group and the Chairmen of the relevant Radiocommunication Study Groups.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 4D

CHAIRMAN, SUB-WORKING GROUP 4D1

FINAL REPORT ON THE MEETINGS OF SUB-WORKING GROUP 4D1

CONSENSUS ON AN APPROVAL TO THE REGULATORY/PROCEDURAL MATTERS RELATED TO THE REVISION OF APPENDICES S30 AND S30A

The Sub-Working Group has met three times since 8 November 1997 to discuss approaches to the regulatory/procedural matters as per the terms of reference in Document DT/74.

Proposals contained in documents listed in DT/18(Rev.1) were presented and clarification on the proposals provided.

SWG 4D1 decided to adopt a step-by-step method in discussing various issues raised in the proposals of the administrations, as indicated in DT/95(Rev.1).

As a first step (Step 1) SWG 4D1 reached agreement in principle on editorial updating of outdated references and comment time-frames in Appendices S30 and S30A to make them consistent with other provisions in the Radio Regulations.

In relation to Step 3, the Group discussed, in principle, incorporation of improvements in the provisions of Appendices S30 and S30A, as proposed by administrations. The Group did not consider the substance of these proposals in its work. The consensus was that improvements to the procedures should be carried out as per proposals listed in DT/92(Rev.1). This document has been prepared on the basis of information provided by the concerned administrations.

Under Step 2, the Group discussed in principle amalgamation of the provisions of Appendix S30 with corresponding provisions of Appendix S30A, where appropriate. A consensus on this issue could not be arrived at in the initial attempt. In a spirit of compromise, fresh proposals were made in Document 223, offering a package deal. Following further discussions based on mutual compromise, many administrations indicated that they would not press their proposals on merger of the corresponding provisions of Appendices S30 and S30A (Step 2) at this Conference. In view of this, it was agreed that action on this issue was no longer needed and it was dropped from the list of issues.

The proposal related to revision to Recommendation 35 (WRC-95), contained in Document 223 was considered. The proposal is to revise Recommendation 35 for consideration of WRC-99 for appropriate action. The proposed revision includes updating the Annex to Recommendation 35 to reflect a single Article S10 based on the merger of respective provisions pertaining to the BSS plans

currently available in Appendices S30 and S30A. After extensive discussion, which indicated divergence of views, it was decided to set up an informal group to deal with this matter. A number of administrations indicated interest to participate. Mr. M.H. Ghazal, Lebanon, has kindly agreed to chair this group which is expected to complete its work as soon as possible.

In relation to relocation of provisions for unplanned services in the BSS frequency bands (Step 4), there were acute differences of opinion. Considerable time was devoted to discussions to find a common ground but a solution could not be found.

On a proposal from some administrations, it was decided that the informal group referred to above will also look into this issue. As there are no further meetings of SWG 4D1, Mr. Ghazal will report directly to Working Group 4D.

In summary, SWG 4D1 has come to the following agreements:

a) editorial updating of the provisions of Appendices S30 and S30A limited to updating outdated references and comment time-frames to be consistent with other provisions in the Radio Regulations;

b) improvement of procedures considering the proposals made by the administrations, indicated in DT/92(Rev.1);

c) merger of similar provisions related to the BSS plans should not be addressed at WRC-97;

d) setting up of an informal group to examine, in principle, the possible revision of Recommendation 35 (WRC-95), asking WRC-99 to consider the following:

   i) a single Article S10 for the BSS plans;

   ii) incorporation in Articles S7 to S14 of the procedure related to unplanned services in the BSS frequency bands.

In conclusion, I should like to compliment administrations for the spirit of compromise shown by them which resulted in the progress we have made in this complex task.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

NOTE BY THE CHAIRMAN OF COMMITTEE 5 AD HOC 3

PROPOSALS TO WRC-97 CONCERNING THE IDENTIFICATION OF SUITABLE FREQUENCY BANDS ABOVE 30 GHz FOR USE BY THE FIXED SERVICE FOR HIGH-DENSITY APPLICATIONS

ADD S5.547 The bands 31.8 - 33.4 GHz, [37 - 40 GHz], [40.5 - 42.5 GHz], 51.4 - 52.6 GHz, 55.78 - 59 GHz and 64 - 66 GHz are available for high-density applications in the fixed service (see Resolution [**COM5-12**]).

ADD S5.547A Use of the band 31.8 - 33.4 GHz by the fixed service shall be in accordance with Resolution [**COM5-11**].

ARTICLE S5

GHz
31.8 – 37

Allocation to Services		
Region 1	Region 2	Region 3
31.8 – 32	RADIONAVIGATION FIXED ADD S5.547A SPACE RESEARCH (deep space) (space-to-Earth) S5.548 ADD S5.547 ADD S5.547B	
32 – 32.3	INTER-SATELLITE FIXED ADD S5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) S5.548 ADD S5.547 ADD S5.547C	
32.3 – 33	INTER-SATELLITE FIXED ADD S5.547A RADIONAVIGATION S5.548 ADD S5.547 ADD S5.547D	
33 – 33.4	RADIONAVIGATION FIXED ADD S5.547A ADD S5.547 ADD S5.547E	

ADD S5.547B *Alternative allocation*: in the United States, the band 31.8 - 32 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis.

ADD S5.547C *Alternative allocation*: in the United States, the band 32 - 32.3 GHz is allocated to the inter-satellite, radionavigation and space research (deep space) (space-to-Earth) services on a primary basis.

ADD S5.547D *Alternative allocation*: in the United States, the band 32.3 - 33 GHz is allocated to the inter-satellite and radionavigation services on a primary basis.

ADD S5.547E *Alternative allocation*: in the United States, the band 33 - 33.4 GHz is allocated to the radionavigation service on a primary basis.

ARTICLE S5

MOD

GHz
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
51.4 – ~~54.25~~52.6	~~EARTH EXPLORATION-SATELLITE (passive)~~ FIXED MOBILE ~~SPACE RESEARCH (passive)~~ ~~S5.340~~ S5.556 ADD S5.547	
…		
~~54.25 – 58.2~~55.78 – 56.9	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556A MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557 ADD S5.547	
~~54.25 – 58.2~~56.9 – 57	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556B MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557 ADD S5.547	

ARTICLE S5

GHz

MOD **54.25 – 71**

Allocation to Services		
Region 1	Region 2	Region 3
~~54.25~~57 – 58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE ADD S5.556A MOBILE MOD S5.558 SPACE RESEARCH (passive) MOD S5.557 ADD S5.547	
58.2 – 59	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) ~~S5.340~~ S5.556 ADD S5.547	
…		
64 – 65	~~EARTH EXPLORATION-SATELLITE (passive)~~ ~~SPACE RESEARCH (passive)~~ FIXED INTER-SATELLITE MOBILE except aeronautical mobile ~~S5.340~~ S5.556 ADD S5.547	
65 – 66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH INTER-SATELLITE ~~Fixed~~FIXED ~~Mobile~~MOBILE except aeronautical mobile ADD S5.547	

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PLENARY MEETING

DT/96, DT/104, DT/102; 213

REPORT TO THE PLENARY MEETING BY WORKING GROUP 2 OF THE PLENARY

Working Group 2 has completed its work and transmits this Report to the Plenary.

Its work was divided into three categories, described as follows, based on Document 8, Report on Resolution 18 (Kyoto, 1994).

I Reducing the regulatory time limits for bringing a satellite network into use and streamlining and simplifying the advance publication information

The Working Group took certain decisions on these matters and transmitted them to Working Group 4A for the development of appropriate regulatory text (see Annex 1 to this document).

The following Administrations reserved their position concerning paragraph 4 ii) of the Report in Annex 1 to this document, in respect of whether satellite networks which have submitted complete API on or before 21 November 1997 should have the six year period and three year (automatic) extension: United Kingdom of Great Britain and Northern Ireland, Sweden, Norway, Germany (Federal Republic of), France, Luxembourg, Czech Republic, Netherlands (Kingdom of the), Portugal.

II Due diligence

a) This issue was intensively discussed in the Working Group; its decision is to recommend to the Plenary an administrative due diligence approach as set forth in the Resolution [GTPLEN2-1] in Annex 2 to this document. The detailed regulatory provisions were developed in a Drafting Group chaired by Mr. Anders Frederich (Sweden).

b) Working Group 2 was unable to reach any conclusion as to whether the due diligence procedure set forth in the Resolution [GTPLEN2-1] in Annex 2 to this document should be applicable to Appendices 30, 30A and 30B and, if so, how to precisely define the scope of such applicability. For this reason, all references to Appendices 30, 30A and 30B remain in square brackets.

c) Algeria reserved its position with respect to Annex 1 to Resolution [GTPLEN2-1] in Annex 2 to this document.

d) The United States of America reserved its position on Resolution [GTPLEN2-1] to the Plenary in Annex 2 to this document.

e) Iran and Tonga reserved their position on the asserted retroactive effect of the decision on due diligence in Resolution [GTPLEN2-1].

f) The following Administrations were in favour of developing further the financial due diligence procedures, and reserved their position concerning the decision by the Working Group: Australia, Canada, Germany (Federal Republic of), France, Netherlands (Kingdom of the), Luxembourg, Norway, Sweden, Czech Republic, Sweden, Russian Federation, Switzerland.

III Other matters

Working Group 2 reviewed the other Recommendations set forth in Document 8 (Recommendations E-Q) and its decisions are as follows:

a) Working Group 2 **noted** Recommendations E, G, H, I, J, K, L, M, N, P and Q. Iran reserved its position concerning Working Group 2's action on Recommendation H. Working Group 2 did not support Recommendation O, concerning dispute resolution.

b) Working Group 2 decided in respect of Recommendation F, to approve a Recommendation, "Role of international monitoring in reducing apparent congestion in the use of orbital and associated spectrum resources" (see Annex 4).

For the text of these Recommendations see Annex 3.

ANNEX 1

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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WORKING GROUP 4A

NOTE TO WORKING GROUP 4A

The Chairman of Working Group 2 of the Plenary herewith transmits to Working Group 4A, for development of the necessary regulatory text, the attached Report of Working Group 2 containing its decisions with regard to Recommendations C and D of Document 8 (Reducing the time-limits for bringing a satellite network into use, and simplifying and streamlining the advance publication information).

David LEIVE
Chairman of Working Group 2 of the Plenary

Report of Working Group 2 of the Plenary to Committee 4

1 Regulatory time limits (Recommendation C, Document 8)

1) WG PL2 has adopted the following decisions [texts] and transmits them to Committee 4:

The initial period (see RR 1042) between the advance publication and the date of bringing into use should be reduced by one year, from six to five, and the present extension period (see RR 1550) should similarly be reduced by one year, from three to two, resulting in a total period of not more than seven years.

2) Two views were expressed on the recommendation made in the second sentence of Recommendation C of Document 8 that "the extension should be limited to specific reasons and decided upon within a well defined procedure."

i) Any extension should be automatic (as at present), and no reasons should be required.

ii) An extension should be granted only if one of a limited number of specific reasons for the grant of an extension is provided to the Bureau with the request, and such an extension should be coupled with a requirement that the requesting administration demonstrate satisfaction of compliance with the due diligence procedure.

3) The sense of the discussion on these views was that the extension is only allowed for the networks which are under coordination, if applicable, and which comply with the due diligence procedure and, if requested and [certified] [justified] [confirmed] by the notifying administration, with respect to one or more of the following specific circumstances:

- launch failure;
- launch delays for circumstances outside the control of the administration or the operator;
- delays caused by modifications of satellite design necessary to reach coordination agreements;
- problems in meeting the design specifications;
- difficulties in obtaining coordination agreements;
- financial circumstances outside the control of the administration or the operator
- *force majeure*.

NOTE 1 - WG PL2 did not reach agreement on the proper term to be used in paragraph 3, and has therefore included in bracketed text the three terms considered ([certified] [justified] [confirmed]) for further consideration by Committee 4.

4) As for the date of implementation of the above Recommendation, it was decided that:

i) for API submissions first received after 21 November 1997 the new rules apply;

ii) for complete API submissions received on or before 21 November 1997, the pre-existing rules would apply (the six-year period and automatic three-year extension).

2 Simplification of Advance Publication Information (API) (Recommendation D, Document 8)

1) WG PL2 agreed as follows:

The advance publication (API) stage should be retained but simplified and streamlined for those satellite networks which are subject to coordination. The API regulatory status ("starting the clock") should be preserved. The six-month gap between the advance publication phase and the formal coordination phase should be preserved. In addition, the API should be automatically deleted if not followed by coordination information submission within 24 months of the date of receipt of the API information.

The information to be submitted and published under the API procedure for satellite networks which require coordination should be simplified and restricted to the following:

– The notifying administration (A.1.f and A.3)
– Satellite name (A.1.a)
– Orbital characteristics
  GEO (A.4.a)
  Non-GEO (A.4.b)
– Frequency range (C.1)
– Service area (C.2.a)
– Type of service
  Class of station/nature of service (C.4)
– Date of bringing into use (A.2.a)

The simplification would not apply to those satellite networks which are not subject to coordination.

ANNEX 2

DRAFT RESOLUTION [GTPLEN2-1]

ADMINISTRATIVE DUE DILIGENCE

APPLICABLE TO SOME SATELLITE COMMUNICATION SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Resolution **18** of the ITU Plenipotentiary Conference held in Kyoto in 1994 instructed the Director of the Radiocommunication Bureau to initiate a review of some important issues concerning international satellite network coordination and make a preliminary report to WRC-95 and a final report to WRC-97;

b) that the Director of the Radiocommunication Bureau provided a comprehensive Report to WRC-97 including a number of recommendations for action as soon as possible and identifying areas requiring further study;

c) that one of the recommendations in the Director's Report was that administrative due diligence should be adopted as a means of addressing the problem of reservation of the orbit and spectrum capacity without actual use;

d) that experience may need to be gained in the application of the administrative due diligence procedures adopted by this Conference, and that several years may be needed to see whether administrative due diligence measures produce satisfactory results;

e) that new regulatory approaches may need to be carefully considered in order to avoid adverse effects on networks already going through the different phases of the procedures;

f) that Article **44** of the Constitution (Geneva, 1992) sets out the basic principles for the use of the radio-frequency spectrum, the geostationary-satellite orbit and the needs of developing countries,

considering further

that the Conference decided to reduce the regulatory time-frame for bringing a satellite network into use,

resolves

1 that the administrative due diligence procedure contained in Annex 1 to this Resolution shall be applied as from [22 November 1997] for a satellite network or satellite system for which advance publication information [**S9.2B**] [or the request for modifications [provisions…of **AP30**, **30A** and **30B**] of the plans of Appendices **30**, **30A** and **30B** that involve the addition of new frequencies and/or orbit positions] has been received by the Bureau from [22 November 1997];

2 that for a satellite network within the scope of paragraph 1 or 2 of Annex 1 to this Resolution, not yet recorded in the MIFR, for which the advance publication information under [**S9.2B**] [or the request for a modification to the plan as covered by *resolves* 1 above] has been received by the Bureau before [22 November 1997] the responsible administration shall submit to the Bureau the complete due diligence information in accordance with Annex 2 to this Resolution not later than [21 November 2003], or before the expiry of the original notified period for bringing the satellite network into use, plus any extension period which shall not exceed three years (**S11.44**), whichever date comes earlier;

3 that for satellite networks recorded in the MIFR, the responsible administration shall submit to the Bureau the complete due diligence information in accordance with Annex 2 to this Resolution not later than [21 November 2000];

4 that six months before the expiry date specified in *resolves* 2 or 3 above, if the responsible administration has not submitted the due diligence information, the Bureau shall send a reminder to the responsible administration;

5 that if the due diligence information is found to be incomplete, the Bureau shall immediately request the administration to submit the required information. In any case, the complete due diligence information shall be received by the Bureau before the expiry date specified in *resolves* 2 or 3 above, as appropriate. The complete due diligence information shall be published by the Bureau in the Weekly Circular;

6 that if the complete due diligence information is not received by the Bureau before the expiry date specified in *resolves* 2 or 3 above, the request for coordination [or request for plan modification] submitted to the Bureau shall be cancelled. Any recording in the MIFR shall be deleted by the Bureau after informing the concerned administration. The Bureau shall publish this information in the Weekly Circular,

further resolves

that in no case should the procedures in *resolves* 1 - 6 above and in Annex 1 to this Resolution bypass the coordination procedures in Article **S9** and Appendices **30**, **30A** and **30B**,

instructs the Director of the Radiocommunication Bureau

to report to a future competent WRC on the results of the implementation of the administrative due diligence procedure,

instructs the Secretary-General

to bring this Resolution to the attention of the Plenipotentiary Conference 1998.

ANNEX 1 TO RESOLUTION [GTPLEN2-1] ON ADMINISTRATIVE DUE DILIGENCE

[1 Any satellite network or satellite system of the fixed-satellite service, mobile-satellite service or broadcasting-satellite service with frequency assignments that are subject to coordination under [**S9.7, S9.11, S9.11A, S9.12**, Resolution 118 and Resolution 120] shall be subject to these procedures.]

[2 Any modifications to the Plans of [Appendices **30, 30A** and **AP 30B**] that involve the addition of new frequencies and/or orbit positions shall also be subject to these procedures.]

3 An administration requesting coordination for a satellite network under 1 above shall send to the Bureau as early as possible before bringing into use, but in any case not to be received later than the end of the 5-year period established as a limit to bringing into use [cross-reference to regulatory provision], the due diligence information relating to the identity of the satellite network and the spacecraft manufacturer specified in Annex 2 to this Resolution.

4 An administration requesting a modification under 2 above shall send to the Bureau as early as possible before bringing into use, but in any case not to be received later than the end of the [8]-year period established as a limit to bringing into use [cross-reference to regulatory provision], the due diligence information relating to the identity of the satellite network and the spacecraft manufacturer specified in Annex 2 to this Resolution.

5 The information to be submitted in accordance with paragraph 3 or 4 above shall be signed by an authorized official of the notifying administration (or of an administration that is acting on behalf of a group of named administrations).

6 On receipt of the due diligence information under 3 or 4 above, the Bureau shall promptly examine that information for completeness. If the information is found to be complete, the Bureau shall publish the complete due diligence information in a special section of the Weekly Circular within 30 days.

7 If the information is found to be incomplete, the Bureau shall immediately request the administration to submit the required information. In all cases the complete due diligence information shall be received by the Bureau within the appropriate time period specified in 3 or 4 above, as appropriate, relating to the date of bring the satellite network into use.

8 Six months before expiry of the period specified in 3 or 4 above and if the administration responsible for the satellite network has not submitted the due diligence information under 3 or 4 above, the Bureau shall send a reminder to the responsible administration.

9 If the complete due diligence information is not received by the Bureau within the time limits specified in this Resolution, the networks covered by paragraphs 1 or 2 above shall no longer be taken into account and shall not be recorded in the MIFR. A provisional recording in the MIFR shall be deleted by the Bureau after informing the concerned administration. The Bureau shall publish this information in the Weekly Circular.

10 Before the Bureau extends the date of bringing into use under **S11.44 [RR 1550]**, the administration shall have submitted the complete information under 3 above.

11 An administration notifying a satellite network under 1 or 2 for recording in the MIFR shall send to the Bureau as early as possible before bringing into use, but in any case not later than the date of bringing it into use, the due diligence information relating to the identity of the satellite network and the launch services provider specified in Annex 2 to this Resolution.

12 When an administration has completely fulfilled the due diligence but has not completed coordination, this does not preclude the application of **S11.41** by that administration.

ANNEX 2 TO RESOLUTION [GTPLEN2-1] ON
ADMINISTRATIVE DUE DILIGENCE

A **Identity of the satellite network**

a) Identity of the satellite network

b) Name of the administration

c) Country symbol

d) Reference to the API [or request for modification of the plans in AP30/30A]

e) Reference to the request for coordination [(not applicable for AP30/30A)]

f) Frequency band(s)

g) Name of the operator

h) Name of the satellite

i) Orbital characteristics

B **Spacecraft manufacturer***

a) Name of the spacecraft manufacturer

b) Date of the execution of the contract

c) Contractual "delivery window"

d) Number of satellites procured

C **Launch services provider**

a) Name of the launch vehicle provider

b) Date of the execution of the contract

c) Anticipated launch or in-orbit delivery window

d) Name of the launch vehicle

e) Name and location of the launch facility

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* NOTE - In cases where a contract for satellite procurement covers more than 1 satellite, the relevant information shall be submitted for each satellite.

ANNEX 3

RECOMMENDATIONS E, F, G, H, I, J, K, L, M, N, O, P, Q

as contained in Document 8

Recommendation E: (Operational lifetime)

The issue of the operational lifetime of a recorded assignment for a satellite network needs to be reviewed in the light of the experience gained from the application of Resolution 2 and Resolution 4 (Rev.Orb-88), by a forthcoming competent WRC.

Recommendation F: (Role of space monitoring)

The ITU, without performing the monitoring itself, should use the international monitoring system for space applications, to identify those records in the database that do not represent the real situation and to improve the data reliability. Administrations should be urged to indicate those stations that can participate in the monitoring system. Discrepancies between the Bureau databases and monitored data should be clarified by the Bureau with the assistance of the administration(s) involved. Continuing discrepancies should be reported to competent ITU bodies (RRB, WRC, etc.).

Recommendation G: (Equitable access)

Equitable access should be guaranteed for all, with burden sharing, whenever a real need arises. The use of *"a priori"* planning should be critically examined in each case, balancing carefully the pros and cons.

Recommendation H: (Direct-to-home (DTH) use of FSS bands)

While from a technical viewpoint, the BSS and FSS are often difficult to be distinguished, administrations generally have different regulatory provisions for these services, therefore the present distinction between the two services should be maintained. In no case should Direct-to-Home (DTH) in the FSS bands be used with the objective of bypassing the regulatory provisions of RR 2674 and Resolution 507.

Recommendation I: (Efficient use of orbit/spectrum resources)

The following measures should be adopted to improve the efficient use of the orbit/spectrum resources:

- use of the latest technologies for space and earth stations;
- revision of the sharing criteria between satellite systems taking into account the evolution of the technology to allow the use of the same frequency bands and orbital arcs by a greater number of satellite networks;
- regulatory mechanisms to take account, in the Radio Regulations, of the relevant ITU-R recommendations (e.g. by incorporation by reference);
- mechanisms to encourage operators to upgrade/improve the technical standards of their terminals and to operate satellites designed with up-to-date technology.

Recommendation J:

In addition to the deltaT/T threshold value, new criteria, based on the concept of coordination arc (the value of which should be frequency band/service dependent) should be developed and introduced to determine those administrations with which coordination is to be effected. Such an approach could be based on studies concluded within the ITU-R Sector.

Recommendation K:

To introduce an ongoing coordination procedure during the complete lifetime of the satellite network to meet frequently-changing requirements in the orbit and to provide a real basis for burden-sharing, taking into account real transponder loading and not possible future worse case combination of carrier types.

Recommendation L:

The content and format of the ITU database should be reviewed to assure that the necessary information is included.

Recommendation M:

No major changes are required in the ITU Constitution, Convention or Radio Regulations with respect to revising the roles in the coordination process of administrations, system operators, the Radiocommunication Bureau and the RRB.

Recommendation N:

Administrations should further increase the role of the system operator in intersystem coordination, as appropriate, while the notifying administration remains responsible for such coordination.

Recommendation O: (Dispute resolution)

To empower the ITU to settle disputes arising from unsuccessful satellite coordination exercises and to introduce in the Constitution, Convention and the Radio Regulations appropriate provisions to be observed.

Recommendation P: (Consequential changes to the Radio Regulations)

Necessary action on the recommendations contained in this report should be taken by WRC-97 with the aim of improving the regulatory procedures as rapidly as possible, taking into account any required transitional arrangements (see paragraph 20 below). It is essential that the recommended changes be effective as soon as possible, that is, as from the date of their adoption by WRC-97.

Recommendation Q: (Transitional issues/date of entry into force)

In order to ensure efficient implementation of Resolution 18 and in view of the large number of possible "paper satellites" already in the coordination or notification process, these networks should also be subject to "due diligence" procedures. The same principle should apply to those networks being processed that may be affected by the reduced regulatory time limits (5 + 2 years, see Recommendation C). In the light of the above, the selection of the appropriate date for entry into force of the proposed new approaches would need to be carefully considered in order to avoid adverse effects on networks already in the different phases of the procedures.

ANNEX 4

RECOMMENDATION [GTPLEN2-A]

ROLE OF INTERNATIONAL MONITORING IN REDUCING APPARENT CONGESTION IN THE USE OF ORBITAL AND ASSOCIATED SPECTRUM RESOURCES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the geostationary-satellite orbit and the radio-frequency spectrum are limited natural resources and being increasingly utilized by space services;

b) the desirability of achieving a more effective use of geostationary-satellite orbit and radio-frequency spectrum in order to assist administrations to satisfy their requirements and, to that end, the desirability of taking steps to make the International Frequency List reflect more accurately the actual use being made of these resources;

c) that monitoring information should assist the ITU-R in discharging this function;

d) that facilities for monitoring of emissions originating from space stations are expensive,

recognizing

that an international monitoring system cannot be fully effective unless it covers all areas of the world,

invites ITU-R

to study and make recommendations concerning the facilities required to provide adequate coverage of the world with a view to ensuring efficient use of resources, and

invites administrations

1 to make every effort to provide monitoring facilities as envisaged in Article **S16** of the Radio Regulations;

2 to inform ITU-R of the extent to which they are prepared to cooperate in such monitoring programmes as may be requested by ITU-R;

3 to consider the various aspects of monitoring the emissions originating from space stations to enable the provisions of Article(s) [**S21**, **S22**] to be applied.

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COMMITTEE 4

FIRST REPORT OF WORKING GROUP 4C TO COMMITTEE 4

PROPOSED ARTICLE S12

Seasonal planning of the HF bands allocated [exclusively] to the broadcasting service between 5 900 kHz and 26 100 kHz[1]

Section I. Introduction

NOC S12.1 The use of the frequency bands allocated exclusively to the HFBC between 5 900 and 26 100 kHz shall be based on the principles given below and shall be in conformity with seasonal planning based on a coordination procedure between administrations (referred in this Article as the Procedure) described in **S12.2** to **S12.45**. An administration may authorize, among others, a broadcasting organization (referred to in this Article as a broadcaster) to act on its behalf in this coordination.

Section II. Principles

NOC S12.2 (1) The Procedure shall be based on the principle of equal rights of all countries, large or small, to equitable access to these bands. Attempts shall also be made to achieve efficient use of these frequency bands, account being taken of the technical and economic constraints that may exist in certain cases. On the basis of the foregoing, the following principles shall be applied.

NOC S12.3 (2) All broadcasting requirements, formulated by administrations, shall be taken into account and treated on an equitable basis, so as to guarantee the equality of rights referred to in No. **S12.2**, and to enable each administration to provide a satisfactory service.

[1 Resolution 529 should be modified to take account of the application of this Procedure in the frequency band allocations to the HFBC service.]

NOC **S12.4** (3) The Procedure shall be based solely on the broadcasting requirements expected to become operational during the schedule period. It shall furthermore be flexible in order to take into account new broadcasting requirements and modifications to the existing broadcasting requirements.

NOC **S12.5** (4) All broadcasting requirements, national[2] and international, shall be treated on an equal basis, with due consideration of the differences between these two kinds of broadcasting requirements.

NOC **S12.6** (5) In the Procedure, an attempt shall be made to ensure, as far as practicable, continuity of use of a frequency or of a frequency band.

NOC **S12.7** (6) The Procedure shall be based on double-side band or single-side band emissions. Other modulation techniques recommended by ITU-R shall be permitted in place of double-sideband or single-sideband emissions, provided that the level of interference caused to existing emissions is not increased.

MOD **S12.8** (7) ~~For~~To promote efficient spectrum use, the number of frequencies used shall be the minimum necessary to provide a satisfactory quality of reception. Whenever practicable, only one frequency should be used.

MOD **S12.9** (8) The procedure shall include a technical analysis, as specified in the RRB Rules of Procedure.[3]

MOD **S12.10** (9) The Procedure should encourage administrations or broadcasters empowered to make changes, to pursue a continual coordination process to resolve incompatibilities at meetings (regional[4] or worldwide, bilateral, multilateral) or by correspondence.

MOD **S12.11** (10) Regional coordination groups[4], which will facilitate bilateral and multilateral coordination among the administrations and broadcasters in various regions of the world, shall ~~be identified~~identify themselves to the Bureau. Administrations and broadcasters shall be urged to participate in the relevant regional coordination groups. However, such participation would be on a voluntary basis.

MOD[2] An HF broadcasting requirement is considered as being for the purposes of national coverage when the transmitting station and its associated required service area are both located within the territory of the same country.

[3] [~~See action required in Section 2.6.2.~~Rules of Procedure will need to be established.]

[4] The word regional in this Article is not related to the ITU Regions.

~~[4] Not related to ITU Regions.~~

MOD **S12.12** ~~(11) Action by the Bureau to coordinate requirements on behalf of administrations whose requirements do not exceed (a value to be defined by a WRC) is part of the seasonal planning and should be undertaken on request from those administrations.~~

(11) When an administration, in particular the administration of a developing country, requests assistance in the application of the Procedure, the Bureau shall take appropriate action, including, if need be, coordination of the requirements submitted by the requesting administration.

MOD **S12.13** (~~9~~12) The regional coordination groups should follow the coordination procedures prescribed in Section III. In the ~~first stage of the equitable application of a new planning procedure~~process of coordinating broadcasting requirements, an attempt ~~will~~shall be made to ~~include~~obtain agreement to the maximum number of submitted requirements ~~achieving the desired~~with the quality level acceptable to administrations or broadcasters. ~~The remaining requirements will be processed on the understanding that lower quality levels would be acceptable.~~

[MOD **S12.14** (13) The other primary services in the additional bands allocated by WARC-92 to the broadcasting service shall be protected until 1 April 2007, and assignments to these other primary services ~~should~~shall be taken into account in the Procedure of this Article.]

NOC **S12.15** (14) In order to ensure maximum success from the Procedure, administrations and broadcasters shall show the utmost goodwill and mutual cooperation, and give due consideration to all the relevant technical and operational factors involved.

Section III. The Procedure

ADD **S12.15A** The process of the Procedure shall be facilitated and coordinated by the Bureau as defined elsewhere in this Article.

NOC **S12.16** Twice yearly administrations shall submit their projected seasonal broadcasting schedules in the relevant frequency bands to the Bureau. These schedules shall cover the following seasonal periods:

NOC **S12.17** Schedule A: Last Sunday in March to last Sunday in October

NOC **S12.18** Schedule B: Last Sunday in October to last Sunday in March

NOC **S12.19** Implementation of these schedules shall start at 0100 UTC

NOC **S12.20** If an administration considers it necessary to take account of propagation changes during the schedule period, it is recommended, for reasons of spectrum efficiency, that such requirements should be implemented on:

NOC **S12.21** First Sunday of May;

NOC **S12.22** First Sunday of September.

NOC **S12.23** Implementation of these changes shall start at 0100 UTC on these dates.

MOD **S12.24** Other start and stop dates within a schedule period may be used to ~~cater for~~accommodate requirements that have different schedule periods e.g. special events, clock changes on different dates not coincident with the schedule period etc.

NOC **S12.25** Administrations may include in their schedules assignments up to one year in advance of their use.

MOD **S12.26** In those cases where an administration does not indicate its ~~use of~~requirements for a new seasonal schedule, the Bureau shall use the assignments ~~for~~from the previous corresponding seasonal schedule for this administration ~~and this~~for the new schedule period. A note in the Schedule shall be used to identify such requirements. The Bureau shall follow this practice for two consecutive schedule periods.

NOC **S12.27** Following the action taken in No. **S12.26**, the Bureau shall notify the administration concerned that the Schedule will not include their broadcast requirements unless the administration advises otherwise.

NOC **S12.28** When an administration decides to cease its broadcasting service in the HF bands, it shall notify the Bureau of such decision.

MOD **S12.29** The frequencies in the schedules should be those that will be used during the season concerned, and ~~they~~ should be the minimum number required to provide satisfactory reception of the programmes in each of the areas and for each of the periods intended. In each schedule, ~~To~~to the maximum possible extent, ~~in each schedule~~ the frequencies to be used in each reception area should ~~be repeated~~remain unchanged from season to season.

NOC **S12.30** Administrations are encouraged to coordinate their schedules with other administrations as far as possible prior to submission. An administration may submit on behalf of a group of administrations their coordinated schedules the frequencies of which shall however have no priority for use over those submitted by other administrations.

NOC **S12.31** The closing dates for receipt by the Bureau of the schedules relating to the two seasons mentioned in No. **S12.17** and **S12.18** shall be established and published by the Bureau.

MOD **S12.32** The schedules shall be submitted with the relevant data ~~contained~~ as specified in Appendix **S4.**

NOC **S12.33** Upon receipt of the schedules the Bureau shall, in accordance with the Rules of Procedure, validate the data where necessary, perform a compatibility analysis, and prepare the Tentative High Frequency Broadcasting Schedule (the Tentative Schedule). This schedule shall include all assignments

where administrations gave no alternatives, the selections made by the Bureau from any alternatives given, and the frequencies selected by the Bureau in cases where the need for its assistance was indicated by their intentional omission from the individual schedules.

NOC **S12.34** The Tentative Schedule shall be published at least two months before the start of each of the two schedule periods in Nos. **S12.17** and **S12.18**.

NOC **S12.35** Administrations should examine the Tentative Schedule and should coordinate their frequency schedules to resolve or to minimize, as far as possible, any incompatibilities identified by the compatibility analysis, or by the monitoring results of similar assignments, or by a combination of both.

NOC **S12.36** Coordination shall be achieved through bilateral or multilateral meetings of administrations or broadcasters or other means acceptable to the parties concerned.

NOC **S12.37** Administrations, either jointly or separately, shall inform the Bureau, as quickly as possible, but no later than two weeks prior to the start of the schedule period, of any changes to their requirements resulting from the coordination process. The Bureau shall prepare a new consolidated High Frequency Broadcasting Schedule (the Schedule), and shall perform a new compatibility analysis. The Bureau shall publish the Schedule and the results of the compatibility analysis at the start of the relevant broadcasting season.

NOC **S12.38** Administrations shall notify the Bureau of changes to their schedules as quickly as possible and the Bureau shall update and make available the Schedule on a monthly basis. The Bureau shall perform new compatibility analyses and publish the updated Schedule and the results of these analyses every two months during the season.

MOD **S12.39** To facilitate the coordination process, the Bureau shall also forward the ~~Tentative S~~schedules to the~~se~~ regional[5] coordination groups.

MOD **S12.40** Regional coordination groups should consider ~~interfacing~~communicating with administrations and broadcasters through the use of any appropriate, mutually agreeable means, for example, e-mail, news-groups, bulletin boards and other forms of electronic data transfer as appropriate.

MOD **S12.41** Each regional coordination group should consider appointing a Steering Committee to ensure smooth progress of the coordination process.

MOD **S12.42** During and after the coordination process, the regional coordination groups shall exchange schedule data among themselves with a view to further enhancing the efficacy of the coordination process.

NOC **S12.43** One month after the end of a season, the Bureau shall publish the Final High Frequency Broadcasting Schedule (the Final Schedule). If any changes have been notified to the Bureau since the previous consolidated

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~~[5] Not related to ITU Regions.~~

schedule, the Bureau shall also perform a compatibility analysis and publish it with the Final Schedule.

MOD **S12.44** The Bureau should, as and when required, convene joint meetings of the representatives of all the regional coordination groups to develop strategies for further reduction of incompatibilities and to discuss related matters. The outcome of these meetings shall be circulated among the regional groups and administrations.

NOC **S12.45** In a case of harmful interference, involving the application of the provisions of Article **S15**, administrations are urged to exercise the utmost goodwill and mutual cooperation taking into account all the relevant technical and operational factors of the case.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 260-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

NOTE BY THE CHAIRMAN OF COMMITTEE 5 AD HOC 3

DRAFT RESOLUTION [COM5-12]

FREQUENCY BANDS ABOVE 30 GHz AVAILABLE FOR USE BY THE FIXED SERVICE IN HIGH-DENSITY APPLICATIONS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that there is a dramatically increasing demand for the fixed service in high-density applications resulting from the deployment of new mobile networks and from the rapid worldwide deregulation in the provision of local broadband services, including multimedia;

b) that the frequency range from 30 to about 50 GHz is preferred to satisfy initial requirements, as indicated in *considering* a), while the bands above about 50 GHz are preferred for similar applications but which take technical advantage of high atmospheric absorption characteristics;

c) that the lower part of the spectrum above 30 GHz has advantages for the fixed service in areas where longer path lengths are necessary;

d) that the 38 GHz band range is already heavily used by many administrations for fixed service in high-density applications;

e) that the needs of other services to which the relevant frequency bands are already allocated must be taken into account;

f) that the band 37 - 37.5 GHz is being planned by the space research service (space-to-Earth) to provide moon-to-Earth communication links;

g) that the deployment of the fixed service in high-density applications in some bands potentially presents sharing difficulties with other primary services allocated to the same band, e.g., the fixed-satellite service;

h) that operations in the space services, such as in the fixed-satellite service, in those bands used by high-density fixed service applications may lead to potential sharing difficulties;

i) that there is a need for global harmonization of new and existing radio frequency bands to facilitate coordination between administrations, encourage development of competitive products through economies of scale, and the worldwide introduction of new telecommunication services, including the provision of reliable global information infrastructure (GII) access at an affordable cost,

resolves

that administrations should take into account that the bands 31.8 - 33.4 GHz, [37 - 40 GHz], [40.5 - 42.5 GHz], 51.4 - 52.6 GHz, 55.78 - 59 GHz and 64 - 66 GHz are available for high-density applications in the fixed service, when considering allocations or other regulatory provisions in relation to these bands,

requests ITU-R

1 to undertake studies leading to the identification of system characteristics of high-density systems in the fixed service in the bands listed in the *resolves*;

2 to undertake, as a matter of urgency, studies of technical and operational criteria and methods to facilitate sharing between high-density systems in the fixed service and other services in the bands listed in the *resolves*,

urges administrations

to participate actively in the aforementioned studies by submitting contributions to ITU-R.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 261-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

FIFTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

The following proposals are submitted for your consideration:

1 Frequency range 137 - 138 MHz (agreed at SWG 5B-1)

MOD S5.208 The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. ~~The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev. WRC-95)**/ Annex 1 of Appendix **S5** shall apply until such time as a competent world radiocommunication conference revises it. Additionally, until that time, the provisions of Resolution **714 (WRC-95)** apply.~~

MOD S5.208A In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. ~~For information, t~~The threshold levels of interference detrimental to the radio astronomy service ~~to be protected~~ are shown in Table 1 of Recommendation ITU-R RA.769-1.

ANNEX 2 TO RESOLUTION 46 (Rev.WRC-95)
(ANNEX 1 TO APPENDIX S5)

….

A2.1.1 *Below 1 GHz*[*]
(1.1)

~~In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the MSS (space-to-Earth) with respect to terrestrial services is required only if the power flux-density produced by the station exceeds -125 dB(W/m²/4 kHz) at the Earth's surface.~~

ADD **A2.1.1.1 (1.1.1)** In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to terrestrial services (except the aeronautical mobile (OR) service networks operating in those administrations listed in numbers **S5.204** and **S5.206** as of 1 November 1996) is required only if the power flux-density produced by this space station exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface.

ADD **A2.1.1.2 (1.1.2)** In the band 137 - 138 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to the aeronautical mobile (OR) service is required only if the power flux-density produced by this space station at the Earth's surface exceeds:

– -125 dB (W/m^2/4 kHz) for networks for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996.

– -140 dB (W/m^2/4 kHz) for networks for which complete Appendix **3**/Appendix **S4** coordination information has been received by the Bureau after 1 November 1996 in those administrations referred to in A2.1.1.1(1.1.1) above.

ADD **A2.1.1.3 (1.1.3)** In the band 137 - 138 MHz coordination is also required for a space station on a replacement satellite of a mobile-satellite service network for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996 and the power flux-density exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface in those administrations referred to in A2.1.1.1(1.1.1) above.

SUP

RESOLUTION 714 (WRC-95)

POWER FLUX-DENSITY LEVEL APPLICABLE IN THE FREQUENCY BAND 137 - 138 MHz SHARED BY THE MOBILE-SATELLITE SERVICE AND TERRESTRIAL SERVICES

[*] These provisions only apply to the mobile-satellite service.

2 Frequency range 148 - 149.9 MHz

Two different views were expressed in the meeting concerning the reference to ITU-R Recommendations. One view stated that those methodologies described in the Recommendations are premature. Thus the reference to these Recommendations is inappropriate. The other view stated the opposite. Discussions are ongoing to resolve this difference.

MOD **S5.219** The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/** No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz. [Recommendation ITU-R M.1039-1 describes the system characteristics of a mobile-satellite system using FDMA techniques and a methodology for sharing with terrestrial services. Recommendation ITU-R M.1087 provides examples of a mobile-satellite service using spread spectrum techniques and methods for sharing with terrestrial services.]

3 Frequency range 149.9 - 150.05 MHz and 399.9 - 400.05 MHz

MOD

MHz
148 – 156.8375

Allocation to Services		
Region 1	Region 2	Region 3
149.9 – 150.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ~~S5.224~~ ADD S5.224A RADIONAVIGATION-SATELLITE ADD S5.224B MOD S5.220 S5.222 S5.223	

MOD

MHz
322 – 400.15

Allocation to Services		
Region 1	Region 2	Region 3
399.9 – 400.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ADD S5.224A RADIONAVIGATION-SATELLITE S5.222 S5.260 ADD S5.224B MOD S5.220 ~~S5.224~~	

MOD **S5.209** The use of the bands 137 - 138 MHz, 148 - ~~149.9~~150.05 MHz, 399.9 - 400.05 MHz, 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service ~~and the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the land mobile-satellite service~~ is limited to non-geostationary-satellite systems.

MOD **S5.220** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the ~~land~~ mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. The ~~land~~ mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.

SUP **S5.224**

ADD **S5.224A** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015.

ADD **S5.224B** The allocation of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015.

Annex 2 to Resolution 46 (Rev.WRC-95), paragraph A2.3.2

….

MOD

TABLE 1

Earth stations operating at frequencies below 1 GHz

Frequency Sharing Situation		Coordination Distance (In sharing situations involving services allocated with equal rights)
Frequency band and earth station for which coordination area is determined	Other service or station ~~(station in terrestrial service)~~	
148.0 - 149.9 MHz ground-based (mobile)	ground-based stations	As determined using Equation (1) and Figure 1 of Recommendation ITU-R M.1185 In this case, the coordination distance is calculated by the administration of the terrestrial station using the parameters of its terrestrial stations and the most updated relevant parameters published by the Bureau for the earth station.
149.9 - 150.05 MHz ground-based (mobile) 399.9 - 400.05 MHz ground-based (mobile)	radionavigation-satellite service	The coordination distance is calculated by the administration of the mobile-satellite service earth station using the parameters of its earth stations and the most updated relevant parameters published by the Bureau for the radionavigation-satellite service earth station
400.15 - 401 MHz ground-based	meteorological aids (radiosonde)	582 km
All bands below 1 GHz ground-based	mobile (aircraft)	500 km
All bands below 1 GHz aircraft (mobile)	ground-based stations	500 km
400.15 - 401 MHz aircraft (mobile)	meteorological aids (radiosonde)	1 082 km
All bands below 1 GHz aircraft (mobile)	mobile (aircraft)	1 000 km
455 - 456 MHz 459 - 460 MHz ground-based	ground-based stations	500 km

MOD

RESOLUTION 715 (~~WRC-95~~Rev.WRC-97)

STUDIES CONCERNING SHARING BETWEEN THE RADIONAVIGATION-SATELLITE SERVICE AND THE MOBILE-SATELLITE SERVICE IN THE BANDS 149.9 - 150.05 MHz AND 399.9 - 400.05 MHz

The World Radiocommunication Conference (Geneva, 199~~5~~7),

considering,

a) that the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz are allocated to and used by radionavigation-satellite service (RNSS) on a primary basis;

~~*b) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) allocated the band 149.9 - 150.05 MHz (Earth-to-space) to the land mobile-satellite service on primary basis;*~~

~~*c*~~*b)* that this Conference ~~has~~ allocated the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (Earth-to-space) to the ~~land~~ mobile-satellite service on a primary basis;

~~*d*~~*c)* that requirements of the RNSS and the mobile-satellite service (MSS) should be met in these frequency bands;

~~*e) that the MSS requirements are not limited solely to use by the land mobile-satellite service;*~~

~~*f*~~*d)* that there may be difficulties in the sharing between the RNSS and the MSS, and studies are being carried out by ITU-R;

~~*g*~~*e)* that there is a need ~~to study~~for further studies of the operational and technical means to facilitate sharing between the RNSS and the MSS (in the Earth-to-space and space-to-Earth directions) in these bands,

recognizing

that No. **953/S4.10** of the Radio Regulations applies to the use of these bands by the RNSS,

resolves

to invite ITU-R, ~~as a matter of urgency, in preparation for the Conference Preparatory Meeting for the 1997 World Radiocommunication Conference (WRC-97)~~, to continue to carry out studies in order to finalize recommendations which identify the operational and technical measures necessary to facilitate sharing between the MSS and the RNSS,

~~*instructs the Secretary-General*~~

~~to bring this Resolution to the attention of the Council, at its next session, with a view to including this item in the agenda of WRC-97,~~

urges

~~1.~~ administrations to participate in such studies by submitting contributions to ITU-R relating to the above-mentioned studies as soon as possible~~;~~.

~~2. ITU-R to bring the results of these studies to the attention of WRC-97 and of preparatory meetings, in order to determine operational criteria for sharing between the RNSS and the MSS.~~

4 Frequency range 401 - 406 MHz

Working Group 5B reached no consensus on the proposals to allocate portions of the band 401 - 406 MHz to the MSS (space-to-Earth) limited to NGSO systems. The majority view was that sharing studies with regard to the terrestrial services, are incomplete and that these 5 MHz are needed by the meteorological aids service. These administrations favoured "no change" to this band.

MHz
400.15 – 410

	Allocation to Services		
	Region 1	Region 2	Region 3
	400.15 – 401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) S5.263 Space Operation (space-to-Earth) S5.262 S5.264	
[NOC]	**401 – 402**	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile	
[NOC]	**402 – 403**	METEOROLOGICAL AIDS Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile	
[NOC]	**403 – 406**	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile	
	406 – 406.1	MOBILE-SATELLITE (Earth-to-space) S5.266 S5.267	
	406.1 – 410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149	

5 Frequency range 450 - 470 MHz

Working Group 5B reached no consensus on the proposals to allocate portions of the band 450 - 470 MHz to the MSS (Earth-to-space) limited to NGSO systems. The majority view was that sharing studies with regard to the terrestrial services, are incomplete and, therefore, these administrations favoured "no change" to this band.

MHz
410 – 455

	Allocation to Services		
	Region 1	Region 2	Region 3
[NOC]	**450 – 455**	FIXED MOBILE S5.271 S5.286	

MHz
455 – 470

	Allocation to Services		
	Region 1	Region 2	Region 3
[NOC]	**455 – 456** FIXED MOBILE S5.271 S5.286B	**455 – 456** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.209 S5.271 S5.286A S5.286B S5.286C	**455 – 456** FIXED MOBILE S5.271 S5.286B
[NOC]	**456 – 459**	FIXED MOBILE S5.271 S5.287 S5.288	
[NOC]	**459 – 460** FIXED MOBILE S5.271 S5.286B	**459 – 460** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.209 S5.271 S5.286A S5.286B S5.286C	**459 – 460** FIXED MOBILE S5.271 S5.286B
[NOC]	**460 – 470**	FIXED MOBILE Meteorological-Satellite (space-to-Earth) S5.287 S5.288 S5.289 S5.290	

6 Resolution 214

MOD

RESOLUTION 214 (Rev.WRC-~~95~~97)

SHARING STUDIES RELATING TO CONSIDERATION OF THE ALLOCATION OF BANDS BELOW 1 GHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICE

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that the agenda of this Conference included consideration of additional ~~the requirements of the mobile-satellite service (MSS) and, if necessary, the adoption of limited~~ allocations on a worldwide basis for the ~~MSS;~~ non-geostationary mobile-satellite service (non-GSO/MSS) below 1 GHz;

b) that the Conference Preparatory Meeting 1997, in its Report, indicated that for the non-GSO/MSS below 1 GHz there is not enough spectrum currently allocated to allow the development of all the systems currently in coordination, and ~~that the Conference Preparatory Meeting 1995, in its Report, indicated~~ that, in order to meet projected MSS requirements below 1 GHz, a range of an additional 7 to 10 MHz will be required in the near future;

c) that there is an urgent need to make additional spectrum available on a worldwide basis for non-GSO/MSS systems operating below 1 GHz;

d~~c~~) that several administrations made proposals to this Conference to allocate additional spectrum between 450 and 470 MHz and between 402 and 406 MHz on a worldwide basis for non-geostationary-satellite networks in the mobile-satellite service (non-GSO/MSS) ~~below 1 GHz~~;

e) that the bands below 1 GHz are extensively used, although the extent to which they are used by each administration varies throughout the world;

f) that there is a need to review constraints on the current allocations to the MSS below 1 GHz;

g) that the compatibility issues including the technical and operational means to facilitate sharing between the land mobile service and the non-GSO/MSS in the bands below 1 GHz remain to be studied,

~~*d) that new technologies of some radiocommunication services, especially within the terrestrial mobile and broadcasting services, which require spectrum below 1 GHz, may have an impact on the sharing possibilities;*~~

~~*e) that non-GSO/MSS systems operating below 1 GHz have undergone advance publication by the Radiocommunication Bureau and that administrations may seek to implement further such systems;*~~

~~*f) that there is an urgent need to make additional spectrum available on a worldwide basis for non-GSO/MSS systems operating below 1 GHz;*~~

~~*g) that the requirements for the introduction of these new technologies have to be balanced,*~~

considering further

that the bands below 1 GHz are extensively used by many services,

noting

a) that~~, after appropriate~~ additional studies~~, there~~ may ~~be~~identify other bands below 1 GHz which could also be considered suitable for a worldwide allocation to non-GSO/MSS~~,~~;

b) that constraints on the duration of any single transmission from an individual MSS MES and constraints on the period between consecutive transmissions from an individual MSS MES operating on the same frequency may facilitate sharing with terrestrial services;

c) that interference mitigating techniques, such as the dynamic channel activity assignment system described in Recommendation ITU-R M.1039-1, may be used by non-GSO MSS systems below 1 GHz in the Earth-to-space direction to promote compatibility with terrestrial systems when operating in the same frequency band;

d) that new technologies of some radiocommunication services, especially within the terrestrial mobile and broadcasting services, which require spectrum below 1 GHz, may have an impact on the sharing possibilities;

e) that non-GSO/MSS systems operating below 1 GHz have undergone advance publication by the Radiocommunication Bureau and that administrations may seek to implement further such systems;

f) that the requirements for the introduction of these new technologies have to be balanced with the needs of other services allocated below 1 GHz,

resolves

1. that further studies are urgently required on operational and technical means to facilitate sharing between the non-GSO/MSS and other radiocommunication services having allocations and operating below 1 GHz;

[2. that further studies are required on the compatibility of non-GSO/MSS and terrestrial stations including operational and technical means to facilitate sharing between existing and planned services and the non-GSO/MSS in existing MSS allocations below 1 GHz;]

3. that [the 199~~7~~9/a future competent] World Radiocommunication Conference ~~(WRC-97)~~ be invited ~~to consider~~, on the basis of the results of the studies referred to in *resolves* 1 and 2 above, to consider constraints on existing allocations and to consider additional allocations on a worldwide basis for the non-GSO/MSS below 1 GHz;

4. that ~~the~~ relevant entities and ~~international~~ organizations be invited to participate in these sharing studies,

[5. …]

invites ITU-R

1. to study and develop Recommendations, as a matter of urgency, on the performance requirements, the sharing criteria, and the technical and operational issues relating to sharing between both the existing and planned services~~, having allocations~~ and the non-GSO/MSS in existing and possible additional allocations below 1 GHz;~~, in the bands proposed to this Conference by several administrations and in other frequency bands, as necessary;~~

2. as a matter of urgency, to carry out studies in preparation for [the next competent Conference (WRC-99),/a future competent Conference,] with a view to reviewing the operating constraints given in *considering g)* necessary to protect the existing and planned development of all of the services to which the bands below 1 GHz are allocated, taking note of *noting c)*;

[2*bis* as a matter of urgency, to carry out studies in preparation for [the next competent Conference (WRC-99),/a future competent Conference,] with a view to reviewing the operating constraints given in **S5.286D** necessary to protect the existing and planned development of all of the services in the bands 454 - 456 MHz and 459 - 460 MHz which are also allocated on a co-primary basis to non-GSO/MSS in Region 2, taking note of *noting c)*;]

3. as a matter of urgency, to carry out studies in preparation [for the next competent Conference (WRC-99),/a future competent Conference,] with respect to interference mitigating techniques, such as the dynamic channel activity assignment system described in Recommendation ITU-R M.1039-1, necessary to permit the continued development of all of the services to which bands are allocated;

4~~2~~. to bring the results of these studies to the attention of [the next competent Conference (WRC-9~~7~~9/a future competent Conference] and the relevant preparatory meetings,

urges administrations

1. to participate actively in these studies~~;~~ with involvement by both terrestrial and satellite interests;

2. to submit to ITU-R reports on their technical studies and on their ~~,~~ operational and frequency sharing experience with non-GSO/MSS systems operating below 1 GHz~~.~~,

encourages administrations

to consider the use of a type of dynamic channel assignment techniques, such as that described in Recommendation ITU-R M.1039-1.

7 Resolution on sharing studies in the band 470 - 862 MHz

ADD

DRAFT RESOLUTION [COM5-14]

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS IN THE BROADCASTING BAND 470 - 862 MHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for the non-geostationary mobile-satellite services (non-GSO/MSS);

b) that the report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO/MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46", and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that CPM-97 considered the protection requirements for analogue television in the band 470 - 862 MHz against a narrow-band MSS signal in the most sensitive and least sensitive portions of an analogue TV channel and the protection requirements for a digital TV channel, based on existing ITU-R Recommendations (BT.655-4, BT.417-4 and IS.851-1);

d) that CPM-97 stated that the protection ratios for a narrow-band interfering signal in the least sensitive parts of an analogue TV channel, are to be verified by further studies;

e) that CPM-97 stated the region of lower protection requirements and commensurately higher permissible interfering power flux levels as being 100 kHz near the band edges of an analogue TV channel at least in some countries;

f) that CPM-97 stated that the interfering effects of a non-GSO/MSS transmission will depend on its specific characteristics (e.g. duty-cycle, duration, periodicity, etc.), that interference contributions from sources other than MSS (even those from other broadcasting stations have to be taken into account), that slightly lower values of field strength to be protected may need to be assumed in countries where television networks are relatively sparse, that studies on sharing are necessary;

g) that the permissible aggregate interfering power flux-density resulting from these protection requirements, in some portions of an analogue TV channel, may be useful in determining the feasibility of sharing with space-to-Earth links from non-GSO/MSS transmitters;

h) that these bands are also allocated in part to fixed and mobile terrestrial systems and radionavigation systems;

i) that in many countries, the channels assigned for analogue TV may also be used for digital TV,

noting

a) that on completion of studies, parts of the bands now allocated to the broadcasting service between 470 MHz and 862 MHz might be considered suitable for worldwide allocation to non-GSO/MSS space-to-Earth transmissions;

b) that the bandwidth required in these TV channels may be 1-2% of the total spectrum of 470 - 862 MHz to be shared with the parties noted above;

c) the need to protect the radio astronomy service in the band 608 - 614 GHz against interference from the MSS transmissions including unwanted emissions,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate co-frequency sharing between narrow-band non-GSO/MSS (space-to-Earth) transmissions and the services to which the band 470 - 862 MHz is allocated, including the bands where the broadcasting service is also allocated;

2 to invite a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, additional allocations on a worldwide basis for the non-GSO/MSS with service links operating below 1 GHz,

urges administrations

to participate actively in such studies with the involvement of interested parties.

8 Resolution on feeder links for non-GSO MSS below 1 GHz

ADD

DRAFT RESOLUTION [COM5-15]

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS FOR FEEDER LINKS IN BANDS AROUND 1.4 GHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for the non-geostationary mobile-satellite services (non-GSO/MSS);

b) that the Report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO/MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46" and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that the CPM-97 stated that due to the "extreme sensitivity of radio astronomy observations interference from unwanted (spurious and out-of-band) emissions" can be a problem. However, CPM-97 noted that interference to radio astronomy can be avoided using various techniques including, low power transmitter levels, choice of modulation, bit shaping, output filtering, band limiting filters. Use of these techniques can minimize the band separation necessary to attain the recommended interference threshold levels for out-of-band emissions;

d) that, since CPM-97, one administration has carried out additional analyses and hardware demonstrations with a view to determining the feasibility of sharing between non-GSO/MSS feeder links and services such as earth exploration-satellite (passive), radio astronomy, and space research (passive) services in bands around 1.4 GHz;

e) that factors taken into account by these post-CPM-97 activities to protect the passive services around 1.4 GHz from out-of-band emissions include: the use of narrow-band non-GSO/MSS feeder link transmissions; the use of spectrum-efficient modulation methods, such as GMSK, having inherently rapid roll-off of out-of-band emissions; the use, where necessary, of band-pass filters in satellite transmitters and MSS feeder link transmitting earth stations; and guardbands where necessary;

f) that factors taken into account by these post-CPM-97 activities considering sharing with radiolocation, include the use of conventional techniques that may be applied in MSS satellite receivers, such as intermediate frequency limiters and time diversity that have long been employed to protect radiolocation receivers, and techniques such as transmitted wave forms that employ time diversity that have been employed to protect receivers in other services, from high-power pulsed radar transmitters,

recognizing

that the bands near 1.4 GHz are extensively used by many other services operating in accordance with the Radio Regulations, included fixed and mobile systems,

noting

a) that Resolution 214 (WRC-97) *resolves* 1 states "that further studies are urgently required on operational and technical means to facilitate sharing between the non-GSO MSS and other radiocommunication services having allocations and operating below 1 GHz";

b) that Resolution 719 (WRC-95) identifies "issues relating to frequency sharing between the mobile-satellite service and terrestrial services at frequencies below 3 GHz" as being among the "urgent studies required in preparation for WRC-97";

c) that one administration performed such studies which were submitted to the ITU-R, but these studies could not be considered due to time limitations;

d) that, since WRC-95, one administration has performed studies of sharing between space and terrestrial services and feeder links near 1.4 GHz for the non-GSO/MSS with service links below 1 GHz,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine the operational and technical measures required to facilitate sharing in portions of the band 1 390 - 1 400 MHz between existing and currently planned services and feeder links (Earth-to-space) for non-GSO/MSS with service links operating below 1 GHz;

2 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate sharing in portions of the band 1 427 - 1 432 MHz between existing and currently planned services and the feeder links (space-to-Earth) for non-GSO/MSS with service links operating below 1 GHz which may be allocated to non-GSO/MSS systems;

3 to invite ITU-R, as a matter of urgency, to study operational and technical measures required to protect passive services in the band 1 400 - 1 427 MHz from unwanted emissions from feeder links near 1.4 GHz for non-GSO/MSS with service links operating below 1 GHz;

4 to invite [WRC-99] or a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, 2 and 3, additional allocations for feeder links on a worldwide basis for non-GSO/MSS with service links below 1 GHz,

urges administrations

to participate actively in such studies with the involvement of interested parties.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 262-E
12 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SIXTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

The following proposals are submitted for your consideration:

1 MSS generic allocation in the 1.5 - 1.6 GHz range

ARTICLE S5

MOD

MHz
1 452 – 1 530

Allocation to Services		
Region 1	Region 2	Region 3
1 525 – 1 530	**1 525 – 1 530**	**1 525 – 1 530**
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)
FIXED	MOBILE-SATELLITE (space-to-Earth)	FIXED
~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth)	Earth Exploration-Satellite	MOBILE-SATELLITE (space-to-Earth)
Earth Exploration-Satellite	Fixed	Earth Exploration-Satellite
Mobile except aeronautical mobile S5.349	Mobile S5.343	Mobile S5.349
~~Land Mobile-Satellite (space-to-Earth) S5.352~~		
S5.341 S5.342 S5.350 S5.351 ADD S5.352A S5.354	S5.341 S5.351 S5.354	S5.341 S5.351 ADD S5.352A S5.354

MOD

MHz
1 530 – 1 535

Allocation to Services		
Region 1	Region 2	Region 3
1 530 – 1 533 SPACE OPERATION (space-to-Earth) ~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth) ADD S5.353A ~~LAND MOBILE-SATELLITE (space-to-Earth)~~ Earth Exploration-Satellite Fixed Mobile except aeronautical mobile S5.341 S5.342 S5.351 S5.354	**1 530 – 1 533** SPACE OPERATION (space-to-Earth) ~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth) ADD S5.353A ~~LAND MOBILE-SATELLITE (space-to-Earth)~~ Earth Exploration-Satellite Fixed Mobile S5.343 S5.341 S5.351 ~~S5.353~~ S5.354	

SUP **S5.352**

ADD **S5.352A** In the band 1 525 - 1 530 MHz, mobile earth stations shall not cause harmful interference nor claim protection from stations of the fixed service in France and French overseas territories in Region 3, Saudi Arabia, United Arab Emirates, India, Israel, Italy, Jordan, Kuwait, Qatar, Syria and Viet Nam notified prior to 1 April 1998.

ARTICLE S5

MOD

MHz
1 530 – 1 535

Allocation to Services		
Region 1	Region 2	Region 3
1 533 – 1 535 SPACE OPERATION (space-to-Earth) ~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth) ADD S5.353A Earth Exploration-Satellite Fixed Mobile except aeronautical mobile ~~Land Mobile-Satellite (space-to-Earth) S5.352~~ S5.341 S5.342 S5.351 S5.354	**1 533 – 1 535** SPACE OPERATION (space-to-Earth) ~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth) ADD S5.353A Earth Exploration-Satellite Fixed Mobile S5.343 ~~Land Mobile-Satellite (space-to-Earth) S5.352~~ S5.341 S5.351 ~~S5.353~~ S5.354	

MOD

MHz
1 535 – 1 610.6

Allocation to Services		
Region 1	Region 2	Region 3
1 535 – 1 544	~~MARITIME~~ MOBILE-SATELLITE (space-to-Earth) ~~Land Mobile-Satellite (space-to-Earth) S5.352~~ S5.341 S5.351 ~~S5.353~~ ADD S5.353A S5.354 S5.355	
1 544 – 1 545	MOBILE-SATELLITE (space-to-Earth) S5.341 S5.354 S5.355 S5.356	
1 545 – 1 555	~~AERONAUTICAL~~ MOBILE-SATELLITE ~~(R)~~ (space-to-Earth) S5.341 S5.351 S5.354 S5.355 S5.357 ~~[S5.358]~~ S5.359 ADD S5.362A	
1 555 – 1 559	~~LAND~~ MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 S5.354 S5.355 S5.359 ~~S5.360~~ ~~[S5.361]~~ ~~S5.362~~	

SUP S5.353

ADD S5.353A In applying the procedures of No. **S9.11A** to the mobile-satellite service in the bands 1 530 - 1 544 MHz and 1 626.5 - 1 645.5 MHz, priority shall be given to accommodating the spectrum requirements [for distress, urgency and safety communications] of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to nor claim protection from distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. [(See Resolution [COM5-24].)]

NOC S5.356

[SUP S5.358]

SUP S5.360

[SUP S5.361]

SUP S5.362

ADD S5.362A In applying the procedures of No. **S9.11A** to the mobile-satellite service in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service (AMS(R)S), providing transmission of messages with priority 1 to 6 in Article **S44**. AMS(R)S communications with priority 1 to 6 in Article **S44** shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to nor claim protection from AMS(R)S communications with priority 1 to 6 in Article **S44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. [(See Resolution [COM5-24].)]

ADD S5.362A*bis* In the United States, in applying the procedures of No. **S9.11A** to the mobile-satellite service in the bands 1 555 - 1 559 MHz and 1 656.5 - 1 660.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service (AMS(R)S), providing transmission of messages with priority 1 to 6 in Article **S44**. AMS(R)S communications with priority 1 to 6 in Article **S44** shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to nor claim protection from AMS(R)S communications with priority 1 to 6 in Article **S44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. [(See Resolution [COM5-24].)]

ARTICLE S5

MOD

MHz
1 610.6 – 1 631.5

Allocation to Services		
Region 1	Region 2	Region 3
1 626.5 – 1 631.5	**1 626.5 – 1 631.5**	
~~MARITIME~~ MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	
~~Land Mobile Satellite (Earth-to-space) S5.352~~		
S5.341 S5.351 S5.354 S5.355 S5.359	S5.341 S5.351 S5.354 S5.355 S5.359 ~~S5.373A~~	

MOD

MHz
1 631.5 – 1 670

Allocation to Services		
Region 1	Region 2	Region 3
1 631.5 – ~~1 634.5~~1 636.5	~~MARITIME~~ MOBILE-SATELLITE (Earth-to-space) ~~LAND MOBILE-SATELLITE (Earth-to-space)~~ S5.341 S5.351 ~~S5.353~~ S5.354 S5.355 S5.359 MOD S5.374 ADD S5.353A	
~~1 634.5~~1 636.5 – 1 645.5	~~MARITIME~~ MOBILE-SATELLITE (Earth-to-space) ~~Land Mobile-Satellite (Earth-to-space) S5.352~~ S5.341 S5.351 ~~S5.353~~ADD S5.353A S5.354 S5.355 S5.359	
1 645.5 – 1 646.5	MOBILE-SATELLITE (Earth-to-space) S5.341 S5.354 S5.375	
1 646.5 – 1 656.5	~~AERONAUTICAL~~ MOBILE-SATELLITE (Earth-to-space) ADD S5.362A S5.341 S5.351 S5.354 S5.355 ~~S5.358~~ S5.359 S5.376	

Allocation to Services		
Region 1	Region 2	Region 3
1 656.5 – 1 660	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) S5.341 S5.351 S5.354 S5.355 S5.359 ~~S5.360 S5.361 S5.362~~ MOD S5.374	
1 660 – 1 660.5	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY S5.149 S5.341 S5.351 S5.354 ~~S5.360 S5.361 S5.362~~ ADD S5.376A	

SUP S5.373A

MOD S5.374 ~~Land earth stations and ship~~Mobile earth stations in the mobile-satellite service operating in the bands 1 631.5 - 1 634.5 MHz and 1 656.5 - 1 660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. **S5.359**.

NOC S5.375

ADD S5.376A Mobile earth stations operating in the 1 660.0 - 1 660.5 MHz band shall not cause harmful interference to stations operating in the radio astronomy service.

DRAFT RESOLUTION [COM5-24]

USE OF THE BANDS 1 525 - 1 559 MHz AND 1 626.5 - 1 660.5 MHz BY THE MOBILE-SATELLITE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that WRC-97 allocated the bands 1 525 - 1 559 MHz (s-E) and 1 626.5 - 1 660.5 MHz (Earth-to-space) to the mobile-satellite service (MSS) to facilitate the assignment of spectrum to multiple mobile-satellite systems in a flexible and efficient manner;

b) that prior to WRC-97 there was a generic allocation by footnote provisions in some countries for the use of the bands 1 530 - 1 544 MHz and 1 631.5 - 1 645.5 MHz by the mobile-satellite service on the condition that maritime mobile-satellite distress and safety communications have priority access over all other communications;

c) that prior to WRC-97, there was a generic allocation by two footnotes for the use of the bands 1 555 - 1 559 MHz and 1 656.5 - 1 660.5 MHz by the mobile-satellite service, where in one of these footnotes in two countries the following conditions applied:

– the aeronautical mobile-satellite (R) service has priority access and immediate availability over all other communications within a network;

– mobile-satellite systems should be interoperable with the aeronautical mobile-satellite (R) service;

– account shall be taken of the priority of safety-related communications in the other mobile-satellite services;

d) that there is at least one global mobile-satellite system that is capable of providing global maritime mobile-satellite distress and safety communications according to Article **S53** and global AMS(R)S communications with priorities 1 to 6 of Article **S44** in accordance with IMO and ICAO requirements;

e) that technical considerations for sharing satellite network resources between MSS (other than AMS(R)S) and AMS(R)S have been developed by the ITU-R (see Recommendation ITU-R **M.[8/17]**);

f) that global and regional mobile-satellite systems are being multilaterally coordinated in the bands 1 525 - 1 559 MHz (s-E) and 1 626.5 - 1 660.5 MHz (E-s) and that the ITU Radio Regulations provide the international framework for multilateral agreements;

g) that in Nos. **S5.362A** and **S5.353A** priority has been given to accommodating the spectrum requirements urgency, distress and safety communications of GMDSS and AMS(R)S communications with priorities 1 to 6 of Article **S44** of AMS(R)S. See No. **S9.11A**, [except No. **S9.13]**,

further considering

a) that the Convention on International Civil Aviation (ICAO SARPS) requires that stations of the AMS(R)S shall be in compliance with the internationally agreed Standards and Recommended Practices and Procedures for Air Navigation Services;

b) that ICAO has developed a global Air Traffic Management system (ATM) which requires interoperability between stations operating in accordance with the ICAO SARPS for those mobile-satellite systems providing AMS(R)S with the priority message structure of Article **S44**;

c) that IMO may also place similar requirements of interoperability of those mobile-satellite systems providing GMDSS communications with the priority message structure of Article **S51**,

recognizing

that Appendix **S15.2** identifies the bands 1 530 - 1 544 MHz (s-E) and 1 626.5 - 1 645.5 MHz (Earth-to-space) for distress and safety purposes in the maritime mobile-satellite service as well as for routine non-safety purposes,

[noting

that for mobile-satellite systems that are already operating on a generic basis in the bands 1 525 - 1 544 MHz, 1 545 - 1 559 MHz, 1 626.5 - 1 645.5 MHz and 1 646.5 - 1 660.5 MHz, administrations may continue to limit the use of these bands to the national mobile-satellite service or, where agreements of administrations concerned are in place, to provide multinational service,]

resolves

1 that the future spectrum requirements for the provision of distress, urgency and safety communications in the GMDSS by mobile satellite and AMS(R)S communications with priority 1 to 6 of Article **S44** should take into account on internationally agreed assumptions and methodologies and information on GMDSS and AMS(R)S communication actual traffic usage and growth;

[2 that the feasibility of prioritization, real time pre-emptive access and, if necessary, interoperability, between different mobile-satellite systems for GMDSS and AMS(R)S, in order to achieve the most flexible and practical use of the generic allocations, should be determined,]

requests ITU-R

1 to develop the assumptions and methodologies and information on GMDSS and AMS(R)S communication actual traffic usage and growth to determine the future spectrum requirements for the provision of distress, urgency and safety communications in the GMDSS by mobile satellite and AMS(R)S communications with priority 1 to 6 of Article **S44**;

2 to determine the feasibility of prioritization, and real time pre-emptive access and, if necessary, interoperability between different mobile-satellite systems for GMDSS and AMS(R)S, in order to achieve the most flexible and practical use of the generic allocations;

3 to complete and report the results of studies called for in *resolves* 1 and 2 above by WRC-99,

requests the next competent WRC

to take into account the outcome of ITU-R studies and take appropriate action on this subject,

invites

ICAO, IMO, IALA, administrations and other concerned organizations to participate in the studies identified in *requests ITU-R* 1 and 2 above.

2 Frequency range 1 559 - 1 567 MHz

Option A For no change to the current Table of Allocations.

NOC

MHz
1 535 – 1 610.6

Allocation to Services		
Region 1	Region 2	Region 3
1 559 – 1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 S5.355 S5.359 S5.363	

Option B This option, if adopted, would introduce an allocation for MSS on a worldwide basis in the band 1 559 - 1 567 MHz subject to a Resolution establishing protection for GNSS services and requesting the completion of sharing studies.

MHz
1 535 – 1 610.6

Allocation to Services		
Region 1	Region 2	Region 3
1 559 – ~~1 610~~1 567	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) ADD S5.354A S5.341 S5.355 S5.359 S5.363	
~~1 559~~1 567 – 1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 S5.355 S5.359 S5.363	

ADD S5.354A The use of the band 1 559 - 1 567 MHz by the mobile-satellite service (space-to-Earth) shall be in accordance with Resolution [COM5-22] (WRC-97).

DRAFT RESOLUTION [COM5-22] (WRC-97)

USE OF THE BAND 1 559 - 1 567 MHz BY THE MOBILE-SATELLITE SERVICE (SPACE-TO-EARTH)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 1 559 - 1 567 MHz is currently allocated on a primary basis to the aeronautical radionavigation and radionavigation-satellite services;

b) that WRC-97 has made an allocation to the mobile-satellite service in the band 1 559 - 1 567 MHz (s-E) subject to appropriate protection for the aeronautical radionavigation and radionavigation-satellite services;

c) that the aeronautical radionavigation and radionavigation-satellite services are safety services (**S4.10** applies);

d) that safety of life services shall be protected,

considering further

a) that there is a shortage of frequency spectrum for the mobile-satellite services;

b) the need to ensure the effective use of the radio spectrum;

c) that there should be equitable access to the scarce radio-frequency spectrum resource to allow for the provision of new services;

d) that studies carried out by some administrations indicate that a power flux-density limit at the Earth's surface of -112 dB(W/m^2/1 MHz) for all angles of arrival for mobile-satellite service space stations is appropriate for the protection of aeronautical radionavigation and radionavigation-satellite services;

d*bis*) that some other administrations consider that the power flux-density limit of -112 dB(W/m^2/1 MHz) given in *considering* d) may not be adequate to protect aeronautical radionavigation and radionavigation-satellite services;

e) that WRC-99 will consider additional allocations to the radionavigation-satellite service,

recognizing

the essential need to protect the international standard GNSS systems of the aeronautical radionavigation and radionavigation-satellite services,

resolves

1 that the allocation in the band 1 559 - 1 567 MHz to the mobile-satellite service (s-E) shall enter into force on 1 July 2000;

2 that such use by the mobile-satellite service shall be subject to coordination under [Resolution **46 (WRC-97)**/No. **S9.11A**];

3 that stations of the mobile-satellite service (space-to-Earth) operating in this band shall not cause harmful interference to international standard GNSS and other already planned systems of the aeronautical radionavigation and radionavigation-satellite services;

4 that the power flux-density at the Earth's surface of mobile-satellite service space stations operating in this band shall not exceed the provisional limit of -112 dB(W/m^2/1 MHz) for all angles of arrival; however, this power flux-density limit shall be reviewed by WRC-99 in the light of the studies referred to in the *further resolves* below;

5 that any MSS systems intending to use this band shall comply with the power flux-density limit decided by WRC-99,

further resolves

1 to request the ITU-R to study, as a matter of urgency, the power flux-density limit to be applied to MSS systems operating in this band taking account of the *recognizing* above, with a view to facilitate sharing, and taking account of existing and planned systems and the studies already carried out;

2 to instruct the Director of the Radiocommunication Bureau to ensure, in consultation with the relevant Study Group Chairman, that the results of these studies are available in due time for consideration at WRC-99;

3 to recommend that WRC-99 review the results of these studies with a view to make any necessary adjustment to the power flux-density limit referred to in *resolves* 4 above and any consequential changes to Article **S5**;

4 to urge all administrations and organizations concerned to contribute to these studies and to cooperate to ensure a mutually satisfactory result is presented to WRC-99.

3 Frequency range 1 675 - 1 710 MHz

The majority of administrations made proposals for modifications to frequency allocations in the 1 675 - 1 710 MHz band and these proposals reflect the band segmentation approach for accommodating the MSS allocation in this part of the spectrum and protection of meteorological services as discussed in the Report of the Conference Preparatory Meeting (CPM-97). These proposals support allocation of the subband 1 675 - 1 683 MHz for MSS on a worldwide basis and deletion of existing Region 2 MSS allocations in the remaining band, i.e. 1 683 - 1 710 MHz.

Two administrations indicated difficulties with the above proposals on the basis of:

- difficulties with the deletion of MSS allocations in Region 2 from 1 683 - 1 710 MHz and also that a transitional plan for radiosondes would be unacceptable should the band 1 675 - 1 683 MHz be made available to MSS;
- concern regarding problems in frequency sharing between the meteorological-satellite and meteorological aids service.

Since the majority of the proposals were in favour of modifications to the allocations in the band 1 675 - 1 710 MHz and MSS allocation on a worldwide basis by applying a band segmentation approach while ensuring protection to the interests of meteorological services, the attached proposals have been developed for further consideration.

ARTICLE S5

MOD

MHz
1 670 – 1 700

Allocation to Services		
Region 1	Region 2	Region 3
1 675 – ~~1 690~~1 683	**1 675 – ~~1 690~~1 683**	**1 675 – ~~1 690~~1 683**
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS
FIXED	FIXED	FIXED
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
MOBILE-SATELLITE (Earth-to-space) ADD S5.377B	MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space) ADD S5.377B
S5.341 MOD S5.377 ADD S5.377A	S5.341 MOD S5.377	S5.341 MOD S5.377 ADD S5.377A
~~1 675~~1 683 – 1 690	**~~1 675~~1 683 – 1 690**	**~~1 675~~1 683 – 1 690**
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS
FIXED	FIXED	FIXED
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
	~~MOBILE-SATELLITE (Earth-to-space)~~	
S5.341	S5.341 ~~S5.377~~	S5.341

Allocation to Services		
Region 1	Region 2	Region 3
1 690 – 1 700	**1 690 – 1 700**	**1 690 – 1 700**
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)
Fixed	~~MOBILE-SATELLITE (Earth-to-space)~~	
Mobile except aeronautical mobile		
S5.289 S5.341 S5.382	S5.289 S5.341 ~~S5.377~~ S5.381	S5.289 S5.341 S5.381

MOD

MHz
1 700 – 2 010

Allocation to Services		
Region 1	Region 2	Region 3
1 700 – 1 710	**1 700 – 1 710**	**1 700 – 1 710**
FIXED	FIXED	FIXED
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
	~~MOBILE-SATELLITE (Earth-to-space)~~	
S5.289 S5.341	S5.289 S5.341 ~~S5.377~~	S5.289 S5.341 S5.384

MOD S5.377 In the band 1 675 - ~~1 710~~1 683 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, the meteorological-satellite and meteorological aids services (see Resolution **213 (Rev.WRC-95)**) and the use of this band shall be subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. In order to avoid causing harmful interference to the meteorological-satellite service, mobile earth stations shall not operate, except on a narrow-band signalling channel, within the exclusion zones around the meteorological-satellite earth stations defined in Recommendation ITU-R **SA.1158**. The mobile-satellite system shall have position determination capabilities to ensure compliance with this provision.

ADD S5.377A In Regions 1 and 3 in the band 1 675 - 1 683 MHz, stations in the mobile-satellite service shall not cause harmful interference to or claim protection from existing stations in the fixed service notified and brought into use prior to 21 November 1997.

ADD S5.377B In Regions 1 and 3 the use of the band 1 675 - 1 683 MHz by the mobile-satellite service shall not commence before 1 July 2000.

Statement by the observer of IMO

The observer of IMO pointed out that the decision to change current frequency allocations for the maritime mobile-satellite service in the bands 1 530 - 1 544 MHz and 1 626.5 - 1 645.5 MHz to generic allocations for MSS at this time, when the GMDSS shall be implemented in 14 months time, did not take into account the IMO opinion on this matter reflected in Document 53 and, therefore, is not acceptable for the international maritime community and industry.

In particular, he noted that footnote S5.353A, as proposed, is splitting the GMDSS as a system described in the SOLAS Convention and jeopardizing its integrity, effectiveness and implementation.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SEVENTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

The following proposals are submitted for your consideration.

1 Non-GSO FSS issues (power flux-density)

WG 5B had a lengthy discussion on the subject of power flux-density limits to be applied for NGSO/FSS to protect the fixed service. Although a new Resolution is created to indicate the power flux-density limit values to be applicable to NGSO/FSS, the treatment of tables and the values of power flux-density have not been resolved. One view expressed was that the tables, values and the associated footnotes should be included both in Article S21 and in the new Resolution. The other view expressed was that the values still need further study and thus the tables should be placed only in the annex to the new Resolution. The meeting finally concluded, with one reservation, to put these tables both in Article S21 and in the new Resolution.

DRAFT RESOLUTION [COM5-23]

POWER FLUX-DENSITY LIMITS APPLICABLE TO NON-GSO FSS SYSTEMS FOR PROTECTION OF TERRESTRIAL SERVICES IN THE BANDS 10.7 - 12.75 GHz AND 17.7 - 19.3 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the power flux-density (pfd) limits specified in Table **S21-4** for the bands 10.7 - 12.75 GHz and 17.7 - 19.7 GHz for the protection of the terrestrial services were originally developed assuming that potentially interfering space stations in the fixed-satellite service (FSS) would operate in the geostationary-satellite orbit (GSO);

b) that the results of studies to date of potential interference from non-GSO FSS networks in the 18.8 - 19.3 GHz ~~bands~~range, but which may be extrapolated to the 17.7 - 19.3 GHz range, differ as to whether the power flux-density limits in Article **S21** would provide adequate protection of the fixed service when applied to non-GSO networks with a large number of satellites (i.e., greater than 100);

c) that, in the 10.7 - 12.75 GHz band, some initial sharing studies have been undertaken and further work is required in order to assess the adequacy of the existing power flux-density limits;

d) that further studies are required of the power flux-density limits applicable to non-GSO FSS systems for protection of terrestrial services in the bands 10.7 - 12.75 GHz and 17.7 - 19.3 GHz,

noting

a) that Resolution **118 (WRC-95)** requested studies of the criteria for sharing between non-GSO FSS systems and terrestrial services in the 20/30 GHz bands;

b) that non-GSO FSS networks are being developed that take into account the power flux-density limits that were in force prior to this Conference; however, in the band 18.9 - 19.3 GHz, these values were subject to review by the ITU-R;

c) that modifications to existing FSS network design or operating parameters may be needed in order to obtain conformance with the revised limits adopted by this Conference~~;~~,

d) that the band 18.6 - 18.8 GHz is allocated to the earth exploration-satellite (passive) and space research (passive) services and that administrations should endeavour to reduce to a minimum the risks of interference to passive sensors; the interference criteria for satellite passive sensors are contained in Recommendation ITU-R SA.1029,

resolves

1 that emissions from a space station in non-GSO FSS networks in the bands 10.7 - 12.75 GHz and 17.7 - 19.3 GHz shall comply with the power flux-density limits contained in Article **S21** and in Annex 1 of this Resolution for protection of terrestrial services (see *considering* d));

2 that in view of *noting* b) in relation to the 18.8 - 19.3 GHz band in the case of non-GSO FSS networks for which complete coordination or notification information has been received by the Radiocommunication Bureau ~~before 18~~by 17 November 1995, or are in operation by that date, the

power flux-density limits which were in force ~~just~~ prior to 27 October ~~1995~~1997 shall continue to apply; in the case of non-GSO FSS networks for which such information was received after 17 November 1995, the power flux-density limits in Annex 1 to this Resolution will apply,

invites ITU-R

to study, as a matter of urgency, the appropriate power flux-density values to be applied to non-GSO networks in the aforementioned bands to ensure protection of the fixed service without unduly constraining the development of either networks,

requests [WRC-99]

to review the provisional limits referred to in *resolves* 1 based on the results of the studies carried out by ITU-R,

urges administrations

to consider reductions of the power flux-density or number of satellites in non-GSO FSS networks within the spirit of No. **S9.58** so as to facilitate sharing between non-GSO FSS networks and systems in the fixed service.

TABLE S21-4/ANNEX 1 TO RESOLUTION [COM5-23]

MOD

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
17.7 - 19.3 GHz[1)1bis] ~~[18.6 - 18.8] GHz[1)]~~ ~~18.8 - 19.3 GHz[1)]~~	Fixed-Satellite (S-E)	–115 or –125[6)]	–115 + 0.5 (δ–5) or –125 + (δ-5)[6)]	–105 or –105[6)]	1 MHz
19.3 - 19.7 GHz[1)]	Fixed-Satellite (S-E)	–115	–115 + 0.5 (δ–5)	–105	1 MHz *

1) The equality of right to operate when a frequency band is allocated in different Regions to different services of the same category is established in No. **S4.8**. Therefore, any limits concerning inter-Regional interference which may appear in ITU-R Recommendations should, as far as practicable, be observed by administrations.

1bis The band 18.6 - 18.8 GHz is allocated to the earth exploration-satellite (passive) and space research (passive) services. Administrations should endeavour to reduce to a minimum the risks of interference to passive sensors. The interference criteria for satellite passive sensors are contained in Recommendation ITU-R SA.1029.

* This line concerns only modifications to Table S21-4 and is not to be included in Annex 1 to Resolution [COM5-23].

MOD

Frequency band	Service	Limits in dB(W/m²) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
10.7 - 11.7 GHz	Fixed-Satellite (S-E)	–150 6bis	–150 + 0.5(δ-5) 6bis	–140 6bis	4 kHz
12.2 - 12.5 GHz (R3) 12.5 - 12.75 GHz (R1 and R3 countries listed in Nos. S5.494 and S5.496)	Fixed-Satellite (S-E)~~, non-GSO~~	–148 6bis	–148 + 0.5(δ-5) 6bis	–138 6bis	4 kHz
[11.7 - 12.5 GHz (R1)] [12.2 - 12.7 GHz (R2)] [11.7 - 12.2 GHz (R3)] 11.7 - 12.2 GHz (R2)	Fixed-Satellite (S-E), non-GSO	–148 ~~6bis~~ 6ter	–148 + 0.5(δ-5) ~~6bis~~ 6ter	–138 ~~6bis~~ 6ter	4 kHz

**

MOD S21.16.6

6) ~~In the bands 18.9 - 19.3 and 19.3 - 19.6 GHz, t~~These values shall provisionally apply ~~for~~only to emissions of space stations on non-geostationary satellites in networks operating with a large number of satellites, that is systems operating with more than 100 satellites (see Resolution [**COM5-23**]) ~~systems, subject to review by ITU-R, and shall apply until they are revised by a competent world radiocommunication conference (see Resolution **119 (WRC-95)**)~~.

ADD S21.16.6*bis*

6bis Although these limits apply to both GSO and non-GSO FSS satellites, values for non-GSO systems require further study (see Resolution [**COM5-23**]).

ADD S21.16.6*ter*

6ter These values require further study (see Resolution [**COM5-23**]).

Following the adoption of revised Article S21 power flux-density limits in the 18 GHz range, a consequential amendment to Resolution 46 (Rev.WRC-95) is required.

The following modifications to A2.2.1 and A2.2.3 of Annex 2 to Resolution 46 (Rev.WRC-95) is suggested to take account of this:

A2.2.1 *Sharing between feeder links of the non-GSO/MSS (space-to-Earth) and terrestrial services in the same frequency bands*

The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150 - 5 216 MHz shall in no case exceed –164 dB(W/m²) in any 4 kHz band for all angles of arrival.

** NOTE - Consideration of these bands, currently allocated to the broadcasting-satellite service, is given in Committee 4.

Emissions from a non-geostationary space station shall not exceed the following limits at the Earth's surface:

Frequency bands	Service	Limit in dB(W/m^2) for angle of arrival above the horizontal plane			Reference bandwidth
		0° – 5°	5° – 25°	25° – 90°	
6 700 - 6 825 MHz	Fixed-satellite (S-E)	–137	–137 + 0.5 (δ–5)	–127	1 MHz
6 825 - 7 075 MHz	Fixed-satellite (S-E)	–154 and –134	–154 + 0.5 (δ–5) and –134 + 0.5 (δ–5)	–144 and –124	4 kHz 1 MHz

Emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of –146 dB(W/m^2/MHz) in the bands 15.4 - 15.45 GHz and 15.65 - 15.7 GHz, and –111 dB(W/m^2/MHz) in the band 15.45 - 15.65 GHz for all angles of arrival. These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

Power flux-density limits between 17.7 GHz and 27.5 GHz.

The power flux-density at the Earth's surface produced by emissions from a space station, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the following values:

–115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

–115 + 0.5(δ-5) dB(W/m^2) in any 1 MHz band for angles of arrival δ between 5 and 25 degrees above the horizontal plane;

–105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

~~In the band 19.3 - 19.7 GHz for non-geostationary satellite systems, these values shall apply subject to review by the ITU-R and the results of this review should be considered by WRC-97 (see Resolution **119 (WRC-95)**).~~

A2.2.3 Power flux-density limits produced by non-GSO/FSS in the 20 - 30 GHz band

The power flux-density at the Earth's surface produced by emissions from a space station shall not exceed the following values:

–115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

–115 + 0.5(δ - 5) dB(W/m^2) in any 1 MHz band for angles of arrival δ between 5 and 25 degrees above the horizontal plane;

–105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

However, the following values shall provisionally apply to emissions of space stations on non-geostationary satellites in networks operating with a large number of satellites, that is systems with more than 100 satellites (see Resolution [**COM5-23**]):

–125 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

–125 + (δ - 5) dB(W/m²) in any 1 MHz band for angles of arrival δ between 5 and 25 degrees above the horizontal plane;

–105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which could be obtained under assumed free-space propagation conditions.

~~In the band 18.9 - 19.3 GHz for non-GSO satellite systems, these values shall apply subject to review by the ITU-R and the results of this review should be considered by WRC-97 (see Resolution **118 (WRC-95)**).~~

2 Resolution 121

RESOLUTION 121 (~~WRC-95~~Rev.WRC-97)

Continued Development of Interference Criteria and Methodologies for Fixed-Satellite Service Coordination Between Feeder Links of Non-Geostationary Satellite Networks in the Mobile-Satellite Service and Geostationary-Satellite Networks in the Fixed-Satellite Service in the Bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that ~~this Conference~~WRC-95 made provision for use of the bands 19.3 -19.6 GHz and 29.1 - 29.4 GHz by feeder links of non-geostationary-satellite networks in the mobile-satellite service (non-GSO/MSS) [and this Conference made provision for an additional 2 x 100 MHz in the bands 19.6 - 19.7 and 29.4 - 29.5 GHz];

b) that coordination between feeder links of non-GSO/MSS networks, and geostationary-satellite networks in the fixed-satellite service (GSO/FSS) and terrestrial networks in these bands will be in accordance with Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 of Appendix **S5**;

~~c) that the Report of the Conference Preparatory Meeting (CPM) to this Conference recognized that coordination between feeder links of non-GSO/ MSS networks and GSO/FSS networks would become more difficult as the number of satellite systems that are implemented increased;~~

~~d~~c) that simultaneous operation of GSO/FSS networks and feeder links of non-GSO/MSS networks will in most cases result in short-term, high-level interference between such networks, unless interference mitigation techniques are applied by both types of network;

d) that the CPM Report to this Conference concluded that of the interference mitigation techniques that were studied, the use of adaptive power control, use of high-gain antennas, and geographic isolation, "appear to offer the most benefit in improving the sharing between NGSO MSS feeder links and GSO/FSS networks";

e) ~~that the CPM Report to this Conference concluded that "by the use of interference reduction mechanisms, frequency sharing may be possible at 20 and 30 GHz in some cases"~~that the ITU-R has developed a Recommendation containing several alternative methodologies for deriving long-term and short-term interference criteria applicable for sharing between non-GSO MSS feeder links and GSO/FSS networks;

f) ~~that no ITU-R Recommendations have been developed on coordination methodologies and permissible interference for non-GSO/MSS feeder links, while permissible interference criteria for GSO networks proposed in the CPM Report to this Conference may require further refinements~~that further development of the Recommendation in *considering* e) would facilitate the determination of appropriate interference mitigation techniques;

~~g) that permissible interference criteria would facilitate determination of the most appropriate interference mitigation techniques;~~

~~h~~g) that No. **S5.541A** of the Radio Regulations requires the use of interference mitigation techniques in order to facilitate coordination of feeder links of non-GSO/MSS networks with GSO/FSS networks;

~~i) that, in addition to permissible interference criteria, an agreed method for calculating mutual interference between feeder links of non-GSO/MSS networks and GSO/FSS networks is required;~~

~~j~~h) that the continued development and implementation of interference mitigation techniques would facilitate the coordination of feeder links of non-GSO/MSS networks with GSO/FSS networks when the interference between such networks exceeds the applicable permissible interference criteria,

~~*recognizing*~~

~~that, while ITU-R is developing Recommendations on coordination methodologies, coordination between feeder links of non-GSO/MSS networks and GSO/FSS networks will be carried out by administrations using mutually acceptable sharing criteria,~~

resolves to invite ITU-R

1. to undertake, as a matter of urgency, the continued development of appropriate permissible interference criteria for both non-GSO/MSS feeder links and GSO/FSS networks operating in the bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz;

2. to undertake, as a matter of urgency, studies of interference mitigation techniques (including, *inter alia*, ~~uplink adaptive power control and fade compensation~~those techniques listed in *considering* d)) which ~~would~~could facilitate coordination between non-GSO/MSS feeder links and GSO/FSS networks;

3. to undertake, as a matter of urgency, studies to develop coordination methodologies for GSO/FSS networks and non-GSO/MSS feeder links operating in the bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz on an equal basis,

urges administrations

to participate actively in the aforementioned studies by submitting contributions to ITU-R,

instructs the Director of the Radiocommunication Bureau

to report on the progress of these studies to WRC-~~97~~99.

3 Resolution 119

SUP

RESOLUTION 119 (WRC-95)

SHARING BETWEEN THE FIXED-SATELLITE SERVICE AND THE FIXED SERVICE IN THE 19.3 - 19.6 GHz BAND WHEN USED BY THE FIXED-SATELLITE SERVICE TO PROVIDE FEEDER LINKS FOR NON-GEOSTATIONARY SATELLITE SYSTEMS IN THE MOBILE-SATELLITE SERVICE

4 Resolution 70

NOC

RESOLUTION 70 (WARC-92)

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 263-E
13 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SEVENTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

The following proposals are submitted for your consideration.

1 Non-GSO FSS issues (power flux-density)

WG 5B had a lengthy discussion on the subject of power flux-density limits to be applied for NGSO/FSS to protect the fixed service. Although a new Resolution is created to indicate the power flux-density limit values to be applicable to NGSO/FSS, the treatment of tables and the values of power flux-density have not been resolved. One view expressed was that the tables, values and the associated footnotes should be included both in Article S21 and in the new Resolution. The other view expressed was that the values still need further study and thus the tables should be placed only in the annex to the new Resolution. The meeting finally concluded, with one reservation, to put these tables both in Article S21 and in the new Resolution.

DRAFT RESOLUTION [COM5-23]

POWER FLUX-DENSITY LIMITS APPLICABLE TO NON-GSO FSS SYSTEMS FOR PROTECTION OF TERRESTRIAL SERVICES IN THE BANDS 10.7 - 12.75 GHz AND [18.8 - 19.3] [17.7 - 19.7] GHz*

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the power flux-density (pfd) limits specified in Table **S21-4** for the bands 10.7 - 12.75 GHz and [18.8 - 19.3] [17.7 - 19.7] GHz for the protection of the terrestrial services were originally developed assuming that potentially interfering space stations in the fixed-satellite service (FSS) would operate in the geostationary-satellite orbit (GSO);

b) that the results of studies to date of potential interference from non-GSO FSS networks in the [18.8 - 19.3] [17.7 - 19.7] GHz bands, differ as to whether the power flux-density limits in Article **S21** would provide adequate protection of the fixed service when applied to non-GSO networks with a large number of satellites (i.e., greater than 100);

c) that, in the 10.7 - 12.75 GHz band, some initial sharing studies have been undertaken and further work is required in order to assess the adequacy of the existing power flux-density limits;

d) that further studies are required of the power flux-density limits applicable to non-GSO FSS systems for protection of terrestrial services in the bands 10.7 - 12.75 GHz and [18.8 - 19.3] [17.7 - 19.7] GHz,

noting

a) that Resolution **118 (WRC-95)** requested studies of the criteria for sharing between non-GSO FSS systems and terrestrial services in the 20/30 GHz bands;

b) that non-GSO FSS networks are being developed that take into account the power flux-density limits that were in force prior to this Conference; however, in the band 18.9 - 19.3 GHz, these values were subject to review by the ITU-R;

c) that modifications to existing FSS network design or operating parameters may be needed in order to obtain conformance with the revised limits adopted by this Conference;

resolves

1 that emissions from a space station in non-GSO FSS networks in the bands 10.7 - 12.75 GHz and [18.8 - 19.3] [17.7 - 19.7] GHz shall comply with the power flux-density limits contained in Article **S21** and in Annex 1 of this Resolution for protection of terrestrial services;

2 that in view of *noting* b) in relation to the 18.8 - 19.3 GHz band in the case of non-GSO FSS networks for which complete coordination or notification information has been received by the Radiocommunication Bureau before 18 November 1995, or are in operation by that date, the power flux-density limits which were in force just prior to 27 October 1995 shall continue to apply;

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* Pending the decision of COM 5 (WG B) concerning regulatory provisions for non-GSO FSS systems, but, in any case, excluding the 19.3 - [19.6] [19.7] GHz band designated for use by feeder links for non-GSO MSS systems.

invites ITU-R

to study, as a matter of urgency, the appropriate power flux-density values to be applied to non-GSO networks in the aforementioned bands to ensure protection of the fixed service without unduly constraining the development of either networks,

requests WRC-99

to review the provisional limits referred to in *resolves* 1 based on the results of the studies carried out by ITU-R,

urges administrations

to consider reductions of the power flux-density or number of satellites in non-GSO FSS networks within the spirit of No. **S9.58** so as to facilitate sharing between non-GSO FSS networks and systems in the fixed service.

TABLE S21-4/ANNEX 1 TO RESOLUTION [COM5-23]

MOD

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
17.7 - 18.6 GHz [18.6 - 18.8] GHz[1)] 18.8 - 19.3 GHz[1)]	Fixed-Satellite (S-E)	–115 or –125[6)]	–115 + 0.5 (δ–5) or –125 + (δ-5)[6)]	–105 or –105[6)]	1 MHz
19.3 - 19.7 GHz[1)]	Fixed-Satellite (S-E)	–115	–115 + 0.5 (δ–5)	–105	1 MHz

MOD

Frequency band	Service	Limits in dB(W/m²) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
10.7 - 11.7 GHz	Fixed-Satellite (S-E)	–150 [6bis]	–150 + 0.5(δ-5) [6bis]	–140 [6bis]	4 kHz
12.2 - 12.5 GHz (R3) 12.5 - 12.75 GHz (R1 and R3 countries listed in Nos. S5.494 and S5.496)	Fixed-Satellite (S-E)~~, non-GSO~~	–148 [6bis]	–148 + 0.5(δ-5) [6bis]	–138 [6bis]	4 kHz
[11.7 - 12.5 GHz (R1)] [12.2 - 12.7 GHz (R2)] [11.7 - 12.2 GHz (R3)] 11.7 - 12.2 GHz (R2)	Fixed-Satellite (S-E), non-GSO	–148 [6bis~~ter~~]	–148 + 0.5(δ-5) [6bis~~ter~~]	–138 [6bis~~ter~~]	4 kHz

MOD S21.16.6

[6] ~~In the bands 18.9 - 19.3 and 19.3 - 19.6 GHz, t~~These values shall provisionally apply ~~for~~only to emissions of space stations on non-geostationary satellites in networks operating with a large number of satellites, such as systems operating with more than 100 satellites (see Resolution [**COM5-23**]) ~~systems, subject to review by ITU-R, and shall apply until they are revised by a competent world radiocommunication conference (see Resolution **119 (WRC-95)**)~~.

ADD S21.16.6*bis*

[6bis] Although these limits apply to both GSO and non-GSO FSS satellites, values for non-GSO systems require further study (see Resolution [**COM5-23**]).

ADD S21.16.6*ter*

[6ter] These values require further study (see Resolution [**COM5-23**]).

Following the adoption of revised Article S21 power flux-density limits in the 18 GHz range, a consequential amendment to Resolution 46(Rev.WRC-95) is required.

The following modification to Part A2.2.3 of Resolution 46(Rev.WRC-95) is suggested to take account of this:

A2.2.3 Power flux-density limits produced by non-GSO/FSS in the 20 - 30 GHz band

The power flux-density at the Earth's surface produced by emissions from a space station shall not exceed the following values:

–115 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

** NOTE - Consideration of these bands, currently allocated to the broadcasting-satellite service, is given in Committee 4.

–115 + 0.5(δ - 5) dB(W/m²) in any 1 MHz band for angles of arrival δ between 5 and 25 degrees above the horizontal plane;

–105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

However, the following values shall provisionally apply to emissions of space stations on non-geostationary satellites in networks operating with a large number of satellites, such as systems with more than 100 satellites (see Resolution [**COM5-23**]):

–125 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

–125 + (δ - 5) dB(W/m²) in any 1 MHz band for angles of arrival δ between 5 and 25 degrees above the horizontal plane;

–105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which could be obtained under assumed free-space propagation conditions.

~~In the band 18.9 - 19.3 GHz for non-GSO satellite systems, these values shall apply subject to review by the ITU-R and the results of this review should be considered by WRC-97 (see Resolution **118 (WRC-95)**).~~

2 Resolution 121

RESOLUTION 121 (~~WRC-95~~Rev.WRC-97)

Continued Development of Interference Criteria and Methodologies for Fixed-Satellite Service Coordination Between Feeder Links of Non-Geostationary Satellite Networks in the Mobile-Satellite Service and Geostationary-Satellite Networks in the Fixed-Satellite Service in the Bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

a) that ~~this Conference~~WRC-95 made provision for use of the bands 19.3 -19.6 GHz and 29.1 - 29.4 GHz by feeder links of non-geostationary-satellite networks in the mobile-satellite service (non-GSO/MSS) [and this Conference made provision for an additional 2 x 100 MHz in the bands 19.6 - 19.7 and 29.4 - 29.5 GHz];

b) that coordination between feeder links of non-GSO/MSS networks, and geostationary-satellite networks in the fixed-satellite service (GSO/FSS) and terrestrial networks in these bands will be in accordance with Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 of Appendix **S5**;

~~c) that the Report of the Conference Preparatory Meeting (CPM) to this Conference recognized that coordination between feeder links of non-GSO/ MSS networks and GSO/FSS networks would become more difficult as the number of satellite systems that are implemented increased;~~

~~d~~c) that simultaneous operation of GSO/FSS networks and feeder links of non-GSO/MSS networks will in most cases result in short-term, high-level interference between such networks, unless interference mitigation techniques are applied by both types of network;

d) that the CPM Report to this Conference concluded that of the interference mitigation techniques that were studied, the use of adaptive power control, use of high-gain antennas, and geographic isolation, "appear to offer the most benefit in improving the sharing between NGSO MSS feeder links and GSO/FSS networks";

e) ~~that the CPM Report to this Conference concluded that "by the use of interference reduction mechanisms, frequency sharing may be possible at 20 and 30 GHz in some cases"~~that the ITU-R has developed a Recommendation containing several alternative methodologies for deriving long-term and short-term interference criteria applicable for sharing between non-GSO MSS feeder links and GSO/FSS networks;

f) ~~that no ITU-R Recommendations have been developed on coordination methodologies and permissible interference for non-GSO/MSS feeder links, while permissible interference criteria for GSO networks proposed in the CPM Report to this Conference may require further refinements~~that further development of the Recommendation in *considering* e) would facilitate the determination of appropriate interference mitigation techniques;

~~g) that permissible interference criteria would facilitate determination of the most appropriate interference mitigation techniques;~~

~~h~~g) that No. **S5.541A** of the Radio Regulations requires the use of interference mitigation techniques in order to facilitate coordination of feeder links of non-GSO/MSS networks with GSO/FSS networks;

~~i) that, in addition to permissible interference criteria, an agreed method for calculating mutual interference between feeder links of non-GSO/MSS networks and GSO/FSS networks is required;~~

~~j~~h) that the continued development and implementation of interference mitigation techniques would facilitate the coordination of feeder links of non-GSO/MSS networks with GSO/FSS networks when the interference between such networks exceeds the applicable permissible interference criteria,

~~*recognizing*~~

~~that, while ITU-R is developing Recommendations on coordination methodologies, coordination between feeder links of non-GSO/MSS networks and GSO/FSS networks will be carried out by administrations using mutually acceptable sharing criteria,~~

resolves to invite ITU-R

1. to undertake, as a matter of urgency, the continued development of appropriate permissible interference criteria for both non-GSO/MSS feeder links and GSO/FSS networks operating in the bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz;

2. to undertake, as a matter of urgency, studies of interference mitigation techniques (including, *inter alia*, ~~uplink adaptive power control and fade compensation~~those techniques listed in *considering* d)) which ~~would~~could facilitate coordination between non-GSO/MSS feeder links and GSO/FSS networks;

3. to undertake, as a matter of urgency, studies to develop coordination methodologies for GSO/FSS networks and non-GSO/MSS feeder links operating in the bands 19.3 - 19.~~6~~[7] GHz and 29.1 - 29.~~4~~[5] GHz on an equal basis,

urges administrations

to participate actively in the aforementioned studies by submitting contributions to ITU-R,

instructs the Director of the Radiocommunication Bureau

to report on the progress of these studies to WRC-~~97~~99.

3 Resolution 119

SUP

RESOLUTION 119 (WRC-95)

SHARING BETWEEN THE FIXED-SATELLITE SERVICE AND THE FIXED SERVICE IN THE 19.3 - 19.6 GHz BAND WHEN USED BY THE FIXED-SATELLITE SERVICE TO PROVIDE FEEDER LINKS FOR NON-GEOSTATIONARY SATELLITE SYSTEMS IN THE MOBILE-SATELLITE SERVICE

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 264-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

REPORT BY THE CHAIRMAN OF 5 AD HOC 2

1 The ad hoc Group held one meeting and completed its work. The task of the group was to consider the disposition of Resolution 711 (WARC-92).

2 The consensus results of a wide-ranging discussion are summarized as follows:

a) many studies concerning the services allocated to, and the sharing conditions required in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz have been completed since 1992. These studies resulted in seven new ITU-R Recommendations and two revised ITU-R Recommendations;

b) this Conference has adopted RR S5.391;

c) that there are increasing requirements for spectrum below about 3 GHz to satisfy the needs of emerging communication systems;

d) that in the long term, early implementation of enhancements in technology may provide opportunities to address some of the needs referred to in c);

e) that a recommendation should be adopted to draw to the attention of administrations the importance of taking these issues into account when making assignments to these services in these bands.

3 Recommendation [COM5-A] (WRC-97) was considered in detail and agreed unanimously as shown in Document 240.

4 It was also agreed unanimously that, with the adoption of Recommendation [COM5-A] (WRC-97), Resolution 711 (WARC-92) should be suppressed.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

B.3 **PLENARY MEETING**

THIRD SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 5	239	**ARTICLE S5** – Table of allocations band 117.975 - 137 MHz – Number S5.198 – Number S5.202 – Number S5.203 – Number S5.203A – Number S5.203B – Table of allocations band 7 075 - 7 250 MHz – Number S5.459 – Table of allocations band 8 025 - 8 400 MHz – Number S5.462A – Number S5.463 – Table of allocations band 25.5 - 27 GHz – Number S5.536A – Number S5.536B **RESOLUTION COM5-9 (WRC-97)** **RESOLUTION COM5-13 (WRC-97)** **RECOMMENDATION 66 (Rev.WRC-97)** **RESOLUTION 408 (Mob-87)**

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COM 5	241	**ARTICLE S5** – Numbers: S5.55; S5.56; S5.58; S5.63; S5.67; S5.91; S5.98; S5.99; S5.107; S5.112; S5.114; S5.117; S5.128; S5.141; S5.149; S5.152; S5.154; S5.160; S5.174; S5.177; S5.181; S5.184; S5.186; S5.190; S5.192; S5.194; S5.197; S5.201; S5.210; S5.221; S5.237; S5.244; S5.259; S5.271; S5.277; S5.290; S5.296; S5.310; S5.312; S5.313; S5.322; S5.330; S5.338; S5.347; S5.349; S5.350; S5.355; S5.369; S5.381; S5.382; S5.384; S5.387; S5.400; S5.412; S5.422; S5.428 to S5.430; S5.434; S5.437; S5.439; S5.448; S5.450; S5.453; S5.454; S5.466; S5.468; S5.477; S5.478; S5.483; S5.494 to S5.496; S5.500; S5.501; S5.505; S5.508; S5.511; S5.512; S5.514; S5.521; S5.524; S5.542; S5.545; S5.546; S5.549; S5.550; S5.557; S5.564
COM 5	243	**ARTICLE S1** – Number S1.X **ARTICLE S4** – Number S4.15A **ARTICLE S5** – Table of allocations band 44 - 68 MHz – Number S5.162A – Table of allocations band 470 - 790 MHz – Number S5.291A – Table of allocations band 47.2 - 50.2 GHz – Number S5.552A **ARTICLE S11** – Number S11.24 – Number S11.26 **RESOLUTION COM5-7 (WRC-97)** **RESOLUTION COM5-5 (WRC-97)** **RECOMMENDATION 621 (WARC-92)**

A.-M. NEBES
Chairman of Committee 6

Annex: 33 pages

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ARTICLE S5

MOD

MHz
75.2 – 137

Allocation to Services		
Region 1	Region 2	Region 3
117.975 – 136	AERONAUTICAL MOBILE (R) S5.111 MOD S5.198 S5.199 S5.200 S5.201	
136 – 137	AERONAUTICAL MOBILE (R) MOD S5.202 MOD S5.203 ADD S5.203A ADD S5.203B	

MOD S5.198 *Additional allocation:* the band 117.975 - 136 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis, subject to agreement obtained under Article **14**/No. **S9.21**.

MOD S5.202 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, United Arab Emirates, Georgia, the Islamic Republic of Iran, Jordan, Kazakstan, Latvia, Moldova, Oman, Uzbekistan, Poland, Syria, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan, Turkey and Ukraine, the band 136 - 137 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

MOD S5.203 In the band 136 - 137 MHz, existing operational meteorological satellites may continue to operate, under the conditions defined in No. **S4.4** with respect to the aeronautical mobile service, until 1 January 2002. Administrations shall not authorize new frequency assignments in this band to stations in the meteorological-satellite service.

ADD S5.203A *Additional allocation:* in Israel, Mauritania, Qatar and Zimbabwe, the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis until 1 January 2005.

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ADD **S5.203B** *Additional allocation:* in Saudi Arabia, United Arab Emirates, Jordan, Oman and Syria, the band 136 - 137 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis until 1 January 2005.

MOD

MHz
5 580 – 7 450

Allocation to Services		
Region 1	Region 2	Region 3
7 075 – 7 250	FIXED MOBILE S5.458 MOD S5.459 S5.460	

MOD **S5.459** *Additional allocation:* in Russia, the frequency bands 7 100 - 7 155 MHz and 7 190 - 7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**.

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MOD

MHz
7 450 – 8 175

Allocation to Services		
Region 1	Region 2	Region 3
8 025 - 8 175	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ADD S5.462A S5.463	

MOD

MHz
8 175 – 8 750

Allocation to Services		
Region 1	Region 2	Region 3
8 175 - 8 215	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE ADD S5.462A S5.463	
8 215 - 8 400	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE ADD S5.462A S5.463	

ADD S5.462A In Regions 1 and 3 (except for Japan), in the band 8 025 - 8 400 MHz, the earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival ($\theta°$), without the consent of the affected administration:

-174 dB(W/m^2) in a 4 kHz band	for	$0° \le \theta < 5°$
-174 + 0.5 (θ - 5) dB(W/m^2) in a 4 kHz band	for	$5° \le \theta < 25°$
-164 dB(W/m^2) in a 4 kHz band	for	$25° \le \theta \le 90°$

These values are subject to study under Resolution [**COM5-9**].

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MOD **S5.463** Aircraft stations are not permitted to transmit in the band 8 025 - 8 400 MHz.

MOD

GHz
24.45 – 27

Allocation to Services		
Region 1	Region 2	Region 3
25.5 – 27	EARTH EXPLORATION-SATELLITE (space-to Earth) ADD S5.536A ADD S5.536B FIXED INTER-SATELLITE S5.536 MOBILE Standard Frequency and Time Signal-Satellite (Earth-to-space)	

ADD **S5.536A** Administrations installing earth exploration-satellite earth stations cannot claim protection from fixed and mobile stations operated by neighbouring administrations. In addition, earth stations operating in the earth exploration-satellite service should take into account Recommendation ITU-R SA.1278.

ADD **S5.536B** In Germany, Austria, Belgium, Brazil, China, the Republic of Korea, Denmark, Spain, Estonia, Finland, France, Hungary, India, Ireland, Italy, Kenya, Liechtenstein, Lithuania, Moldova, Norway, New Zealand, Oman, Uganda, Pakistan, Netherlands, the Philippines, Poland, Portugal, Slovakia, Romania, the United Kingdom, Sweden, Switzerland, Turkey, Viet Nam and Zimbabwe, earth stations operating in the earth exploration-satellite service in the band 25.5 - 27.0 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services.

RESOLUTION COM5-9 (WRC-97)

PROTECTION OF THE FIXED SERVICE IN THE FREQUENCY BAND 8 025 - 8 400 MHz SHARING WITH GEOSTATIONARY-SATELLITE SYSTEMS OF THE EARTH EXPLORATION-SATELLITE SERVICE (SPACE-TO-EARTH)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that prior to WRC-97, the band 8 025 - 8 400 MHz was allocated to the earth exploration-satellite service (space-to-Earth) on a secondary basis in Regions 1 and 3, except for those countries listed in No. **S5.464** of the Radio Regulations;

b) that the power flux-density limits given in Table S21.4 of the Radio Regulations apply to emissions from space stations of the earth exploration-satellite service (space-to-Earth);

c) that, for those administrations where the secondary allocation applied before WRC-97, geostationary orbital avoidance was not required for the fixed service and, therefore, the power flux-density limits given in Table S21.4 of the Radio Regulations may give rise to excessive interference to the fixed service;

d) that the administrations identified by No. **S5.462A** of the Radio Regulations have adopted provisional power flux-density limits lower than those shown in Table S21.4 to protect the fixed service;

e) that no studies have been conducted in this frequency band by ITU-R on the power flux-density values to apply to space stations of geostationary-satellite systems in the earth exploration-satellite service where geostationary orbital avoidance has not been implemented by stations of the fixed service,

considering further

that the band 8 025 - 8 400 MHz is used extensively by the fixed service in accordance with ITU-R channel arrangements for the 8 GHz band (see Recommendation ITU-R F.386) and is also used by some countries for television outside broadcast applications,

resolves

to invite ITU-R to study, as matter of urgency, the required power flux-density limits to be applied to space stations of geostationary-satellite systems in the earth exploration-satellite service (space-to-Earth) in the frequency band 8 025 - 8 400 MHz where orbital avoidance has not been implemented by the fixed service sharing the band,

urges administrations

to provide ITU-R with the necessary technical parameters of fixed-service links requiring protection in this frequency band.

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RESOLUTION COM5-13 (WRC-97)

USE OF THE FREQUENCY BAND 420 - 470 MHz BY THE EARTH EXPLORATION-SATELLITE SERVICE (ACTIVE)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, 1992) identified an urgent need for assessment and systematic observations of forest cover and rate of forest degradation in tropical and temperate regions;

b) that during this Conference, many countries agreed to the principle that ITU should take action in response to the need identified by UNCED;

c) that frequencies around 450 MHz have been identified as having the unique capability to penetrate the canopy of forests and to determine the ground-trunk interaction;

d) that a bandwidth of about 6 MHz is considered necessary to provide the required resolution,

recognizing

a) that this Conference considered a proposal for a secondary allocation for the earth exploration-satellite service (active) within the frequency band 432 - 438 MHz;

b) that the Report of the Conference Preparatory Meeting (CPM-97) stated that WRC-97 may deem it appropriate to defer consideration of this agenda item to WRC-[99], by which time all relevant studies should be completed;

c) that CPM-97 concluded that spaceborne sensors cannot be considered technically compatible with terrestrial tracking radars without restriction on the spaceborne sensors;

d) that measures may be needed to minimize interference to fixed, mobile, mobile-satellite, amateur, amateur-satellite and space operation services,

resolves

1 to invite ITU-R to study, as a matter of urgency, emission criteria, specific sharing criteria and operational characteristics for spaceborne sensors in the frequency band 420 - 470 MHz, and develop a relevant Recommendation;

2 to invite ITU-R to develop an ITU-R Report by the date of CPM-99 on the specific emission and operational characteristics used by the earth exploration-satellite service (active) in order to minimize the potential interference to existing services, and in order to support the selection of a frequency band having the optimal sharing scenarios;

3 that, on the basis of proposals from administrations, and taking into account the results of the ITU-R studies, the ITU-R Report mentioned in *resolves* 2, and the CPM-99 Report, [WRC-99] should consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency band 420 - 470 MHz.

RECOMMENDATION No. 66 (Rev.WRC-97)

STUDIES OF THE MAXIMUM PERMITTED LEVELS OF UNWANTED EMISSIONS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Appendix **S3** to the Radio Regulations [Rev.WRC-97] specifies the maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line;

b) that the principal objective of Appendix **S3** is to specify the maximum permitted levels of spurious emissions that, while being achievable, provide protection against harmful interference;

c) that excessive levels of unwanted emissions may give rise to harmful interference;

d) that while out-of-band emissions can also give rise to harmful interference, the Radio Regulations do not provide general limits for these emissions;

e) that while Appendix **S3** applies generally to the mean power of a transmitter and its spurious emissions, it also takes account of the variety of emissions where interpretation of the term "mean power", and thus its measurement, would be difficult, particularly in the cases of digital modulation broadband systems, pulsed modulation and narrow-band high-power transmitters;

f) that while Appendix **S3** covers spurious emissions for all radio services, those listed for space services are included only as design objectives;

g) that unwanted emissions from transmitters operating in space stations may cause harmful interference, particularly emissions from wideband amplifiers which cannot be adjusted after launch;

h) that unwanted emissions may cause harmful interference to safety services and radio astronomy and space services using passive sensors;

i) that, for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect specific services, such as safety services and passive services in specific bands;

j) that broadband digital modulation may cause unwanted emissions at frequencies far from the carrier frequency,

noting

a) that safety services and passive services have in many cases been allocated frequencies adjacent or close to those of services employing high-power transmitters;

b) that some administrations have adopted more stringent limits for spurious emissions than those specified in Appendix **S3**,

recommends that ITU-R

1. study, as a matter of urgency, the question of spurious emissions resulting from space service transmissions, and, on the basis of those studies, develop Recommendations for maximum permitted levels of spurious emissions in terms of mean power of spurious components supplied by the transmitter to the antenna transmission line;

2. submit a report to [WRC-99] on the results of its studies with a view to reviewing and including spurious emission limits for space services in Appendix **S3** of the Radio Regulations;

3. continue the study of spurious emission levels in all frequency bands, emphasizing the study of those frequency bands, services and modulation techniques not presently covered by Appendix **S3**;

4. study the question of unwanted emissions resulting from transmitters of all services and all modulation methods, and, on the basis of those studies, develop a Recommendation or Recommendations for maximum permitted levels of spurious emissions and out-of-band emissions;

5. establish appropriate measurement techniques for unwanted emissions, where those techniques do not currently exist, including the determination of reference levels for wideband transmissions as well as the applicability of reference measurement bandwidths;

6. study the reasonable boundary of spurious emissions and out-of-band emissions with a view to defining such a boundary in Appendix **S1**;

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7. study those frequency bands and instances where, for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect safety services and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

8. study those frequency bands and instances where, for technical or operational reasons, out-of-band limits may be required to protect safety services and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

9. report to a future competent conference the results of studies under *recommends* 3, 4 and 5 above, with a view to recommending whether or not it is appropriate to include general limits for out-of-band emissions in the Radio Regulations;

10. report the results of studies under *recommends* 6, 7 and 8 above to a competent conference(s).

SUP

RESOLUTION 408 (Mob-87)

MOD S5.55 *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Georgia, Kazakstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 - 17 kHz is also allocated to the radionavigation service on a primary basis.

MOD S5.56 The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

MOD S5.58 *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Georgia, Kazakstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 67 - 70 kHz is also allocated to the radionavigation service on a primary basis.

SUP S5.63

MOD S5.67 *Additional allocation:* in Azerbaijan, Bulgaria, Georgia, Mongolia, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.

MOD S5.91 *Additional allocation:* in the Philippines and Sri Lanka, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.

MOD S5.98 *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, Moldova, the Netherlands, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.99 *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq, Libya, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya, Somalia, Swaziland and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

MOD S5.112 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iceland, Italy, Malta, Norway, Sri Lanka, Turkey and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.114 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iraq, Italy, Malta, Norway, Turkey and Yugoslavia, the band 2 502 - 2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.117 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Côte d'Ivoire, Denmark, Egypt, France, Greece, Iceland, Italy, Liberia, Malta, Norway, Sri Lanka, Togo, Turkey and Yugoslavia, the band 3 155 - 3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.128 In Afghanistan, Argentina, Armenia, Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakstan, Mali, Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

MOD S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya and Madagascar, the band 7 000 - 7 050 kHz is allocated to the fixed service on a primary basis.

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MOD S5.149 In making assignments to stations of other services to which the bands:

13 360 - 13 410 kHz,
25 550 - 25 670 kHz,
37.5 - 38.25 MHz,
73 - 74.6 MHz in Regions 1 and 3,
150.05 - 153 MHz in Region 1,
322 - 328.6 MHz*,
406.1 - 410 MHz,
608 - 614 MHz in Regions 1 and 3,
1 330 - 1 400 MHz*,
1 610.6 - 1 613.8 MHz*,
1 660 - 1 670 MHz,
1 718.8 - 1 722.2 MHz*,
2 655 - 2 690 MHz,
3 260 - 3 267 MHz*,
3 332 - 3 339 MHz*,
3 345.8 - 3 352.5 MHz*,
4 825 - 4 835 MHz*,
4 950 - 4 990 MHz,
4 990 - 5 000 MHz,
6 650 - 6 675.2 MHz*,
10.6 - 10.68 GHz,
14.47 - 14.5 GHz*,
22.01 - 22.21 GHz*,
22.21 - 22.5 GHz,
22.81 - 22.86 GHz*,
23.07 - 23.12 GHz*,
31.2 - 31.3 GHz,
31.5 - 31.8 GHz in Regions 1 and 3,
36.43 - 36.5 GHz*,
42.5 - 43.5 GHz,
42.77 - 42.87 GHz*,
43.07 - 43.17 GHz*,
43.37 - 43.47 GHz*,
48.94 - 49.04 GHz*,
72.77 - 72.91 GHz*,
93.07 - 93.27 GHz*,
97.88 - 98.08 GHz*,
140.69 - 140.98 GHz*,
144.68 - 144.98 GHz*,
145.45 - 145.75 GHz*,
146.82 - 147.12 GHz*,
150 - 151 GHz*,
174.42 - 175.02 GHz*,
177 - 177.4 GHz*,
178.2 - 178.6 GHz*,
181 - 181.46 GHz*,
186.2 - 186.6 GHz*,
250 - 251 GHz*,
257.5 - 258 GHz*,
261 - 265 GHz,
262.24 - 262.76 GHz*,
265 - 275 GHz,
265.64 - 266.16 GHz*,
267.34 - 267.86 GHz*,
271.74 - 272.26 GHz*

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **S4.5** and **S4.6** and Article **S29**).

MOD S5.152 *Additional allocation:* in Armenia, Azerbaijan, China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

MOD **S5.154** *Additional allocation:* in Armenia, Azerbaijan, Georgia, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18068 - 18168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.

MOD **S5.160** *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, Swaziland and Zaire, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD **S5.174** *Alternative allocation:* in Bulgaria, Hungary, Poland and Romania, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960).

MOD **S5.177** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD **S5.181** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, Sweden and Switzerland, the band 74.8 - 75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

MOD **S5.184** *Additional allocation:* in Bulgaria and Romania, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).

SUP **S5.186**

MOD **S5.190** *Additional allocation:* in Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. **S9.21**.

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MOD **S5.192** *Additional allocation:* in China and the Republic of Korea, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.194** *Additional allocation:* in Azerbaijan, Georgia, Lebanon, Kyrgyzstan, Syria, Somalia and Turkmenistan, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis.

MOD **S5.197** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, and Sweden, the band 108 - 111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. **S9.21**.

MOD **S5.201** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Latvia, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

MOD **S5.210** *Additional allocation:* in Austria, France, Italy, Liechtenstein, Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.

MOD **S5.221** Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Honduras, Hungary, India, the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russia, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe.

MOD **S5.237** *Additional allocation:* in the Congo, Eritrea, Ethiopia, Gambia, Guinea, Libya, Malawi, Mali, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 223 MHz is also allocated to the fixed and mobile services on a secondary basis.

SUP **S5.244**

MOD **S5.259** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria and Sweden, the band 328.6 - 335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

MOD **S5.271** *Additional allocation:* in Azerbaijan, Belarus, China, Estonia, Georgia, India, Latvia, Lithuania, Kyrgyzstan, Turkmenistan and Ukraine, the band 420 - 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.

MOD **S5.277** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Cameroon, the Congo, Djibouti, Estonia, Gabon, Georgia, Hungary, Kazakstan, Latvia, Mali, Moldova, Mongolia, Uzbekistan, Pakistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.

MOD **S5.290** *Different category of service:* in Afghanistan, Armenia, Azerbaijan, Belarus, China, Georgia, Japan, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460 - 470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.

MOD **S5.296** *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland and Tunisia, the band 470 - 790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

SUP **S5.310**

MOD **S5.312** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 645 - 862 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

SUP **S5.313**

MOD **S5.322** In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**) excluding Algeria, Egypt, Spain, Libya, Morocco and South Africa, subject to agreement obtained under No. **S9.21**.

MOD **S5.330** *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Morocco, Mozambique, Nepal, Nigeria, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo and Yemen, the band 1 215 - 1 300 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.338** In Azerbaijan, Bulgaria, Georgia, Mongolia, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the existing installations of the radionavigation service may continue to operate in the band 1 350 - 1 400 MHz.

MOD **S5.347** *Different category of service:* in Bangladesh, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Cuba, Denmark, Egypt, Greece, Ireland, Italy, Jordan, Kenya, Mozambique, Portugal, Sri Lanka, Swaziland, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1 452 - 1 492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007.

MOD **S5.349** *Different category of service:* in Saudi Arabia, Azerbaijan, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, France, Georgia, the Islamic Republic of Iran, Iraq, Israel, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, Mongolia, Oman, Qatar, Syria, Kyrgyzstan, Romania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 525 - 1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).

MOD **S5.350** *Additional allocation:* in Azerbaijan, Georgia, Kyrgyzstan, Turkmenistan and Ukraine, the band 1 525 - 1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.

MOD **S5.355** *Additional allocation:* in Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, Oman, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo, Yemen and Zambia, the bands 1 540 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a secondary basis.

MOD **S5.369** *Different category of service:* in Angola, Australia, Burundi, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD **S5.381** *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, the Islamic Republic of Iran, Malaysia, Pakistan and Sri Lanka, the band 1 690 - 1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD **S5.382** *Different category of service:* in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Georgia, Guinea, Hungary, Iraq, Israel, Jordan, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690 - 1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

MOD **S5.384** *Additional allocation:* in India, Indonesia and Japan, the band 1 700 - 1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.

MOD **S5.387** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Mali, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 1 770 - 1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD **S5.400** *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Sudan, Swaziland, Togo, Zaire and Zambia, the allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD **S5.412** *Alternative allocation:* in Azerbaijan, Bulgaria, Georgia, Kyrgyzstan, Turkmenistan and Ukraine, the band 2 500 - 2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD **S5.422** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, Malaysia, Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia, Zaire and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

MOD **S5.428** *Additional allocation:* in Azerbaijan, Bulgaria, Cuba, Georgia, Kazakstan, Mongolia, Poland, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 3 100 - 3 300 MHz is also allocated to the radionavigation service on a primary basis.

MOD **S5.429** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

MOD **S5.430** *Additional allocation:* in Azerbaijan, Bulgaria, Cuba, Georgia, Mongolia, Poland, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 3 300 - 3 400 MHz is also allocated to the radionavigation service on a primary basis.

SUP **S5.434**

MOD **S5.437** *Additional allocation:* in Germany and Norway, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.

MOD **S5.439** *Additional allocation:* in China, the Islamic Republic of Iran and Libya, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.

MOD S5.448 *Additional allocation:* in Austria, Azerbaijan, Bulgaria, Georgia, Libya, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.

MOD S5.450 *Additional allocation:* in Austria, Azerbaijan, Bulgaria, Georgia, the Islamic Republic of Iran, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD S5.453 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650 -5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.454 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **S5.33**).

MOD S5.466 *Different category of service:* in Israel, Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400 - 8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**).

MOD S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Swaziland, Tanzania, Chad, Togo, Tunisia and Yemen, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.477 *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sweden, Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

MOD S5.478 *Additional allocation:* in Azerbaijan, Bulgaria, Georgia, Kazakstan, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 9800 - 10000 MHz is also allocated to the radionavigation service on a primary basis.

MOD S5.483 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, China, Colombia, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Georgia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Democratic People's Republic of Korea, Romania, Russia, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the band 10.68 - 10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

MOD S5.494 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Nigeria, Qatar, Syria, Senegal, Somalia, Sudan, Chad, Togo, Yemen and Zaire, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.495 *Additional allocation:* in Bosnia and Herzegovina, Croatia, Denmark, France, Greece, Liechtenstein, Monaco, Norway, Uganda, Portugal, Romania, Slovenia, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

MOD S5.496 *Additional allocation:* in Austria, Azerbaijan, Georgia, Kyrgyzstan, Turkmenistan and Ukraine, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in Article **S21**, Table S21-4 for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.

MOD S5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, Mali, Malta, Morocco, Mauritania, Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Chad and Tunisia, the band 13.4 - 14 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.501 *Additional allocation:* in Austria, Azerbaijan, Bulgaria, Georgia, Hungary, Japan, Mongolia, Kyrgyzstan, Romania, the United Kingdom, Turkmenistan and Ukraine, the band 13.4 - 14 GHz is also allocated to the radionavigation service on a primary basis.

MOD S5.505 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

MOD S5.508 *Additional allocation:* in Germany, Austria, Bosnia and Herzegovina, France, Greece, Ireland, Iceland, Italy, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Portugal, the United Kingdom, Slovenia, Switzerland, Turkey and Yugoslavia, the band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis.

MOD S5.511 *Additional allocation:* in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, the Islamic Republic of Iran, Iraq, Israel, Kuwait, Lebanon, Libya, Pakistan, Qatar, Syria, Slovenia, Somalia and Yugoslavia, the band 15.35 - 15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.

MOD S5.512 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, the Islamic Republic of Iran, Jordan, Kuwait, Libya, Malaysia, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Slovenia, Somalia, Sudan, Swaziland, Tanzania, Chad, Yemen and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD S5.514 *Additional allocation:* in Algeria, Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Slovenia, Sudan, Sweden, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply.

MOD S5.521 *Alternative allocation:* in Germany, Denmark, the United Arab Emirates, Greece, Slovakia and the Czech Republic, the band 18.1 - 18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis (see No. **S5.33**). The provisions of No. **S5.519** also apply.

MOD S5.524 *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan, Tanzania, Chad, Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

MOD **S5.542** *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Pakistan, Qatar, Syria, Somalia, Sudan, Sri Lanka and Chad, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.

MOD **S5.545** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31 - 31.3 GHz to the space research service is on a primary basis (see No. **S5.33**).

MOD **S5.546** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31.5 - 31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).

MOD **S5.549** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Malta, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Togo, Tunisia, Yemen and Zaire, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.550** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. **S5.33**).

MOD **S5.557** *Additional allocation:* in Japan, the band 54.25 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.

MOD **S5.564** *Additional allocation:* in Germany, Argentina, Spain, Finland, France, India, Italy and the Netherlands, the band 261 - 265 GHz is also allocated to the radio astronomy service on a primary basis.

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ARTICLE S1

Terms and Definitions

ADD **S1.X** *High Altitude Platform Station*: A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.

ARTICLE S4

Assignment and Use of Frequencies

ADD **S4.15A** Transmissions to or from high altitude platform stations shall be limited to bands specifically identified in Article **S5**.

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ARTICLE S5

MHz

MOD **40.98 – 68**

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td>44 – 47</td><td colspan="2">FIXED
MOBILE
S5.162 ADD S5.162A</td></tr>
<tr><td rowspan="4">47 – 68
BROADCASTING

S5.163 S5.164 S5.165
S5.169 S5.171
ADD S5.162A</td><td>47 – 50
FIXED
MOBILE</td><td>47 – 50
FIXED
MOBILE
BROADCASTING</td></tr>
<tr><td colspan="2">50 – 54
AMATEUR
S5.166 S5.167 S5.168 S5.170</td></tr>
<tr><td>54 – 68
BROADCASTING
Fixed
Mobile

S5.172</td><td>54 – 68
FIXED
MOBILE
BROADCASTING</td></tr>
</table>

ADD S5.162A *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, Netherlands, Poland, Portugal, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Switzerland and Turkey, the band 46 - 68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution [**COM5-5**] (WRC-97).

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MOD

MHz
470 – 890

Allocation to Services		
Region 1	Region 2	Region 3
470 – 790 BROADCASTING S5.149 S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312 ADD S5.291A	**470 – 512** BROADCASTING Fixed Mobile S5.292 S5.293	**470 – 585** FIXED MOBILE BROADCASTING S5.291 S5.298

ADD S5.291A *Additional allocation:* in Germany, Austria, Denmark, Estonia, Finland, Liechtenstein, Netherlands, the Czech Republic and Switzerland, the band 470 - 494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution [**COM5-5**] (WRC-97).

Frequency Allocations

MOD

GHz
42.5 – 54.25

Allocation to Services		
Region 1	Region 2	Region 3
47.2 – 50.2	FIXED FIXED-SATELLITE (Earth-to-space) S5.552 MOBILE S5.149 S5.340 ADD S5.552A S5.555	

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ADD S5.552A The allocation to the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is intended for use by high altitude platform stations. The use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is subject to the provisions of Resolution [**COM5-7**].

ARTICLE S11

Notification and Recording of Frequency Assignments[1]

MOD S11.24 Notices relating to assignments for stations of terrestrial services, except for those referred to in No. **S11.25** or **ADD S11.26**, shall reach the Bureau not earlier than three months before, preferably not later than one month before, and in no case later than one month after the assignments are brought into use.

ADD S11.26 Notices relating to assignments for high altitude platform stations in the fixed service in the 47.2 - 47.5 GHz and 47.9 - 48.2 GHz bands shall reach the Bureau not earlier than five years before, preferably not later than three months before, and in no case later than one month before the assignments are brought into use.

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ADD

RESOLUTION COM5-7 (WRC-97)

USE OF THE BANDS 47.2 - 47.5 GHz AND 47.9 - 48.2 GHz BY HIGH ALTITUDE PLATFORM STATIONS IN THE FIXED SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 47.2 - 50.2 GHz is allocated to the fixed, mobile and fixed-satellite services on a co-primary basis;

b) that WRC-97 has made provision for operation of high altitude platform stations, also known as stratospheric repeaters, within the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz;

c) that ITU has among its purposes "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. 6 of the Constitution of the ITU (Geneva, 1992));

d) that systems based on new technologies using high altitude platforms will be able to provide high-capacity, competitive services to urban and rural areas;

e) that high altitude platform systems are in an advanced stage of development and some countries have notified such systems to ITU;

f) that the Radio Regulations Board issued a provisional rule of procedure concerning notification periods in No. **S11.24** (RR 1228) in February 1997, pending a final decision by WRC-97;

g) that in spite of the urgency attached to the development of such systems, technical, sharing and regulatory issues should be studied in order to achieve the most efficient use of the spectrum available for these systems;

h) that technical studies are required in order to ascertain the extent to which sharing of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is feasible between systems using high altitude platforms in the fixed service and systems in the fixed, fixed-satellite and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;

i) that the radio astronomy service has primary allocations in the bands 42.5 - 43.5 GHz and 48.94 - 49.04 GHz;

j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude relay platforms and the feasibility of sharing between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4);

k) that No. **S5.552** urges administrations to reserve fixed-satellite service use of the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service, and that preliminary ITU-R studies indicate that high altitude platforms stations in the fixed service may share with broadcasting-satellite feeder links;

l) that the development of services using high altitude platforms in these bands requires major investment and that manufacturers and operators should be given the confidence to make the necessary investment in these applications,

resolves

1 to urge administrations to facilitate coordination between high altitude platforms in the fixed service operating in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz and other co-primary services in their territory and adjacent territories;

2 that, on a provisional basis, the procedures of Article **S9** shall be used for coordination between satellite systems and high altitude platform systems;

3 to request ITU-R to carry out urgently studies on the appropriate technical sharing criteria for the situations referred to in *considering* h), with priority given to the sharing with other systems in the fixed and fixed-satellite services, in particular the determination of the appropriate geographical separation from feeder links in the broadcasting-satellite service;

4 that [WRC-99] should review the results of these studies and consider refinement of the regulatory provisions that might facilitate a broader application of these high altitude platform technologies,

instructs the Director of the Radiocommunication Bureau

1 that notices concerning high altitude platform stations that were received by the Bureau prior to 22 November 1997, and provisionally recorded in the ITU Master International Frequency Register in accordance with the provisional rule of procedure issued by the Radio Regulations Board, shall be maintained;

2 that from 22 November 1997, and pending review of the sharing studies in *considering* h) and review of the notification process by [WRC-99], the Bureau shall accept notices in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz only for high altitude platform stations in the fixed service and for feeder links for the broadcasting-satellite service, shall continue to process notices for FSS networks (except for feeder links for the broadcasting-satellite service) for which complete information for advance publication has been received prior to 27 October 1997, and shall inform the notifying administrations accordingly.

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RESOLUTION COM5-5 (WRC-97)

IMPLEMENTATION OF WIND PROFILER RADARS

The World Radiocommunication Conference (Geneva, 1997),

having noted

a request to ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars,

considering

a) that wind profiler radars are vertically-directed Doppler radars exhibiting characteristics similar to radiolocation systems;

b) that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;

c) that it is necessary to use frequencies in different ranges in order to have options for different performance and technical characteristics;

d) that, in order to conduct measurements up to a height of 30 km, it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km);

e) that some administrations have either already deployed, or plan to expand their use of, wind profiler radars in operational networks for studies of the atmosphere and to support weather monitoring, forecasting and warning programmes;

f) that the ITU radiocommunication study groups have studied the technical and sharing considerations between wind profiler radars and other services allocated in bands near 50 MHz, 400 MHz and 1 000 MHz,

considering further

a) that some administrations have addressed this matter nationally by assigning frequencies for use by wind profiler radars in existing radiolocation bands or on a non-interference basis in other bands;

b) the work of the Voluntary Group of Experts on the Allocation and Improved Use of the Radio Frequency Spectrum and Simplification of the Radio Regulations supports increased flexibility in the allocation of frequency spectrum,

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noting in particular

a) that wind profilers radars operating in the meteorological aids service in the band 400.15 - 406.0 MHz interfere with satellite emergency position-indicating radio beacons operating in the mobile-satellite service in the band 406.0 - 406.1 MHz under No. **S5.266**;

b) that in accordance with No. **S5.267**, any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited,

resolves

1 to urge administrations to implement wind profiler radars as radiolocation service systems in the following bands, having due regard to the potential for incompatibility with other services and assignments to stations in these services, thereby taking due account of the principle of geographical separation, in particular with regard to neighbouring countries, and keeping in mind the category of service of each of these services:

46 - 68 MHz in accordance with No. **S5.162A**

440 - 450 MHz

470 - 494 MHz in accordance with No. **S5.291A**

904 - 928 MHz in Region 2 only

1 270 - 1 295 MHz

1 300 - 1 375 MHz;

[1a)] in case compatibility between wind profiler radars and other radio applications operating in the band 440 - 450 MHz or 470 - 494 MHz cannot be achieved, the bands 420 - 435 MHz or 438 - 440 MHz could be considered for use;

2 to urge administrations to implement wind profiler radars in accordance with Recommendations ITU-R M.1226, ITU-R M.1085-1 and ITU-R M.1227 for the frequency bands around 50 MHz, 400 MHz and 1 000 MHz, respectively;

3 to urge administrations not to implement wind profiler radars in the band 400.15 - 406 MHz; and

4 to urge administrations currently operating wind profiler radars in the band 400.15 - 406.0 MHz to discontinue them as soon as possible,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO, IMO and WMO.

SUP

RECOMMENDATION 621 (WARC-92)

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 266-E
12 November 1997

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

B.4 **PLENARY MEETING**

FOURTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 4	245	**ARTICLE S1** – Number S1.109A **ARTICLE S5** – Number S5.287 **ARTICLE S18** – Number S18.1 **ARTICLE S19** **ARTICLE S30** – Number S30.1 **ARTICLE S31** – Number S31.1 – Number S31.16 – Number S31.17 – Number S31.18 – Number S31.20 **ARTICLE S32** – Number S32.5A and S32.5B – Number S32.9 – Number S32.10A **ARTICLE S47** – Number S47.19 – Numbers S47.23 and S47.24 – Table S47-1 **ARTICLE S48** – Numbers S48.5 to S48.7 **APPENDIX S18**

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RESOLUTION 310 (Rev.WRC-97)
RESOLUTION 331 (Rev.WRC-97)
RESOLUTION COM4-1 (WRC-97)
RESOLUTION COM4-2 (WRC-97)
RESOLUTION COM4-3 (WRC-97)
RESOLUTION COM4-4 (WRC-97)
RESOLUTION COM4-5 (WRC-97)
RESOLUTION COM4-7 (WRC-97)
RESOLUTION COM4-8 (WRC-97)

A.-M. NEBES
Chairman of Committee 6

Annex: 32 pages

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ARTICLE S1

ADD S1.109A *Adaptive System:* A radiocommunication system which varies its radio characteristics according to channel quality.

ARTICLE S5

Frequency Allocations

MOD S5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174 (see Resolution [**COM4-2**]).

ARTICLE S18

Licences

NOC S18.1

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ARTICLE S19

Identification of Stations

Section I. General Provisions

NOC **S19.1 to S19.27**

MOD **S19.28** § 11. Each Member State reserves the right to establish its own measures for identifying its stations used for national defense. However, it shall use, as far as possible, call signs recognizable as such, and containing the distinctive characters of its nationality.

Section II. Allocation of International Series and Assignment of Call Signs

ADD **S19.28A** § 11A.(1) For the purpose of the supply of identification signals, a "territory or geographical area" shall be understood to mean the territory within the limits of which the station is located. For mobile stations, it shall be understood to mean the territory within the limits of which the responsible administration is located. A territory which does not have full responsibility for its international relations shall also be considered as a geographical area for this purpose.

ADD **S19.28B** § 11A.(2) In all documents of the Union where the terms "***allocation of call sign series***" and "***assignment of call signs***" are to be used, they shall be used with the following meaning:

Identification means	Terms used in these Regulations
International series of call signs (including maritime identification digits (MID) and selective call numbers)	Allocation to the administration of a Member State (see definition in CS No. 1002)
Call signs (including maritime indentification digits (MID) and selective call numbers)	Assignment by any administration to stations operating in a territory or geographical area (see S19.28A)

MOD **S19.29** § 12. (1) All stations open to international public correspondence, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of the territory or geographical area in which they are located, shall have call signs from the international series allocated to its administration as given in the Table of Allocation of International Call Sign Series in Appendix **S42**.

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NOC **S19.30 to S19.33**

MOD **S19.34** § 15. The Secretary-General shall be responsible for allocating maritime identification digits to administrations and shall regularly publish information regarding allocated maritime identification digits (MID).

SUP **S19.34.1**

MOD **S19.35** § 16. The Secretary-General shall be responsible for allocating additional maritime identification digits to administrations within the limits specified[3], provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations (see Resolution **27 (WRC-95)**).

SUP **S19.35.1**

MOD **S19.35.2** [3] In no circumstances may an administration claim more MIDs than the total number of its ship stations shown in the ITU List of Ship Stations (List V) divided by 1000.

MOD **S19.36** § 17. A single MID has been allocated initially to each administration. A second MID should not be requested unless the MID first allocated is more than 80% exhausted in the basic category of three trailing zeros and the rate of assignments is such that 90% exhaustion is foreseen. The same criteria should be applied to subsequent requests for MIDs.

NOC **S19.37**

MOD **S19.38** § 19. (1) Each administration shall choose the call signs and, if the selective calling system used is in accordance with Recommendation ITU-R M.257-3, the ship station selective call numbers and the coast station identification numbers of its stations from the international series allocated or supplied to it; and shall notify this information to the Secretary-General together with the information which is to appear in Lists I, IV, V, VI and VIIIA. These notifications do not include call signs assigned to amateur and experimental stations.

MOD **S19.39** (2) Each administration shall choose the maritime mobile service identities of its stations from the maritime identification digits allocated to it and notify this information to the Secretary-General for inclusion in the relevant lists, as provided for in Article **S20**.

NOC **S19.40 to S19.44.1**

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Section III. Formation of Call Signs

NOC **S19.45 to S19.71**

Section IV. Identification of Stations Using Radiotelephony

NOC **S19.72 to S19.82**

Section V. Selective Call Numbers in the Maritime Mobile Service

NOC **S19.83 to S19.95**

MOD **S19.96** (2) Each administration shall choose the selective call numbers to be assigned to its ship stations from the blocks of the series supplied to it. Administrations shall notify the Radiocommunication Bureau immediately in accordance with **S20.16** when assigning selective call numbers to ship stations.

NOC **S19.97**

Section VI. Maritime Mobile Service Identities in the Maritime Mobile Service and the Maritime Mobile-Satellite Service

NOC **S19.98** *A. General*

MOD **S19.99** § 39. When a station[1] in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Nos. **S19.100** to **S19.126**, in accordance with relevant ITU-R and ITU-T Recommendations (see Resolution **27 (WRC-95)**). In accordance with **S20.16,** administrations shall notify the Radiocommunication Bureau immediately when assigning maritime mobile service identities.

NOC **S19.99.1**

NOC **S19.100 to S19.106**

SUP **S19.107**

NOC **S19.108** *B. Maritime Identification Digits (MID)*

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NOC **S19.109**

NOC **S19.110** *C. Ship Station Identities*

NOC **S19.111 to S19.117**

NOC **S19.118** *D. Group Ship Station Call Identities*

NOC **S19.119**

MOD **S19.120** (2) The MID represents only the territory or geographical area of the administration assigning the group ship station call identity and does not therefore prevent group calls to fleets containing more than one ship nationality.

NOC **S19.121** *E. Coast Station Identities*

NOC **S19.122**

MOD **S19.123** (2) The MID reflects the territory or geographical area in which the coast station or coast earth station is located.

NOC **S19.124** *F. Group Coast Station Call Identities*

NOC **S19.125**

MOD **S19.126** (2) The MID represents only the territory or geographical area of the administration assigning the group coast station call identity. The identity may be assigned to stations of one administration which are located in only one geographical region as indicated in the relevant ITU-T Recommendation.

Section VII. Special Provisions

NOC **S19.127 to S19.131**

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ARTICLE S30

General Provisions

Section I. Introduction

MOD **S30.1** § 1. This Chapter contains the provisions for the operational use of the Global Maritime Distress and Safety System (GMDSS), which is fully defined in the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. Distress, urgency and safety transmissions may also be made, using Morse telegraphy or radiotelephony techniques, in accordance with the provisions of Appendix **S13** and relevant ITU-R Recommendations. Stations of the maritime mobile service, when using frequencies and techniques in conformity with Appendix **S13**, shall comply with the appropriate provisions of that Appendix.

ARTICLE S31

Frequencies for the Global Maritime Distress and Safety System (GMDSS)

Section I. General

MOD **S31.1** § 1. The frequencies to be used for the transmission of distress and safety information under the GMDSS are contained in Appendix **S15**. In addition to the frequencies listed in Appendix **S15**, coast stations should use other appropriate frequencies for the transmission of safety messages.

ADD **S31.16** *C. Ship Stations*

MOD **S31.17** § 8. (1) Ship stations, where so equipped, shall, while at sea, maintain an automatic digital selective calling watch on the appropriate distress and safety calling frequencies in the frequency bands in which they are operating. Ship stations, where so equipped, shall also maintain watch on the appropriate frequencies for the automatic reception of transmissions of meteorological and navigational warnings and other urgent information to ships. However, ship stations shall also continue to apply the appropriate watch-keeping provisions of Appendix **S13** (see Resolution **331 (Rev.WRC-97)**).

NOC **S31.18**

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MOD **S31.20** § 9. Ship earth stations complying with the provisions of this Chapter shall, while at sea, maintain watch except when communicating on a working channel.

ARTICLE S32

Operational Procedures for Distress and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section I. General

ADD **S32.5A** § 4A. Each administration shall ensure that suitable arrangements are made for assigning and registering identities used by ships participating in the GMDSS, and shall make registration information available to rescue coordination centres on a 24-hour day, 7-day week basis. Where appropriate, administrations shall notify responsible organizations immediately of additions, deletions and other changes in these assignments (see Nos. **S19.39, S19.96** and **S19.99**). Registration information shall be in accordance with Resolution [**COM4-1**].

ADD **S32.5B** Any GMDSS shipboard equipment which is capable of transmitting position coordinates as part of a distress alert message and which does not have an integral electronic position fixing system receiver shall be interconnected to a separate navigation receiver, if one is installed, to automatically provide that information.

MOD **S32.9** § 7. (1) The transmission of a distress alert indicates that a mobile unit[1] or person[2] is threatened by grave and imminent danger and requests immediate assistance. The distress alert is a digital selective call using a distress call format[3] in the bands used for terrestrial radiocommunication or a distress message format, in which case it is relayed through space stations.

ADD **S32.10A** § 7A. A distress alert is false if it was transmitted without any indication that a mobile unit or person was in distress and required immediate assistance (see No. **S32.9**). Administrations receiving a false distress alert shall report this infringement in accordance with Section V of Article **S15**, if that alert:

a) was transmitted intentionally;

[b) was not cancelled in accordance with Resolution [**COM4-12**];]

c) could not be verified as a result of either the ship's failure to keep watch on appropriate frequencies in accordance with Nos. **S31.16** - **S31.20**, or its failure to respond to calls from an authorized rescue authority;

d) was repeated; or

e) was transmitted using a false identity.

Administrations receiving such a report shall take appropriate steps to ensure that the infringement does not recur. No action should normally be taken against any ship or mariner for reporting and cancelling a false distress alert.

ARTICLE S47

Operator's Certificates

Section II. Categories of Operator's Certificates

NOC **S47.19**

NOC **S47.23**

NOC **S47.24**

NOC

TABLE S47-1

Requirements for Radio Electronic and Operator's Certificates

ARTICLE S48

Personnel

NOC **S48.5**

NOC **S48.6**

MOD **S48.7**

§ 5. The personnel of ship stations and ship earth stations for which a radio installation is not compulsory either under international agreements or national regulations and which use the frequencies and techniques prescribed in Chapter **SVII** shall be adequately qualified and certificated in accordance with the administration’s requirements. Guidance concerning appropriate qualifications and certification is provided in Resolution [**COM4-4**]. This Resolution describes two appropriate certificates for use by personnel of ship stations and ship earth stations for which a radio installation is not compulsory.

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APPENDIX S18

Table of Transmitting Frequencies in the VHF Maritime Mobile Band

(see Article **S52**)

Note: For assistance in understanding the Table, see notes *a)* to *n)* below.

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port Operations and Ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
60		156.025	160.625			x	x
01		156.050	160.650			x	x
61		156.075	160.675			x	x
02		156.100	160.700			x	x
62		156.125	160.725			x	x
03		156.150	160.750			x	x
63		156.175	160.775			x	x
04		156.200	160.800			x	x
64		156.225	160.825			x	x
05		156.250	160.850			x	x
65		156.275	160.875			x	x
06	*f)*	156.300		x			
66		156.325	160.925			x	x
07		156.350	160.950			x	x
67	*h)*	156.375	156.375	x	x		
08		156.400		x			
68		156.425	156.425		x		
09	*i)*	156.450	156.450	x	x		
69		156.475	156.475	x	x		
10	*f)*	156.500	156.500	x	x		
70	*j)*	156.525	156.525	Digital selective calling for distress, safety and calling			
11		156.550	156.550		x		

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port Operations and Ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
71		156.575	156.575		x		
12		156.600	156.600		x		
72	*i)*	156.625		x			
13	*k)*	156.650	156.650	x	x		
73	*h)*	156.675	156.675	x	x		
14		156.700	156.700		x		
74		156.725	156.725		x		
15	*g)*	156.750	156.750	x	x		
75	*n)*	156.775			x		
16		156.800	156.800	DISTRESS, SAFETY AND CALLING			
76	*n*	156.825			x		
17	*g)*	156.850	156.850	x	x		
77		156.875		x			
18	*m)*	156.900	161.500		x	x	x
78		156.925	161.525			x	x
19		156.950	161.550			x	x
79		156.975	161.575			x	x
20		157.000	161.600			x	x
80		157.025	161.625			x	x
21		157.050	161.650			x	x
81		157.075	161.675			x	x
22		157.100	161.700			x	x
82	*m)*	157.125	161.725		x	x	x
23		157.150	161.750			x	x
83	*m)*	157.175	161.775		x	x	x
24		157.200	161.800			x	x
84	*m)*	157.225	161.825		x	x	x
25		157.250	161.850			x	x

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port Operations and Ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
85	*m)*	157.275	161.875		x	x	x
26		157.300	161.900			x	x
86	*m)*	157.325	161.925		x	x	x
27		157.350	161.950			x	x
87		157.375			x		
28		157.400	162.000			x	x
88		157.425			x		
AIS 1	*l)*	161.975	161.975				
AIS 2	*l)*	162.025	162.025				

NOTES REFERRING TO THE TABLE

General notes

a) Administrations may designate frequencies in the intership, port operations and ship movement services for use by light aircraft and helicopters to communicate with ships or participating coast stations in predominantly maritime support operations under the conditions specified in Nos. **S51.69**, **S51.73**, **S51.74**, **S51.75**, **S51.76**, **S51.77** and **S51.78**. However, the use of the channels which are shared with public correspondence shall be subject to prior agreement between interested and affected administrations.

b) The channels of the present Appendix, with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may also be used for highspeed data and facsimile transmissions, subject to special arrangement between interested and affected administrations.

c) The channels of the present Appendix, but preferably channel 28 and with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may be used for direct-printing telegraphy and data transmission, subject to special arrangement between interested and affected administrations.

d) The frequencies in this table may also be used for radiocommunications on inland waterways in accordance with the conditions specified in No. **S5.226**.

e) Administrations having an urgent need to reduce local congestion may apply 12.5 kHz channel interleaving on a non-interference basis to 25 kHz channels, provided:

1) Recommendation ITU-R M.1084-2 shall be taken into account when changing to 12.5 kHz channels;

2) it shall not affect the 25 kHz channels of the Appendix **S18** maritime mobile distress and safety frequencies, especially the channels 6, 13, 15, 16, 17, and 70, nor the technical characteristics mentioned in Recommendation ITU-R M.489-2 for these channels;

3) implementation of 12.5 kHz channel interleaving and consequential national requirements shall be subject to prior agreement between the implementing administrations and administrations whose ship stations or services may be affected.

Specific notes

f) The frequency 156.300 MHz (channel 06) (see Appendix **S13**, Appendix **S15** and **S51.79**) may also be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. Ship stations shall avoid harmful interference to such communications on channel 06 as well as to communications between aircraft stations, ice-breakers and assisted ships during ice seasons.

g) Channels 15 and 17 may also be used for on-board communications provided the effective radiated power does not exceed 1 W, and subject to the national regulations of the administration concerned when these channels are used in its territorial waters.

h) Within the European Maritime Area and in Canada these frequencies (channels 10, 67, 73) may also be used, if so required, by the individual administrations concerned, for communication between ship stations, aircraft stations and participating land stations engaged in coordinated search and rescue and anti-pollution operations in local areas, under the conditions specified in Nos. **S51.69, S51.73, S51.74, S51.75, S51.76, S51.77** and **S51.78**.

i) The preferred first three frequencies for the purpose indicated in note *a)* are 156.450 MHz (channel 09), 156.625 MHz (channel 72) and 156.675 MHz (channel 73).

j) This channel (70) is to be used exclusively for digital selective calling for distress, safety and calling.

k) Channel 13 is designated for use on a world-wide basis as a navigation safety communication channel, primarily for intership navigation safety communications. It may also be used for the ship movement and port operations service subject to the national regulations of the administrations concerned.

l) The channels will be used for an automatic ship identification and surveillance system capable of providing worldwide operation on high seas, unless other frequencies are designated on a regional basis for this purpose.

m) These channels (18 and 82 to 86) may be operated as single frequency channels, subject to special arrangement between interested or affected administrations.

n) The use of these channels should be restricted to navigation-related communications only and all precautions should be taken to avoid harmful interference to channel 16, e.g. by limiting the output power to 1 W or by means geographical separation.

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RESOLUTION No. 310 (Rev.WRC-97)

FREQUENCY PROVISIONS FOR DEVELOPMENT AND FUTURE IMPLEMENTATION OF SHIP MOVEMENT TELEMETRY, TELECOMMAND AND DATA EXCHANGE SYSTEMS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) the need to specify radio frequencies which may be used by the maritime mobile service on a world-wide basis for ship movement requirements including transmission of electronic nautical chart data corrections, using digital automated data exchange, telemetry and telecommand techniques;

b) the developments now in progress in different portions of the frequency spectrum which will require common frequency bands in the future for efficient frequency utilization;

c) the importance of these systems in the safe and efficient operations of ships;

d) the advantages to port authorities for safe and efficient port management and operations;

noting

a) that ITU-R is considering this matter particularly within its Question 55/8;

b) that further operational and technical information is needed in deciding the most effective frequency utilization and sharing criteria;

c) that the International Maritime Organization (IMO) has identified a need for data exchange, using digital transmission techniques, between shore and ship for ship's position and movement data, correction data of radionavigation systems and electronic nautical charts;

resolves

that a future competent world radiocommunication conference should review possible frequency provisions in the light of additional studies;

requests administrations

to review the requirements relating to future ship movement telemetry, telecommand and data exchange systems and submit relevant results to ITU-R,

invites ITU-R

to examine and advise on modulation techniques such as spread spectrum, frequency bands, bandwidths and data formats in coordination with administrations developing and testing these digital transmission systems;

invites the Council

to include this Resolution in the agenda of a forthcoming competent world radiocommunication conference;

instructs the Secretary-General

to communicate this Resolution to IMO and the International Hydrographic Organization (IHO).

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RESOLUTION No. 331 (Rev.WRC-97)

TRANSITION TO THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) AND CONTINUATION OF THE DISTRESS AND SAFETY PROVISIONS IN APPENDIX S13

The World Radiocommunication Conference (Geneva, 1997),

noting

that the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, prescribes that all ships subject to this Convention shall be fitted for the GMDSS by 1 February 1999,

noting further

a) that a number of administrations have taken steps to implement the GMDSS also for classes of vessels not subject to SOLAS, 1974 as amended;

b) that an increasing number of vessels not subject to SOLAS, 1974 as amended, are making use of the techniques and frequencies of the GMDSS prescribed in Chapter **SVII**;

c) that some administrations and vessels, not subject to SOLAS, 1974, as amended, may wish to continue to use provisions of Appendix **S13** for distress and safety communications for some time after 1 February 1999;

d) that it would be costly for administrations to maintain in parallel for an excessive period of time shore-based facilities necessary to support both the old and new distress and safety systems;

e) that there may be a need to continue existing shore-based distress and safety services for a certain period after 1 February 1999 so that vessels not subject to the 1974 SOLAS Convention and not yet using the techniques and frequencies of the GMDSS will be able to obtain assistance from these services until such time as they are able to participate in the GMDSS;

f) that separate provisions of the existing Radio Regulations designate VHF channel 16 and the frequency 2 182 kHz as the international channels for general calling by radiotelephony;

g) that IMO has already decided for GMDSS vessels that:

– listening watches on 2 182 kHz will no longer be mandatory after 1 February 1999;

– listening watches on VHF channel 16 will be continued and that a final date for the cessation of mandatory watchkeeping on channel 16 is yet to be determined;

h) that the Radio Regulations require GMDSS ships to keep watch on the appropriate DSC distress frequencies;

i) that the Radio Regulations establish that ship stations should, when practicable keep watch on VHF channel 13;

j) that several administrations have established Vessel Traffic Service (VTS) systems and require their ships to keep watch on local VTS channels;

k) that ships that are required by SOLAS to carry a radio station are being equipped with DSC, but the majority of vessels that carry a radio station on a voluntary basis might not have DSC equipment;

l) that similarly, many administrations have established distress and safety service based on DSC watchkeeping, but the majority of port stations, pilot stations and other operational coast stations have not been equipped with DSC facilities;

m) that for the reasons listed above, it will remain necessary for some stations in the maritime mobile service to call each other by radiotelephony in certain situations,

considering

a) that the operation of the GMDSS described in Chapter **SVII** and the present distress and safety system described in Appendix **S13** differ in many crucial aspects, such as means and methods of alerting, communication facilities available, announcement and transmission of maritime safety information, etc.;

b) that operation of the two systems in parallel for a long period would cause ever-increasing difficulties and incompatibilities between ships operating in the two different systems and may thus seriously degrade safety at sea in general;

c) that the GMDSS overcomes the deficiencies of the aural watchkeeping on maritime distress and calling frequencies on which the distress and safety system described in Appendix **S13** relies, by replacing these watches by automatic watch, i.e. digital selective calling and satellite communication systems,

resolves

1 that, until such time as voice calling has become obsolete, VHF channel 16 and the frequency 2 182 kHz may be used as voice-calling channels;

2 to urge all administrations to assist in enhancing safety at sea by:

– encouraging all ships to make use of the GMDSS as soon as possible;

– encouraging, where appropriate, establishment of suitable shore-based facilities for GMDSS, either on an individual basis or in cooperation with other relevant parties in the area;

3 that administrations may, taking account of all aspects involved, such as:

– decisions by IMO on aural watch on 2 182 kHz and VHF channel 16;

– the GMDSS radio systems available in the area concerned;

– the compatibility problems mentioned in *considering a)* and *b)* above;

– the density and classes of ships normally in the area;

– the geographical nature of the area and general navigational conditions within the area;

– other adequate measures taken to ensure safety communications for ships sailing in the area,

at a time after 1 February 1999, when the development on transition to the GMDSS and the prevailing conditions in the area makes it reasonable to do so, release their ship stations and coast stations within the area concerned from the obligations described in Appendix **S13** on listening watch on 2 182 kHz or VHF channel 16 or both;

when doing so, administrations should:

– inform IMO of their decisions and submit to IMO details on the area concerned;

– inform the Secretary-General on the necessary details for inclusion in the List of Coast Stations,

resolves further

that the Secretary-General should ensure that such arrangements and details regarding the area concerned be indicated in relevant maritime publications,

invites the next world radiocommunication conference

to include the review of this Resolution, Appendix **S13** and Chapter **SVII** on the agenda of the 2001 World Radiocommunication Conference,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO),

invites ITU-R Study Group 8

to review the operational and procedural incompatibilities between the old and new systems with a view to presenting the information to WRC-01.

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RESOLUTION COM4-1 (WRC-97)

RELATING TO THE NEED FOR ADDITIONAL SEARCH AND RESCUE INFORMATION IN DATABASES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the provisions of No. **S20.16** of Article **S20** of the simplified Radio Regulations require administrations to notify the Radiocommunication Bureau of ship station characteristics contained in the List of Ship Stations (List V), which currently includes:

name of ship, call sign, selective call number, country, auxiliary installations, class of ship, nature of service, hours of service, telegraph transmission frequency bands, telephone transmission frequency bands, accounting authority, and remarks (e.g. Inmarsat terminal number, MMSI);

b) that the provisions of No. **S20.15**, however, give the Bureau authority to change the content and form of this information in consultation with administrations; and

c) that administrations and IMO have expressed a need for additional information to be included in search and rescue databases, including:

– vessel identification number (IMO number or national registration number);
– name, address and telephone number and, if applicable, telefax number of emergency contact person ashore;
– alternative 24-hour emergency telephone number;
– capacity for persons on board (passengers and crew),

resolves

to instruct the Director of the Radiocommunication Bureau to begin consultations with administrations with a view to incorporating the information contained in the Annex into the ITU maritime services database,

invites

administrations to consider also the incorporation of that information in their national databases,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

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ANNEX TO RESOLUTION COM4-1 (WRC-97)

REGISTRATION DATABASE FOR THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

(See Article **S32**)

1 All identities used by the GMDSS for identifying vessels in distress shall be registered in accordance with this Annex. Administrations or organizations responsible for assigning these identities shall make suitable arrangements for ensuring registrations of these identities are made and maintained. Administrations shall notify this information to the Radiocommunication Bureau in accordance with No. **S20.16**.

2 Means shall be provided by the Radiocommunication Bureau and administrations maintaining national databases to allow rescue coordination centres immediate access to this database on a 24-hour per day, 7-day per week basis.

3 Each registration database should include the following information:

1) vessel name;

2) Maritime Mobile Service Identity (MMSI);

3) radio call sign;

4) EPIRB identification code (if applicable);

5) country (vessel flag state; may be derived from MMSI and call sign);

6) vessel identification number (IMO number or national registration number);

7) brief ship description (type);

8) name, address, telephone and (if applicable) telefax number of emergency contact person ashore;

9) alternative 24-hour emergency telephone number;

10) capacity for persons on board (passengers and crew);

11) ship's radio installation (Inmarsat A, B, C, M, VHF DSC, etc.); and

12) Inmarsat ship earth station identities (if applicable).

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RESOLUTION COM4-2 (WRC-97)

UHF FREQUENCIES USED IN THE MARITIME MOBILE SERVICE FOR ON-BOARD COMMUNICATION

The World Radiocommunication Conference (Geneva, 1997),

considering

that this Conference has adopted the introduction of channel spacing of 12.5 kHz for maritime UHF on-board communications to be used on a voluntary basis,

noting

that Recommendation ITU-R M.1174 contains the characteristics of equipment used for on-board communications in the bands between 450 and 470 MHz,

resolves to invite ITU-R

to modify this Recommendation by including also the characteristics of the equipment using the new 12.5 kHz channel spacing,

urges administrations

to submit contributions to ITU-R,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

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RESOLUTION COM4-3 (WRC-97)

REVIEW OF NEW TECHNOLOGY TO PROVIDE IMPROVED EFFICIENCY IN THE USE OF THE BAND 156 - 174 MHz BY STATIONS IN THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included the consideration of the use of Appendix **S18** to the Radio Regulations in respect of maritime mobile communications and the use of new technology for maritime radiotelephony channels;

b) Recommendation **318 (Mob-87)**;

c) that Appendix **S18** identifies frequencies to be used for distress and safety communications on an international basis;

d) that the introduction of new technology in the maritime mobile service shall not disrupt the distress and safety communications in the VHF band including those established by the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended;

e) that the ITU Radiocommunication Sector is conducting studies on improving efficiency in the use of this band, and that these studies are still ongoing;

f) that changes made in Appendix **S18** should not prejudice the future use of these frequencies or the capabilities of systems or new applications required for use by the maritime mobile service;

g) that the congestion on Appendix **S18** frequencies calls for the implementation of efficient new technologies;

h) that the use of new technology on maritime VHF frequencies will make it possible to better respond to the emerging demand for new services,

noting

that some administrations are considering adopting some of the above changes to their operations within the Appendix **S18** frequencies,

resolves

that WRC-99 should consider the use of new technology in the band 156 - 174 MHz and consequential revision of Appendix **S18**,

invites ITU-R

to continue studies on the following with a view to providing a report to the WRC-99:

i) to identify the future requirements of the maritime mobile service;

ii) to identify suitable technical characteristics of the system or interoperable systems to replace existing technology;

iii) to identify necessary modifications to the frequency plan contained within Appendix **S18**;

iv) to recommend a timetable for the introduction of new technology and the necessary changes;

v) to study and recommend how new technology can be introduced without harming the distress and safety requirements,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

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RESOLUTION COM4-4 (WRC-97)

MARITIME CERTIFICATION FOR PERSONNEL OF SHIP STATIONS AND SHIP EARTH STATIONS FOR WHICH A RADIO INSTALLATION IS NOT COMPULSORY

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that this Conference has considered the question of certification for personnel of ship stations and ship earth stations within the GMDSS;

b) that GMDSS will be fully implemented on 1 February 1999 by ships subject to an international agreement;

c) that ships not subject to international agreement have begun to adopt GMDSS systems and techniques;

d) that use of GMDSS equipment should be accompanied by appropriate training and certification;

e) that the Radio Regulations stipulate that the service of every ship radio station working on frequencies assigned for international use shall be performed by operators holding a certificate;

f) that the present certificates described in Article **S47** of the Radio Regulations may be too demanding for radio operators of ship stations and ship earth stations on board ships for which a radio installation is not compulsory,

noting

that a number of administrations currently issue radio operator certificates specially designed for the non-compulsory sector,

resolves

that administrations wishing to implement special certification for the non-compulsory sector should implement the certificates contained in the Annex to this Resolution,

invites ITU-R

to develop a Recommendation describing these certificates,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization.

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ANNEX TO RESOLUTION COM4-4 (WRC-97)

EXAMINATION SYLLABUS FOR RADIO OPERATOR'S CERTIFICATES APPROPRIATE TO VESSELS USING THE FREQUENCIES AND TECHNIQUES OF THE GMDSS ON A NON-COMPULSORY BASIS

Introduction

The introduction of the Global Maritime Distress and Safety System (GMDSS) in February 1992 made it necessary to harmonize the examination requirements for certificates for professional radio personnel. Harmonized examination procedures for the General Operator's Certificate and Restricted Operator's Certificate, based on the syllabi described in Article **S47** of the Radio Regulations, have already been introduced for maritime radio operators performing radiocommunication duties on board vessels subject to the International Convention for the Safety of Life at Sea (1974), as amended (SOLAS). The GMDSS will be fully implemented on 1 February 1999 for vessels subject to SOLAS.

For vessels not subject to SOLAS, and which install radiocommunication equipment on a voluntary basis, there are significant advantages to also using the GMDSS. However, it was foreseen by some administrations that such vessels would use some, but not all, of the frequencies and techniques of the GMDSS and that radio personnel on board such vessels would not need the same level of certification as radio personnel on board vessels which use all of the frequencies and techniques of the GMDSS on a compulsory basis. A syllabus has been developed which provides the flexibility for a depth of study, level of knowledge, and length of course appropriate to meet the certification requirements of radio personnel on board vessels which use some of the frequencies and techniques of the GMDSS on a non-compulsory basis. The syllabus also provides for certification in the use of satellite equipment where appropriate.

This Annex describes the syllabus developed to meet the certification requirements described above, and which are implemented in a number of countries under the title "Long Range Certificate" and "Short Range Certificate". The Short Range Certificate should at least contain those elements of the syllabus which are relevant to sea area A1.

Examination syllabus

The examination should consist of theoretical and practical tests and should include at least:

A GENERAL KNOWLEDGE OF RADIOCOMMUNICATIONS IN THE MARITIME MOBILE SERVICE

A1 The general principles and basic features of the maritime mobile service.

B DETAILED PRACTICAL KNOWLEDGE AND ABILITY TO USE RADIO EQUIPMENT

B1 The VHF radio installation. Use of VHF equipment in practice.

B2 The MF/HF radio installation. Use of MF/HF equipment in practice.

B3 Purpose and use of Digital Selective Calling (DSC) facilities and techniques.

C OPERATIONAL PROCEDURES OF THE GMDSS AND DETAILED PRACTICAL OPERATION OF GMDSS SUBSYSTEMS AND EQUIPMENT

C1 Basic introduction to Global Maritime Distress and Safety System (GMDSS) procedures.

C2 Distress, urgency and safety communication procedures in the GMDSS.

C3 Distress, urgency and safety communication procedures by radiotelephony in the old distress and safety system.

C4 Protection of distress frequencies.

C5 Maritime Safety Information (MSI) systems in the GMDSS.

C6 Alerting and Locating Signals in the GMDSS.

D OPERATIONAL PROCEDURES AND REGULATIONS FOR RADIOTELEPHONE COMMUNICATIONS

D1 Ability to exchange communications relevant to the safety of life at sea.

D2 Regulations, obligatory procedures and practices.

D3 Practical and theoretical knowledge of radiotelephone procedures.

D4 Use of the international phonetic alphabet and, where appropriate, parts of the IMO Standard Marine Communication Phrases.

E OPTIONAL EXAMINATION MODULE FOR THE MARITIME MOBILE-SATELLITE SERVICE FOR VESSELS NOT SUBJECT TO A COMPULSORY FIT

E1 The general principles and basic features of the maritime mobile-satellite service.

E2 Operational procedures and detailed practical operation of ship earth stations in the GMDSS.

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RESOLUTION COM4-5 (WRC-97)

RELATING TO THE EXHAUSTION OF THE MARITIME MOBILE SERVICE IDENTITY NUMBERING RESOURCE

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required to carry GMDSS equipment may do so, for safety purposes;

b) that Digital Selective Calling Equipment on such ships for VHF radio, and/or Inmarsat ship earth station equipment requires the assignment of a unique Maritime Mobile Service Identity (MMSI);

c) that not all administrations assign these identities to users of digital selective calling-equipped VHF radios on such ships, from the numbers intended for use by vessels sailing and communicating only with domestic coast stations,

considering

a) that VHF digital selective calling distress alerts require valid identities for use by search and rescue authorities;

b) that Recommendation ITU-R M.585 contains guidance for the assignment of MMSIs, including to non-compulsory ships which communicate only with domestic radio stations; and

c) that Recommendation ITU-R M.585 was derived from ITU-T Recommendation E.210,

recognizing

a) that even domestic ships which install Inmarsat will require the assignment of MMSI numbers from those numbers reserved for ships communicating worldwide, further depleting the resource; and

b) that future growth of Inmarsat B, C and M mobile earth station use by non-compulsory ships is not, however, expected to deplete the resource, however;

c) that growth projections of Inmarsat systems by non-compulsory ships could change,

noting further

that ITU-R can monitor the status of the MMSI resource by monitoring the available spare Maritime Identification Digits (first three digits of the MMSI),

instructs the Director of the Radiocommunication Bureau

to monitor the status of the MMSI resource, and to report to each WRC as to the anticipated reserve capacity and expected exhaustion of the resource,

resolves to invite ITU-T and ITU-R

1 to keep under review the Recommendations for assigning Maritime Mobile Service Identities, with a view to identifying alternative resources before the resources are exhausted;

2 to consult each other when addressing changes to any of the Recommendations affecting the MMSI numbering resources; and

3 to complete studies on an urgent basis when a future WRC identifies the impending exhaustion of the MMSI resource,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

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RESOLUTION COM4-7 (WRC-97)

USE OF FREQUENCY ADAPTIVE SYSTEMS IN THE MF/HF BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the efficiency of spectrum use will be improved by the use of frequency adaptive systems in the MF and HF bands shared by the fixed and the mobile services;

b) that trials of frequency adaptive systems which have been undertaken during the past 20 years have demonstrated the feasibility of such systems and their improved spectrum efficiency;

c) that such improved efficiency is attained through:

– shorter call set-up and improved transmission quality by selection of the most suitable assigned channels;

– reduced channel occupancy, permitting the same channels to be used by different networks, yet decreasing the probability of harmful interference;

– minimization of the transmitter power required for each transmission;

– continued optimization of the emissions owing to the sophistication of the systems;

– simple operation by the use of intelligent peripheral equipment;

– reduced need for skilled radio operators;

d) that following Resolution **23 (WRC-95)**, the Bureau no longer undertakes examination with respect to the probability of harmful interference caused by new assignments recorded in the MIFR in the non-planned bands below 28 MHz;

e) that frequency adaptive systems will actively contribute to the avoidance of interference since, when other signals are observed on the channel, the frequency adaptive system will move to another frequency,

resolves

1 that, in authorizing the operation of frequency adaptive systems in the MF/HF bands, administrations shall:

i) make assignments in the bands allocated to the fixed and mobile services;

ii) not make assignments in the bands:

– allocated exclusively to the maritime or aeronautical mobile (R) services;

– shared on a co-primary basis with the broadcasting service, radiodetermination service or the amateur services;

– allocated to radio astronomy;

iii) avoid use which may affect frequency assignments involving safety services made in accordance with Nos. **S5.155**, **S5.155A** and **S5.155B**;

iv) take into account any footnotes applicable to the proposed bands and the implications regarding compatibility;

2 that frequency adaptive systems shall automatically limit simultaneous use of frequencies to the minimum necessary for communication requirements;

3 that, with a view to avoiding harmful interference, the system should evaluate the channel occupancy prior to and during operation;

4 that frequency adaptive systems shall be notified to the Bureau in accordance with the provisions of Article **S11**,

invites ITU-R

1 to pursue its studies on the subject (see, for example, Questions ITU-R 204-1/1, 147/9, 205/9 or 214/9) with a view to achieving optimum operational performance and compatibility;

2 to report on the results of these studies to a future WRC,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements, as soon as practicable, for the notification of frequency assignments to adaptive systems and for their recording in the Master International Frequency Register, taking into account the studies already undertaken.

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RESOLUTION COM4-8 (WRC-97)

OPERATION OF GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM EQUIPMENT ON AND ASSIGNMENT OF MARITIME MOBILE SERVICE IDENTITIES (MMSI) TO NON-COMPULSORY FITTED VESSELS

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required by international agreement to carry GMDSS equipment could elect to do so for safety purposes;

b) that such vessels may only carry VHF Digital Selective Calling (DSC) equipment;

c) that some administrations may not require operators on such vessels to have appropriate training, certification or licence;

d) that not all administrations assign and register identities to users of VHF DSC on such ships,

considering

that VHF DSC false distress alerts are a problem for rescue coordination centres, particularly when incorrect identities are used, or when the radio is operated by persons untrained in its use,

recognizing

that administrations have different training requirements for users of VHF DSC equipment,

resolves

1 to invite the ITU-R to consider digital selective calling standards and operating procedures in order to simplify operation of this equipment;

2 to invite the ITU-T and ITU-R to review the process for assigning maritime mobile service identities for simplifying the process, taking into account cases of new installation, sale of the vessel or transfer of the equipment to a new ship;

3 to invite the ITU-T and ITU-R to undertake studies to ensure the registration and continuous accessibility and availability of identities to rescue authorities,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) for consideration and comments.

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List of Resolutions and Recommendations approved for suppression
(seventh meeting of Committee 4 on 11 November 1997)

Resolution No.	Subject	Proposed action
39 (Mob-83)	Use of monitoring facilities in applying decisions of WARCs	SUP
200 (Rev.Mob-87)	Class of emission on 2 182 kHz	SUP
210 (Mob-87)	Reducing the guardband around 500 kHz	SUP
314 (Rev.Mob-87)	Collection of data for oceanography	SUP
315	Abolition of mobile station charges	SUP
316 (Rev.Mob-87)	Technical cooperation in maritime telecommunications	SUP
319 (Rev.Mob-87)	General review in 4/8 MHz (MMS/FX)	SUP
322 (Rev.Mob-87)	Watch keeping on GMDSS frequencies	SUP
323 (Mob-87)	Use of 156.525 MHz for DSC	SUP
330 (Mob-87)	Frequencies for RTF calling around 3 MHz	SUP
333 (Mob-87)	Use of HF for MSI	SUP
335 (Mob-87)	Non-paired frequencies, NBDP, ships	SUP
336 (Mob-87)	DSC on maritime HF	SUP
338 (WARC-92)	Provisional application of Art. 56	SUP
601 (Rev.Mob-87)	Standards for EPIRBs on 121.5 MHz/243 MHz	SUP

Recommendation No.	Subject	Proposed action
4	National and international circuits in HF	SUP
5	Reducing the congestion in HF	SUP
302 (Rev.Mob-87)	Improved use of HF in MMS	SUP
303 (Rev.Mob-87)	Use of 4 125 kHz and 6 215 kHz for distress and safety	SUP
304	Frequencies in Appendix 16, Section B	SUP
305	Use of CH15 and CH17 of AP18	SUP
306	Watch on 156.8 MHz	SUP
310	Automated UHF MM	SUP
312 (Rev.Mob-87)	Interconnection of MM in PSTN	SUP
317 (Rev.Mob-87)	Priority Indicator Signal (MMS)	SUP
603 (Rev.Mob-87)	Technical provisions for maritime radiobeacon in the African area	SUP

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 267-E
12 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Cape Verde (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 1.9.1

Background

The Administration of Cape Verde supports the contributions in Documents CMR97/71, CMR97/71(Add.1), CMR97/114 and CMR97/114(Add.1)+(Add.2) in so far as they relate to non-GSO FSS systems and proposes that the Conference should allow these systems to enter the Ku and Ka bands in order to ensure competition.

WRC-95 decided that the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz could be used by non-GSO FSS, by providing for application of the Resolution 46 coordination procedures and by deleting No. S22.2 of the Radio Regulations in the upper 400 MHz of those bands. In the light of the results of the technical studies undertaken by ITU-R and presented in the CPM-97 Report, the Administration of Cape Verde makes the following proposal:

CPV/267/1

1 The same regulatory provisions should apply to the whole of the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz identified in Resolution 118 (WRC-95). For these bands, No. S22.2 should be deleted and Resolution 46 applied.

2 GSO FSS networks in the process of coordination as at 18 November 1995 will continue to be coordinated under Resolution 46 with non-GSO networks notified prior to that date.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 268-E
12 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4C TO COMMITTEE 4

Working Group 4C adopted the following Recommendation and Resolution for consideration by Committee 4.

DRAFT RECOMMENDATION [4C-A]

COORDINATION OF HF BROADCASTING SCHEDULES IN THE BANDS ALLOCATED [EXCLUSIVELY] TO THE BROADCASTING SERVICE BETWEEN 5 900 kHz AND 26 100 kHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Article **S12** establishes the Principles and the Procedure for use of the frequency bands allocated [exclusively] to the HF broadcasting service between 5 900 kHz and 26 100 kHz;

b) that the aforementioned principles stipulate, *inter alia*, that the Procedure should promote the development of a voluntary coordination process among administrations to resolve incompatibilities;

c) that the Procedure itself encourages administrations to coordinate their schedules with other administrations as far as possible prior to submission;

d) that the development of coordination among administrations with the assistance of the Bureau, when requested would result in better use of the spectrum allocated [exclusively] to the HF broadcasting service between 5 900 kHz and 26 100 kHz,

recognizing

a) that the participation of broadcasting organizations in this coordination process would make the task of resolving incompatibilities easier;

b) that multilateral coordination of the use of HFBC bands is already practized on an informal basis in various regional coordination groups[1],

recommends administrations

to promote, as far as possible, regular coordination of their broadcasting schedules among appropriate regional coordination groups of administrations or broadcasting organizations in order to resolve or reduce incompatibilities, through actual (bilateral or multilateral) meetings or by correspondence (telephone, facsimile, email, etc.).

[1] Not related to the ITU Regions.

DRAFT RESOLUTION [COM4-6]

INFORMATION RELEVANT IN THE APPLICATION OF ARTICLE S12

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that this Conference adopted Article **S12** as a simple and flexible seasonal planning procedure based on coordination for HF broadcasting;

b) that Article **S12** responds to the intent of Resolution **508 (WARC-79)** and Resolution **523 (WARC-92)**;

c) that Article **S12** makes reference to the Rules of Procedure,

considering further

d) that appropriate Rules of Procedure are to be developed by the Bureau and adopted by the Radio Regulations Board,

resolves to instruct the Director of the Radiocommunication Bureau

to consider the information contained in the Annex in developing the Rules of Procedure,

urges administrations

1) to support the Director of the Radiocommunication Bureau in the preparation of these Rules of Procedure and in the development and testing of any accompanying computer software;

2) to submit their schedules in a common electronic format to be defined in the Rules of Procedure,

requests the Director of the Telecommunication Development Bureau

to consider the provision of the necessary funding to enable developing countries to participate fully in the application of Article **S12** and relevant radiocommunications seminars.

ANNEX

This Annex responds to the need for information in the application of Article S12; the flowchart in Description 2 provides an overview of the Procedure.

1 Software development

The Procedure will require a number of user friendly software modules to be developed, tested and supplied to administrations by the Bureau. This will ensure that the same software modules are used by administrations and the Bureau for the analysis of the schedules.

The Bureau should:

- develop the aforementioned software with assistance from administrations;
- distribute this software, together with user instructions and relevant documentation;
- organize appropriate training in the use of the software;
- monitor the functional performance of the software and if needed make necessary modifications.

2 Software modules

Data capture of requirements

A new module will be required that permits the capture of all data elements detailed in Description 3. This module should also contain validation routines that prevent inconsistent data being captured and sent to the Bureau for processing.

Propagation calculation

This new module should calculate the signal strength and other necessary data at all relevant test points as described in Descriptions 1 and 4.

This module should also include an option that allows administrations to select the optimum frequency bands for their requirements.

The output format of the data and medium should be such that it allows easy publication and distribution of the results to all administrations.

The results of these calculations should be displayable in a graphical format.

Compatibility analysis

This module should use the output of the propagation calculation to provide a technical analysis of a requirement both alone and in the presence of other requirements as in Description 4. This analysis is used in the coordination process.

The values for the parameters given in Description 4 should be user selectable but the recommended default values should be used in the absence of other values.

The results of this analysis should be capable of being displayed in a graphical format for a defined service area as in Description 4.

Data query

This module should enable the user to perform typical data query functions.

DESCRIPTION 1

SELECTION OF SUITABLE FREQUENCY BAND(S)

General

In order to assist broadcasters and administrations in the preparation of their HF broadcasting requirements, the Bureau will prepare and distribute suitable computer software. This should be easy to use and the output should be easy to understand.

User input data

The user should be able to enter:

– the name of the transmitting station (for reference purposes);
– the geographic coordinates of the transmitting station;
– the transmitter power;
– the bands which are available for use;
– hours of transmission;
– sun spot number;
– months during which a service is required;
– the available antenna types, together with the relevant directions of maximum radiation;
– the required coverage area specified as a set of CIRAF zones and quadrants (or by means of relevant geographic information).

It is desirable that the software should be able to store the above information, once it has been entered correctly, and provide the user with an easy means of recalling any previously entered information.

Methodology and data

The software should use:

– Recommendation ITU-R BS.705 for the calculation of antenna patterns;
– Recommendation ITU-R P.533 for the prediction of wanted field strength values;
– Recommendation ITU-R P.842 for the calculation of reliability values.

The set of 911 test points (agreed at WARC-87) should be used, supplemented where necessary with test points based on a geographic grid.

The software should calculate the field strength values and the fading margins at each test point inside the required service area for each of the frequency bands declared to be available, taking account of the relevant transmitting antenna characteristics for each frequency band. The desired RF signal to noise ratio should be user selectable with a default value of 34 dB.

The dates for which calculations are made should be user selectable, the default values being:

– 0.5 month after the start of the season;

– mid-point of the season;

– 0.5 month before the end of the season.

The times for which calculations are made should be user selectable, the default values being:

– 30 minutes past the hour in which the requirement starts;

– 30 minutes past each successive hour until the hour in which the requirement stops.

Software output data

For rapid assessment of suitable bands, the software should calculate:

– the basic service reliability (BSR) for each available band and for the relevant test points from the set of 911 test points;

– the basic area reliability (BAR) for each available band and for the relevant test points from the set of 911 test points.

In order to provide information about the geographic distribution of wanted signal values within the required service area, additional results should be available from the software:

– a listing should be available giving, for each of the available bands, the basic circuit reliability (BCR) for each of the test points (from the set of 911 test points) inside the required service area.

In some cases, a graphical display of the BCR values throughout the required service area may be desirable. These values should be calculated at test points at 2 degree intervals of latitude and longitude throughout the required service area.

The BCR values should be displayed graphically as a set of coloured or hatched "pixels" scaled in steps of 10 per cent. It should be noted that:

– reliability values relate to the use of a single frequency band;

– reliability values are a function of the desired RF signal-to-noise ratio (user selectable);

– the field strength values should be calculated by the supplied software on the user's own computer hardware. The software supplied should calculate the relevant reliability values based on these field strength values and the user supplied desired signal to noise values.

DESCRIPTION 2

TIME SEQUENCE FOR THE PROCEDURE

In the sequence outlined below, the start date for a given schedule period is defined as D and the end date for the same schedule period is defined as E.

Date	**Action**
D-4 months	Closing date for Administrations to send their schedules[1] to the Radiocommunication Bureau (Bureau) preferably by electronic mail or on 3.5" diskette (720 kbytes or 1.44 Mbytes). Schedule data will be made available via TIES as soon as it has been processed.
D-2 months	Bureau to send to administrations a consolidated schedule (the tentative schedule) together with a complete compatibility analysis[2].
D-2 weeks	Closing date for receipt of amendments from administrations to correct errors and other changes resulting from the coordination process to ensure that this information appears in the schedule for date D.
D	Bureau to issue the high frequency broadcasting schedule and compatibility analysis.
D to E	Administrations to correct errors and coordinate change requirements sending information to Bureau as it becomes available. Bureau to issue updates of the schedule and compatibility analysis at intervals of two months.
E	Closing date for receipt of final operational schedules from administrations to Bureau. No input is needed if there have been no changes to the information previously sent.
E+1 month	Bureau to send to administrations the final consolidated schedule (the final schedule) together with a compatibility analysis.

Figure 1 shows, in flow chart form, the time sequence for the Procedure.

---

[1] See Description 3.

[2] See Description 4. The schedules and the results of the analyses should be available on CD-ROM and in TIES.

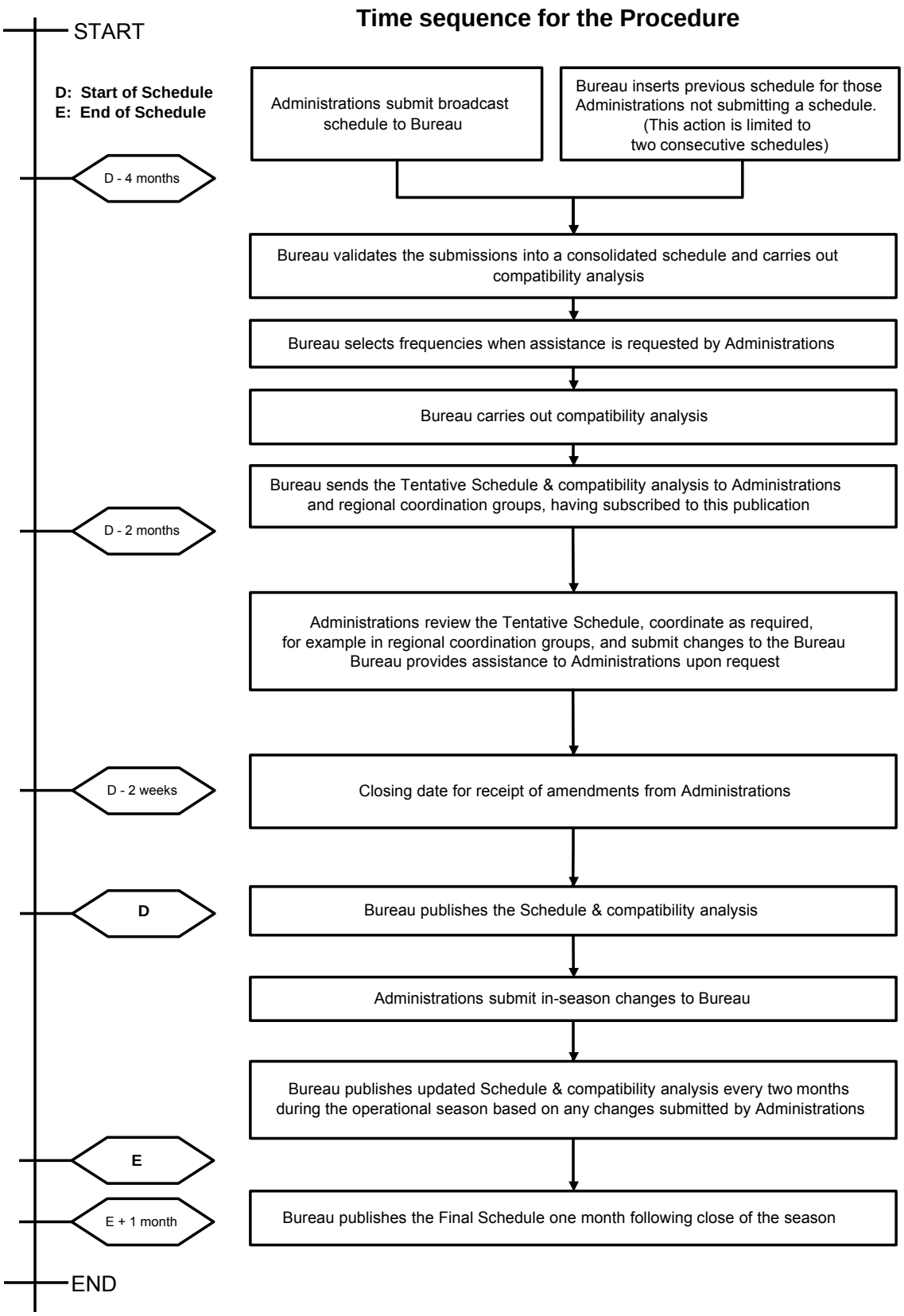
Time sequence for the Procedure
START
D: Start of Schedule
E: End of Schedule
Administrations submit broadcast schedule to Bureau
Bureau inserts previous schedule for those Administrations not submitting a schedule. (This action is limited to two consecutive schedules)
D - 4 months
Bureau validates the submissions into a consolidated schedule and carries out compatibility analysis
Bureau selects frequencies when assistance is requested by Administrations
Bureau carries out compatibility analysis
Bureau sends the Tentative Schedule & compatibility analysis to Administrations and regional coordination groups, having subscribed to this publication
D - 2 months
Administrations review the Tentative Schedule, coordinate as required, for example in regional coordination groups, and submit changes to the Bureau
Bureau provides assistance to Administrations upon request
D - 2 weeks
Closing date for receipt of amendments from Administrations
D
Bureau publishes the Schedule & compatibility analysis
Administrations submit in-season changes to Bureau
Bureau publishes updated Schedule & compatibility analysis every two months during the operational season based on any changes submitted by Administrations
E
E + 1 month
Bureau publishes the Final Schedule one month following close of the season
END

FIGURE 1

DESCRIPTION 3

SPECIFICATION OF INPUT DATA FOR A REQUIREMENT

The fields needed for a given requirement and their specifications are:

– frequency in kHz, up to 5-digit integer;
– start time, as 4-digit integer;
– stop time, as 4-digit integer;
– target service area, as a set of up to 12 CIRAF zones and quadrants up to a maximum of 30 characters;
– site code, a 3 character code from a list of codes, or a site name and its geographic coordinates;
– power in kW, up to 4-digit integer;
– azimuth of maximum radiation;
– slew angle, up to 2-digit integer representing the difference between the azimuth of maximum radiation and the direction of unslewed radiation;
– antenna code, up to 3-digit integer from a list of values, or a full antenna description, as given in Recommendation ITU-R BS.705;
– days of operation;
– start date, in the case that the requirement starts after the start of the schedule;
– stop date, in the case that the requirement stops before the end of the schedule;
– modulation choice, to specify if the requirement is to use DSB or SSB (see Recommendation ITU-R BS.640). This field may be used to identify any other type of modulation when this has been defined for use by HFBC in an ITU-R Recommendation;
– administration code;
– broadcasting organization code;
– identification number;
– identification of synchronization with other requirements.

DESCRIPTION 4

COMPATIBILITY ANALYSIS

General

In order to assess the performance of each requirement in the presence of noise and the potential interference from other requirements using the same or adjacent channels, it is necessary to calculate the relevant reliability values. The Bureau will prepare suitable software to enable this to be done, taking account of user requirements in terms of desired signal-to-noise and signal-to-interference ratios.

Input data

The programme schedule for a given season - this may be either an initial consolidated schedule (to permit assessment of those requirements which need coordination) or the high frequency broadcasting schedule (to provide assessment of the likely performance of requirements during the relevant season).

Methodology and data

The software should use:

– Recommendation ITU-R BS.705 for the calculation of antenna patterns;

– Recommendation ITU-R P.533 for the prediction of the wanted field strength values at each test point for each wanted requirement;

– Recommendation ITU-R P.533 for the prediction of the potentially interfering field strength values from all other co-channel or adjacent channel requirements at each test point for each wanted requirement;

– Recommendations 517(HFBC-87) and ITU-R BS.560 for adjacent channel RF protection ratios;

– Recommendation ITU-R P.842 for the calculation of reliability values.

The set of 911 test points (agreed at WARC-87) should be used, supplemented where necessary with test points based on a geographic grid.

The software should calculate the wanted and unwanted field strength values and the fading margins at each test point inside the required service area.

The desired RF signal-to-noise and RF protection ratios should be user selectable, the default values being 34 dB and 17 dB (co-channel case) respectively. The latter values should be used by the Bureau for its compatibility analyses.

The dates for which a compatibility analysis is made should be user selectable, the default values being:

– 0.5 month after the start of the season;

– mid-point of the season;

– 0.5 month before the end of the season.

These default values should be used by the Bureau for its compatibility analyses.

The times for which a compatibility analysis is made should be user selectable, the default values being:

– 30 minutes past the hour in which the requirement starts;

– 30 minutes past each successive hour until the hour in which the requirement ends.

These default values should be used by the Bureau for its compatibility analyses.

Software output data

For rapid assessment of the performance of a requirement, the software should calculate:

– the overall service reliability (OSR) for the relevant test points from the set of 911 test points;

– the overall area reliability (OAR) for the relevant test points from the set of 911 test points.

In order to provide information about the geographic distribution of wanted and unwanted signal values for a given requirement, additional results should be available from the software:

– a listing should be available giving the overall circuit reliability (OCR) for each of the relevant test points from the set of 911 test points.

In some cases, a graphical display of the coverage achieved throughout a required service area may be desirable. These values will need to be calculated by the user (with the supplied software and on the user's own computer hardware) at test points at 2 degree intervals of latitude and longitude throughout the required service area. The values should be displayed graphically as a set of coloured or hatched pixels in steps of 10 per cent. It should be noted that:

– reliability values relate to the use of a single frequency;

– reliability values are a function of the desired RF signal-to-noise and RF protection ratios (both user selectable);

– the field strength values for the test points (from the set of 911 test points) inside the required service area should be calculated by the Bureau. The software supplied should calculate the relevant reliability values based on these pre-calculated field strength values and the user supplied desired signal-to-noise and signal-to-interference values.

– the field strength values for the test points at 2 degree intervals should be calculated using the supplied software on the user's own computer hardware. The software supplied should calculate the relevant reliability values based on these field strength values and the user supplied desired signal-to-noise and signal-to-interference values.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 269-E
12 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

CHAIRMAN OF WORKING GROUP 4D

After having completed the preparatory work for Planning, WG 4D started its work on the regulatory/procedural issues. Since the last report to Committee 4, WG 4D has agreed to the following:

1) SWG 4D-1 was established, chaired by Mr. Sadhu (ABU) to try to reach agreement on an approach for dealing with regulatory/procedural matters. The Group agreed to minor updating of the provisions of Appendices 30 and 30A and improvement of the procedures once agreement is reached on them. But there was no agreement on an approach for further action, i.e. whether the Plan provisions should stay in Appendices 30 and 30A or whether they should be merged with other Articles outside Appendices 30 and 30A.

2) Ad hoc Group 4 was established, chaired by Dr. J. Seseña, (Spain) to discuss the compatibility between NGSO systems and the BSS. The Group is still working on this matter.

3) Ad hoc Group 5 was established, chaired by Mr. C. Dosch (Germany) to update Annexes 3 and 5 of Appendices 30A and 30 in light of the decisions taken. This Group is still active.

4) Regarding the request by Israel to move its orbital position from 13° W to 4° W there were some technical and regulatory matters which could not be resolved. While solution to the technical problems were pursued further, there was no agreement. The meeting agreed to report this matter to Committee 4.

5) Most of the proposed revision to Annex 3 (concerning information to be provided to the Bureau) as contained in Section 3 of Document DT/8 were approved. Some items remain in abeyance. France reserved its position on the table in Annex 2 of DT/8. A document containing the revision of the text of Annex 2 of Appendices 30 and 30A is being prepared and will be submitted for approval at the next meeting of Committee 4.

6) As a result of the discussion on Section 3.15 of Document 56 on how to deal with various combinations of compatibility issues, the following has been agreed upon and is submitted for approval,

With respect to item 1, paragraph 3.15

1 New assignments causing interference

1.1 Compatibility with FSS (space-to-Earth) (from BSS feeder link into the FSS (space-to-Earth))

Introduce provision similar to current 5.1.4 of Article 5 of Appendix 30A (Approach c) described in Section 3.15.2 of Document 56, e.g. "Before an administration in Region 1 or 3 notifies to the Bureau or brings into use any frequency assignment to a transmitting feeder-link earth station in the bands 17.7 - 18.1 GHz, it shall effect coordination of this assignment with each administration, using the method detailed in Annex 4 of Appendix 30A, in respect of specific earth stations in the fixed-satellite service (space-to-Earth) in the band 17.7 - 18.1 GHz either recorded in the Master Register with a favourable finding or received by the Bureau prior to [YY.YY.YYYY] for recording in the Master Register."

1.2 Compatibility with the terrestrial service (from BSS feeder link into the terrestrial service)

Introduce provision similar to the current 5.1.4 of Article 5 of Appendix 30A (Approach c) described in Section 3.15.2 of Document 56, e.g. "Before an administration in Region 1 or 3 notifies to the Bureau or brings into use any frequency assignment to a transmitting feeder-link earth station in the bands 14.5 - 14.8 GHz and 17.7 - 18.1 GHz, it shall effect coordination of this assignment with each administration whose territory lies wholly or partly within the coordination area of the planned earth station, using the method detailed in Appendix 28 in respect of notices concerning stations of the mobile and fixed services in the bands 14.5 - 14.8 GHz and 17.7 - 18.1 GHz either recorded in the Master Register with a favourable finding or received by the Bureau prior to [YY.YY.YYYY] for recording in the Master Register."

The above items 1.1 and 1.2 could be merged into one single provision in the same fashion as presently appears in paragraph 5.1.4 of Article 5 of Appendix 30A.

1.3 Compatibility with the Region 2 BSS Plan (from BSS feeder link into the Region 2 BSS Plan)

Introduce a note similar to Note 10 of Article 10 of Appendix 30 against new BSS Plan assignments which are identified as likely to cause interference to the Region 2 BSS Plan (Approach b) described in Section 3.15.2 of Document 56, e.g. "This assignment shall be brought into use only when the limits given in Table X are not exceeded or with the agreement of the affected administration identified in Table XX. These administrations shall be informed by the notifying administration of changes in characteristics before these beams are brought into use."

1.4 Compatibility with the Region 2 BSS Plan (from BSS downlink link into the Region 2 BSS Plan)

Introduce a note similar to Note 10 of Article 10 of Appendix 30 against new BSS Plan assignments which are identified as likely to cause interference to Region 2 BSS Plan (Approach b) described in Section 3.15.2 of Document 56, e.g. "This assignment shall be brought into use only when the limits given in Table X are not exceeded or with the agreement of the affected administration identified in

Table XX. These administrations shall be informed by the notifying administration of changes in characteristics before these beams are brought into use."

1.5 Compatibility with the terrestrial service (from BSS downlink link into the terrestrial service)

Identify the affected administrations by taking into account assignments recorded in the Master Register with a favourable finding or whose notification has been received by the Bureau by [YY.YY.YYYY]. Thereafter introduce a note similar to Note 10 of Article 10 of Appendix 30 against these new BSS Plan assignments which affect these terrestrial administrations, e.g. "This assignment shall be brought into use only when the limits given in Table X are not exceeded or with the agreement of the affected administration identified in Table XX. These administrations shall be informed by the notifying administration of changes in characteristics before these beams are brought into use." The identification in Table XX will be accompanied by a note indicating that complete analysis of assignments not processed on 7 November 1997 will be carried out by the Bureau to determine whether the coordination of the new BSS assignments are required with the above-mentioned services. The result of the Bureau's analysis together with modified Table XX shall be conveyed to all administrations.

2 New assignments receiving interference

2.1 Compatibility with the Region 2 Plan (from the Region 2 Plan into BSS feeder link and downlink)

Any Region 1 and 3 new BSS feeder-link and downlink assignments affected by the Region 2 Plan shall accept (have accepted) the interference.

Many regulatory/procedural issues remain for consideration and WG 4D will attempt to deal with them in the time remaining. However, as time gets shorter it might become necessary to concentrate on a few major issues and pass on the rest for consideration possibly by the "Intersessional Group" to be formed to prepare for a future planning conference.

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INTERNATIONAL TELECOMMUNICATION UNION

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WORKING GROUP 4C

NOTE FROM WORKING GROUP 4C

Working Group 4C has reviewed proposals IAP/40/28 to IAP/40/33 and is transmitting for consideration the proposed addition of points:

7AA (with suppression of terms "HF")

9R

10CA

10CB

10CC

However, Working Group 4C does not propose to modify item 12A.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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13 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

Egypt (Arab Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

REPLANNING OF TERRESTRIAL TV TRANSMITTERS OVER COASTAL AREAS WITH SPECIAL REFERENCE TO THE MEDITERRANEAN SEA

1 Introduction

The main aim behind this paper is to accommodate all terrestrial TV transmitters over coastal areas, and make appropriate changes in existing or planned TV transmitters over neighbouring areas deep inland, while keeping these changes to a minimum.

One planning conference may be sufficient. However, on account of the greater degree of complexity, we propose that the Mediterranean be covered in one conference, then moving on to areas close to other seas.

The significance of this replanning is to obtain a finer plan. What is available now enables many deficiencies in the existing plans to be eliminated.

2 Basis of the finer plan

Knowledge is evolving in the field of TV transmitters, and there have been noticeable advances on the following subjects:

1) propagation characteristics over seas;
2) propagation characteristics over land;
3) propagation characteristics over transitional areas in general;
4) progress in receiving technology and hence modified protection ratios;
5) added sources of interference from new services;
6) new planning methods.

Each of these subjects is considered in detail below.

2.1 Propagation characteristics over seas

All seas are characterized by surface ducts, whose characteristics vary according to the following:

1) wind and temperature distributions over the sea;

2) sea closed or open to larger seas or oceans;

3) main orientation of the sea (whether it stretches from north to south or otherwise). North-to-south orientation entails a noticeable surface temperature variation.

Each sea may be divided into subareas, characterized by a specific type of wave propagation which has to be taken into account for planning: surface duct characteristics and the time duration of surface duct occurrences, with the duct height as the main parameter, together with gradients of refractivity within the duct. Of course, for the division into subareas, the right level of detail has to be determined to obtain the required overall accuracy.

2.2 Propagation characteristics over land

The general trend over land areas is tapering of the sea surface ducts. The main parameters involved are the nature of the terrain, wind direction and soil type. Such parameters serve to determine the boundaries of the coastal area concerned, if these are not determined by natural features, e.g. mountains or rough land. Suitable parameters may be used to describe the propagation characteristics over the area.

After the coastal area is specified as above, propagation characteristics may be described using other parameters for the area further inland. By using both types of land propagation characteristics, together with sufficient topographical path characteristics, the attenuation over any path may be estimated.

2.3 Propagation characteristics over transitional areas in general

Any subarea for the purpose of planning may be classified generally into one of two categories: uniform expanses, over which the propagation characteristics are described by parameters independent of the location within the expanse, or transitional areas. Transitional areas are those within which the above parameters vary according to the location.

In general, uniform areas would be separated from each other by transitional areas.

2.4 Technological status of TV reception

Here, the following may be noted:

1) it is well-known that the large number of programmes broadcast calls for a new tuning arrangement. Also, the use of video recorders entails an alternative arrangement;

2) the use of TV receivers for reception from satellites entails a third arrangement;

3) some programmes require the use of coders and decoders;

4) technological development has improved receiver sensitivity and selectivity;

5) antenna requirements have increased.

Accordingly, Egypt proposes the following:

1) respecifying the antenna and the receiver for the purpose of planning;

2) revision of the protection ratios and types of interference.

2.5 Added sources of interference from new services

Added sources of interference have to be investigated. They may be classified as:

1) resulting from services using the same receiver;

2) resulting from band sharing or adjacent band usage.

One example is the use of an intermediate channel for reception, as in the case of satellite reception, or the use of video recorders. Every situation has to be analysed and modes of interference specified geometrically and electrically.

2.6 New planning method

In the earlier plans, uniform lattice planning was used throughout because of its simplicity. In general, it worked out well over seas with uniform characteristics and over deep inland areas. As a coastal area is approached, however, more and more deficiencies appear, and uniform lattice planning becomes less and less suitable for the purposes of handling gross areas, i.e. large areas over which non-uniform propagation characteristics prevail, which is the general case. Considering also that there are void areas, i.e. areas over which no transmitters are required, such as sea areas, new methods of planning are very necessary. This is facilitated by the possible use of large-memory computers, capable of processing a plan with a very large number of assignments, which is generally the case. A new planning method, referred to as the linear lattice planning method, has thus been developed, mainly for coastal subareas.

The coastal subarea is seen as a bounded area of variable limited width, and may be regarded as a line over which the transmitters are located. This line is divided into parts of limited length. Each part is given a group of channels. A condition is imposed that within a group its members shall not interfere with each other. This is achieved by controlling the choice from among the whole number of channels in the land, and to a small extent controlling the spatial arrangement.

For the purpose of initial checking, a representative location is chosen for each part of the line. Interference is then checked along the whole coastal line, assuming that all the transmitters in each part are at the representative location. Later on, the transmitters are processed at their actual sites. A number of transmitters are installed at each site which do not interfere with each other (co-sited transmitters).

At this stage, interference is rechecked, and transmitters may be optimally resited so as to minimize interference and directivity to the greatest possible extent. Negotiations between countries need to be conducted with the aid of the planning organization.

The plan for the coastal area must match with planning over the uniform area, making use of the planned transition.

3 Possible procedure

The following set of tasks may be carried out in sequence:

1) measurements on existing transmitters (computerized measurements) in order to obtain propagation characteristics. This may necessitate new installations, e.g. receiving antennas. Use must also be made of existing data and knowledge;
2) inputting data on the computer, including propagation characteristics, service area, antenna directivity and preliminary transmitter sites. This is the real start of the planning meetings;
3) preliminary evaluation of interference;
4) negotiation between countries with the help of the planning organization;
5) final plan with complete evaluation and summation of interference.

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13 November 1997
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COMMITTEE 5

Ecuador

PROPOSALS FOR THE WORK OF THE CONFERENCE

CONSIDERATION OF USE OF THE BANDS BETWEEN 470 AND 862 MHz BY NON-GEOSTATIONARY SYSTEMS IN THE MOBILE-SATELLITE SERVICE (REFERENCE: DOCUMENT 210)

Working Group 5B has prepared draft Resolution [**COM5-14**], contained in Document 210, which considers the possibility of the future use of bands between 470 and 862 MHz by non-geostationary systems in the mobile-satellite service.

In Ecuador, these bands are used intensively by the fixed and mobile services, and we therefore request that the country name "Ecuador" be included in footnote **S5.293** in order to change the category of the services in question from **secondary** to **primary** in the bands 470 - 512 MHz and 614 - 806 MHz, so that the relevant Table of Frequency Allocations (Article **S.5**) reflects actual use.

EQA/272/1

MOD S5.293 *Different category of service:* in Chile, Colombia, Cuba, Ecuador, the United States, Guyana, Honduras, Jamaica, Mexico and Panama, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**), subject to agreement obtained under Article **14/**No. **S9.21**.

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WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 2 to Document 273-E
17 November 1997
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WORKING GROUP 4D

NOTE BY THE SECRETARY-GENERAL

CORRIGENDUM 2 TO DOCUMENT 273

Replace the table which appears on page 2 of the English text of Document 273 with the following table.

Administration	**Administration symbol**	**Beam**
Burkina Faso	BFA	BFA10700
Cape Verde (Republic of)	CPV	CPV30100
Côte d'Ivoire (Republic of)	CTI	CTI23700
Spain	E	E 12900
Spain	E	HISPASA2
Spain	E	CNR13000
United Kingdom of Great Britain and Northern Ireland	G	G 02700
United Kingdom of Great Britain and Northern Ireland	G	G UKDBS
Guinea-Bissau (Republic of)	GNB	GNB30400
Ireland	IRL	IRL21100
Iceland	ISL	ISL04900
Korea (Republic of)	KOR	KOR11200
Korea (Republic of)	KOR	KOR11201
Korea (Republic of)	KOR	KO11201D
Democratic People's Republic of Korea	KRE	KRE28600
Liberia (Republic of)	LBR	LBR24400
Malaysia	MLA	MLA22800
Portugal	POR	POR13300
Portugal	POR	AZR13400
Romania	ROU	ROU13600
Sierra Leone	SRL	SRL25900
Viet Nam (Socialist Republic of)	VTN	VTN33500

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97

WORLD
RADIOCOMMUNICATION
CONFERENCE

Corrigendum 1 to
Document 273-E
14 November 1997
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CORRIGENDA TO DOCUMENT 273

The following corrigenda should be made to Document 273:

1 In Section 1.1, **add** to the fourth dot point the following text (new text shown double underlined):

" ... provide the component individual co-channel and adjacent channel C/I ....."

2 **Add** the following note against the beams E2WA7DA1, E2WA7DA2, E2WA7DB1, E2WA7DB2, E2WA7DC1, E2WA7DC2, E2WA7DD1, E2WA7DD2, E2WA7DE1, E2WA7DE2, E2WA7DF1, E2WA7DF2, E2WA7DG1, E2WA7DG2 of the EUROPESAT-1 network:

"* Pending clarification of bringing into service of the satellite network."

(This note should be read against entries for the above-mentioned beams on pages 77-106, 144, 158-161, 164-165 and 168-191.)

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WORKING GROUP 4D

NOTE BY THE SECRETARY-GENERAL

RESULTS OF BSS-BSS COMPATIBILITY STUDIES FOR THE DRAFT REVISED APPENDICES 30/30A REGIONS 1 AND 3 PLAN

This document provides computer printouts of the BSS-BSS compatibility situation for the "**Draft revised Appendices 30/30A Regions 1 and 3 Plan"**.

Two separate sets of data are provided. These are:

- a listing of the overall equivalent protection margin (OEPM) and equivalent protection margin (EPM) situation for each beam;
- a listing of overall co-channel single entry carrier-to-interference (C/I) situations that are worse (i.e. lower) than 28 dB.

1.1 OEPM/EPM data

In **Annex 1** OEPM/EPM data is provided for each combination of beam, channel and test point.

The OEPM/EPM listing is arranged in the following way: beams of WARC-77/88 Step 1 countries in alphabetical order by beam name; Step 1 countries for which changes have been made during WRC-97; submissions received under Article 4 which have successfully completed the procedure of that Article and which enjoy the same status as those systems in the initial Plan; Step 2 new countries; Step 2 countries having less than the minimum number of channels.

For each case of beam, channel and test point the following OEPM/EPM data is provided:

- The column labelled "New Ref" provides the OEPM reference situation that would exist after incorporation of the Step 2 new countries and additional channels.
- The column labelled "Ref" provides the OEPM reference situation for Step 1 (but with the new parameters of Recommendation 521 where applicable). (NOTE - If an assignment has a positive OEPM in the current Plan it is shown as 0.0 dB.)
- The six columns under the main heading "C/I" provide the component individual adjacent-channel C/I values for both feeder link and downlink from which the OEPM values were derived.
- The last two columns indicate the EPM values for the feeder link and the downlink. This data is provided for information only.

1.2 Additional data concerning Step 1 countries for which modifications have been made

Several proposed Step 1 assignments in the revised Appendices 30/30A Regions 1 and 3 Plan differ from those of the current WARC-77/WARC ORB-88 Plans. These beams are listed below:

Administration	Country symbol	Beam
Burkina Faso	BFA	BFA10700
Cape Verde	CPV	CPV30100
Côte d'Ivoire	CTI	CTI23700
Spain	E	E 12900
Spain (HISPASAT-2)	E	HISPASA2
Spain (Canary Islands)	E/CNR	CNR13000
United Kingdom	G	G 02700
United Kingdom (UK-DBS)	G	G UKDBS
Guinea-Bissau	GNB	GNB30400
Ireland	IRL	IRL21100
Iceland	ISL	ISL04900
Republic of Korea	KOR	KOR11200
Republic of Korea (KOREASAT-1)	KOR	KOR11201
Republic of Korea (KOREASAT-1D)	KOR	KO11201D
Democratic People's Republic of Korea	KRE	KRE28600
Liberia	LBR	LBR24400
Malaysia	MLA	MLA22800
Portugal	POR	POR13300
Portugal (Azores)	POR/AZR	AZR13400
Romania	ROU	ROU13600
Sierra Leone	SRL	SRL25900
Viet Nam	VTN	VTN33500

In the case of the changes to Step 1 assignments, resulting of national requests to WRC-97, there are two possible ways of calculating the Reference situation. The Reference situation can be calculated either by assuming that the changed Step 1 situation is calculated before, or after, the inclusion of Step 2 assignments. Therefore, in addition to the main computer file listing in Annex 1 which treats the changes as part of the Step 1 situation, a side-by-side comparison of the reference situation of the subject beam both before and after the proposed change is presented in **Annex 2**. That Annex also includes, where applicable, the impact of the proposed Step 1 change on other beams of the Plan.

1.3 In addition, the following comments/notes apply to the OEPM/EPM printouts

Overall equivalent protection margin (OEPM) has been calculated in accordance with Resolution 531 (WRC-95).

Overall protection ratios applied for assignments which have been notified, which are in conformity with Appendices 30 and 30A, and for which the date of bringing into use has been confirmed to the Bureau (marked by *):

Co-channel = 30 dB upper and lower adjacent channel = 14 dB

Overall Protection Ratios applied for other assignments:

Co-channel = 23 dB upper and lower adjacent channel = 15 dB

Equivalent protection margin (EPM) has been calculated in accordance with Recommendation ITU-R BO.1297.

Protection ratios applied for assignments which have been notified, which are in conformity with Appendices 30 and 30A, and for which the date of bringing into use has been confirmed to the Bureau:

Feeder-link: Co-channel = 40 dB upper and lower adjacent channel = 21 dB

Downlink: Co-channel = 31 dB upper and lower adjacent channel = 15 dB

Protection ratios applied for other assignments:

Feeder-link: Co-channel = 30 dB upper and lower adjacent channel = 22 dB

Downlink: Co-channel = 24 dB upper and lower adjacent channel = 16 dB

WARNING - For assignments which have been notified, which are in conformity with Appendices 30 and 30A, and for which the date of bringing into use has been confirmed to the Bureau (as indicated by *), EPM values should not be used to calculate OEPM.

2 Overall co-channel single entry C/I data

Annex 3 lists cases where overall co-channel single entry values below 28 dB are identified for each combination of beam, channel and test point.

The overall co-channel single entry C/I reports are provided in the following order:

1) cases involving overall co-channel single entry C/Is lower than 28 dB from Step 2 to Step 1;
2) cases involving overall co-channel single entry C/Is lower than 28 dB from Step 2 to Step 2;
3) cases involving overall co-channel single entry C/Is lower than 28 dB from Step 1 to Step 2;
4) cases involving overall co-channel single entry C/Is lower than 28 dB from Step 1 to Step 1.

In each case the listing has been sorted by the beam name of the beam **receiving** the overall co-channel single entry C/I value below 28 dB, in the following order. Firstly, entries in the original Appendices 30/30A Plans are listed in alphabetical order by beam name; then follow entries resulting from submissions received under Article 4 which have successfully completed the procedure of that Article and which enjoy the same status as those systems in the initial Plans; Step 2 new countries; and then, Step 2 countries having less than the minimum number of channels.

For each case of beam, channel and test point the following overall co-channel single entry C/I data is provided:

- Under the main column label "interfering beam" details of the beam causing the overall co-channel single entry C/I condition are given.
- Under the main column label "overall co-channel single entry C/I (dB)" details of the overall overall co-channel single entry C/I value and the individual feeder link and downlink overall co-channel single entry C/I values are given.

It is noted that in these listings the beams of many administrations do not appear. This indicates that for these beams there are no cases where the overall co-channel single entry C/I is less than 28 dB.

3 Comments concerning BSS-BSS compatibility study results

Attention is drawn to the fact that some of the BSS-BSS incompatibilities reported in this document may not need to be further considered because one or more of the following conditions apply:

1) the negative OEPMs were inherited from either the initial WARC-77 or WARC ORB-88 Plans;
2) the negative OEPMs result from successful application of the modification procedure of the Plan, i.e. the negative OEPMs emanate from the agreements given (explicitly or tacitly) to coordination requests;
3) overall co-channel single entry C/I values lower than 28 dB due to the fact that this criterion was not used when the WARC-77 and WARC ORB-88 Plans were established. Therefore this criterion may not be appropriate to apply between two Step 1 entries.

OEPM/EPM listing

Beam	Down-link Pos	Chan	TP	Overall Equivalent Protecion Margin (dB) New Ref	Ref.	Change	C / I Feeder-link Co-chan	Lower chan.	Upper chan.	C / I Down-link Co-chan	Lower chan.	Upper chan.	Equivalent Protection Margin* Feeder-link	Down-link
AFG24500	50.00	3	1	6.23	0.00	6.23	45.72	28.42	53.36	33.83	26.15	30.51	5.93	6.27
AFG24500	50.00	3	2	6.94	0.00	6.94	45.72	28.42	53.36	33.04	28.64	35.37	5.93	7.20
AFG24500	50.00	3	3	6.28	0.00	6.28	45.72	28.42	53.36	31.89	28.25	36.07	5.93	6.35
AFG24500	50.00	3	4	8.22	0.00	8.22	45.72	28.42	53.36	36.46	28.60	34.59	5.93	9.01
AFG24500	50.00	3	5	7.72	0.00	7.72	45.72	28.42	53.36	38.40	26.65	31.83	5.93	8.28
AFG24500	50.00	3	6	7.56	0.00	7.56	45.72	28.42	53.36	38.56	26.41	31.10	5.93	8.05
AFG24500	50.00	7	1	6.29	0.00	6.29	45.73	28.42	50.51	33.93	26.20	30.61	5.91	6.35
AFG24500	50.00	7	2	7.00	0.00	7.00	45.73	28.42	50.51	33.14	28.70	35.47	5.91	7.29
AFG24500	50.00	7	3	6.35	0.00	6.35	45.73	28.42	50.51	31.99	28.30	36.17	5.91	6.43
AFG24500	50.00	7	4	8.27	0.00	8.27	45.73	28.42	50.51	36.56	28.66	34.68	5.91	9.09
AFG24500	50.00	7	5	7.77	0.00	7.77	45.73	28.42	50.51	38.50	26.71	31.91	5.91	8.35
AFG24500	50.00	7	6	7.60	0.00	7.60	45.73	28.42	50.51	38.66	26.47	31.18	5.91	8.12
AFG24500	50.00	11	1	6.57	0.00	6.57	45.72	28.42	54.85	33.92	26.15	34.24	5.93	6.71
AFG24500	50.00	11	2	7.15	0.00	7.15	45.72	28.42	54.85	33.14	28.64	42.57	5.93	7.48
AFG24500	50.00	11	3	6.46	0.00	6.46	45.72	28.42	54.85	31.98	28.25	44.77	5.93	6.57
AFG24500	50.00	11	4	8.49	0.00	8.49	45.72	28.42	54.85	36.53	28.60	40.65	5.93	9.42
AFG24500	50.00	11	5	7.92	0.00	7.92	45.72	28.42	54.85	38.44	26.65	33.68	5.93	8.57
AFG24500	50.00	11	6	7.71	0.00	7.71	45.72	28.42	54.85	38.60	26.41	32.25	5.93	8.26
AFG24500	50.00	15	1	7.00	0.00	7.00	45.74	28.42	53.58	34.03	26.72	41.19	5.92	7.28
AFG24500	50.00	15	2	7.44	0.00	7.44	45.74	28.42	53.58	33.24	29.71	46.31	5.92	7.89
AFG24500	50.00	15	3	6.78	0.00	6.78	45.74	28.42	53.58	32.07	29.62	46.26	5.92	6.99
AFG24500	50.00	15	4	9.01	0.00	9.01	45.74	28.42	53.58	36.61	30.28	44.02	5.92	10.28
AFG24500	50.00	15	5	8.67	0.00	8.67	45.74	28.42	53.58	38.50	27.81	38.67	5.92	9.72
AFG24500	50.00	15	6	8.44	0.00	8.44	45.74	28.42	53.58	38.66	27.23	37.70	5.92	9.35
AFG24600	50.00	1	1	6.62	0.00	6.62	45.80		28.44	32.02		28.78	5.96	6.77
AFG24600	50.00	1	2	7.93	0.00	7.93	45.80		28.44	34.06		29.92	5.96	8.56
AFG24600	50.00	1	3	10.55	0.00	10.55	45.80		28.44	42.16		30.93	5.96	13.24
AFG24600	50.00	1	4	10.86	0.00	10.86	45.80		28.44	45.09		30.97	5.96	14.02
AFG24600	50.00	1	5	10.59	0.00	10.59	45.80		28.44	48.87		29.67	5.96	13.35
AFG24600	50.00	1	6	10.41	0.00	10.41	45.80		28.44	48.83		29.22	5.96	12.93
AFG24600	50.00	5	1	6.47	0.00	6.47	45.80	53.34	28.44	32.02	36.55	28.74	5.95	6.58
AFG24600	50.00	5	2	7.83	0.00	7.83	45.80	53.34	28.44	34.05	40.05	29.88	5.95	8.43
AFG24600	50.00	5	3	10.46	0.00	10.46	45.80	53.34	28.44	42.11	44.32	30.90	5.95	13.07
AFG24600	50.00	5	4	10.78	0.00	10.78	45.80	53.34	28.44	45.01	44.53	30.94	5.95	13.83
AFG24600	50.00	5	5	10.49	0.00	10.49	45.80	53.34	28.44	48.75	43.07	29.63	5.95	13.13
AFG24600	50.00	5	6	10.26	0.00	10.26	45.80	53.34	28.44	48.71	40.95	29.18	5.95	12.62
AFG24600	50.00	9	1	6.45	0.00	6.45	45.80	50.49	28.44	32.01	36.55	28.68	5.94	6.56
AFG24600	50.00	9	2	7.81	0.00	7.81	45.80	50.49	28.44	34.05	40.04	29.82	5.94	8.40
AFG24600	50.00	9	3	10.44	0.00	10.44	45.80	50.49	28.44	42.09	44.30	30.83	5.94	13.02
AFG24600	50.00	9	4	10.75	0.00	10.75	45.80	50.49	28.44	44.98	44.51	30.87	5.94	13.77
AFG24600	50.00	9	5	10.46	0.00	10.46	45.80	50.49	28.44	48.66	43.04	29.57	5.94	13.07
AFG24600	50.00	9	6	10.23	0.00	10.23	45.80	50.49	28.44	48.62	40.92	29.12	5.94	12.56
AFG24600	50.00	13	1	6.79	0.00	6.79	45.74	54.83	28.43	32.01	45.15	29.96	5.94	7.00
AFG24600	50.00	13	2	8.10	0.00	8.10	45.74	54.83	28.43	34.04	47.82	31.05	5.94	8.83
AFG24600	50.00	13	3	10.82	0.00	10.82	45.74	54.83	28.43	42.07	47.53	32.18	5.94	13.93
AFG24600	50.00	13	4	11.19	0.00	11.19	45.74	54.83	28.43	44.95	47.37	32.39	5.94	14.98
AFG24600	50.00	13	5	11.19	0.00	11.19	45.74	54.83	28.43	48.65	46.21	31.63	5.94	14.99
AFG24600	50.00	13	6	11.07	0.00	11.07	45.74	54.83	28.43	48.61	44.55	31.27	5.94	14.61
AGL29500	-13.00	23	1	7.67	0.00	7.67	49.20	25.97	27.90	55.30	30.51	35.63	1.74	13.27
AGL29500	-13.00	23	2	5.73	0.00	5.73	49.20	25.97	27.90	54.64	24.90	30.10	1.74	7.73
AGL29500	-13.00	23	3	7.04	0.00	7.04	49.20	25.97	27.90	49.49	30.31	29.93	1.74	10.95
AGL29500	-13.00	23	4	8.21	0.00	8.21	49.20	25.97	27.90	54.87	35.87	35.64	1.74	16.58
AGL29500	-13.00	23	5	7.02	0.00	7.02	49.20	25.97	27.90	52.77	29.53	30.44	1.74	10.88
AGL29500	-13.00	27	1	7.70	0.00	7.70	49.20	25.97	27.90	56.27	30.61	35.74	1.74	13.39
AGL29500	-13.00	27	2	5.78	0.00	5.78	49.20	25.97	27.90	55.28	25.00	30.21	1.74	7.83
AGL29500	-13.00	27	3	7.08	0.00	7.08	49.20	25.97	27.90	49.75	30.41	30.03	1.74	11.06
AGL29500	-13.00	27	4	8.23	0.00	8.23	49.20	25.97	27.90	55.83	35.99	35.75	1.74	16.73
AGL29500	-13.00	27	5	7.06	0.00	7.06	49.20	25.97	27.90	53.18	29.64	30.55	1.74	10.99
AGL29500	-13.00	31	1	7.67	0.00	7.67	49.20	25.97	27.90	56.25	30.51	35.64	1.74	13.29
AGL29500	-13.00	31	2	5.73	0.00	5.73	49.20	25.97	27.90	55.25	24.90	30.11	1.74	7.73
AGL29500	-13.00	31	3	7.05	0.00	7.05	49.20	25.97	27.90	49.74	30.31	29.93	1.74	10.96
AGL29500	-13.00	31	4	8.21	0.00	8.21	49.20	25.97	27.90	55.82	35.89	35.65	1.74	16.63
AGL29500	-13.00	31	5	7.03	0.00	7.03	49.20	25.97	27.90	53.17	29.54	30.45	1.74	10.89
AGL29500	-13.00	35	1	7.70	0.00	7.70	49.20	25.97	27.90	56.23	30.61	35.75	1.74	13.39
AGL29500	-13.00	35	2	5.78	0.00	5.78	49.20	25.97	27.90	55.30	25.00	30.21	1.74	7.83
AGL29500	-13.00	35	3	7.08	0.00	7.08	49.20	25.97	27.90	49.75	30.41	30.03	1.74	11.06
AGL29500	-13.00	35	4	8.23	0.00	8.23	49.20	25.97	27.90	55.86	35.99	35.75	1.74	16.73
AGL29500	-13.00	35	5	7.06	0.00	7.06	49.20	25.97	27.90	53.20	29.64	30.55	1.74	10.99
AGL29500	-13.00	39	1	7.70	0.00	7.70	49.20	25.97	27.90	56.06	30.61	35.74	1.74	13.39
AGL29500	-13.00	39	2	5.78	0.00	5.78	49.20	25.97	27.90	55.15	25.00	30.21	1.74	7.83
AGL29500	-13.00	39	3	7.08	0.00	7.08	49.20	25.97	27.90	49.77	30.41	30.03	1.74	11.06
AGL29500	-13.00	39	4	8.22	0.00	8.22	49.20	25.97	27.90	55.63	35.99	35.76	1.74	16.72
AGL29500	-13.00	39	5	7.06	0.00	7.06	49.20	25.97	27.90	53.15	29.64	30.55	1.74	10.99
ALB29600	-7.00	22	1	4.94	0.00	4.94	36.97	29.78	40.10	35.21	42.86	22.39	4.16	5.12
ALB29600	-7.00	22	2	4.20	0.00	4.20	36.97	29.78	40.10	33.53	42.76	21.70	4.16	4.17
ALB29600	-7.00	22	3	5.09	0.00	5.09	36.97	29.78	40.10	35.06	43.32	22.70	4.16	5.32

ALB29600	-7.00	22	4	5.44	0.00	5.44	36.97	29.78	40.10	35.73	43.07	23.11	4.16	5.79
ALB29600	-7.00	22	5	4.51	0.00	4.51	36.97	29.78	40.10	34.17	41.45	22.02	4.16	4.57
ALB29600	-7.00	22	6	5.00	0.00	5.00	36.97	29.78	40.10	35.09	43.58	22.54	4.16	5.21
ALB29600	-7.00	26	1	4.83	0.00	4.83	34.09	40.13	40.10	35.18	42.87	22.39	3.76	5.11
ALB29600	-7.00	26	2	4.09	0.00	4.09	34.09	40.13	40.10	33.51	42.77	21.66	3.76	4.14
ALB29600	-7.00	26	3	4.97	0.00	4.97	34.09	40.13	40.10	35.04	43.33	22.68	3.76	5.30
ALB29600	-7.00	26	4	5.32	0.00	5.32	34.09	40.13	40.10	35.71	43.07	23.11	3.76	5.79
ALB29600	-7.00	26	5	4.42	0.00	4.42	34.09	40.13	40.10	34.15	41.47	22.03	3.76	4.57
ALB29600	-7.00	26	6	4.89	0.00	4.89	34.09	40.13	40.10	35.06	43.58	22.52	3.76	5.19
ALB29600	-7.00	30	1	4.89	0.00	4.89	34.09	40.13	40.10	35.20	42.95	22.49	3.76	5.19
ALB29600	-7.00	30	2	4.14	0.00	4.14	34.09	40.13	40.10	33.52	42.84	21.76	3.76	4.21
ALB29600	-7.00	30	3	5.02	0.00	5.02	34.09	40.13	40.10	35.06	43.41	22.78	3.76	5.37
ALB29600	-7.00	30	4	5.38	0.00	5.38	34.09	40.13	40.10	35.73	43.16	23.21	3.76	5.87
ALB29600	-7.00	30	5	4.48	0.00	4.48	34.09	40.13	40.10	34.17	41.55	22.13	3.76	4.65
ALB29600	-7.00	30	6	4.94	0.00	4.94	34.09	40.13	40.10	35.07	43.66	22.62	3.76	5.26
ALB29600	-7.00	34	1	4.87	0.00	4.87	34.09	40.13	40.10	35.20	42.94	22.46	3.76	5.17
ALB29600	-7.00	34	2	4.13	0.00	4.13	34.09	40.13	40.10	33.52	42.83	21.74	3.76	4.20
ALB29600	-7.00	34	3	5.01	0.00	5.01	34.09	40.13	40.10	35.05	43.40	22.75	3.76	5.35
ALB29600	-7.00	34	4	5.36	0.00	5.36	34.09	40.13	40.10	35.73	43.15	23.18	3.76	5.84
ALB29600	-7.00	34	5	4.46	0.00	4.46	34.09	40.13	40.10	34.16	41.54	22.09	3.76	4.62
ALB29600	-7.00	34	6	4.93	0.00	4.93	34.09	40.13	40.10	35.07	43.65	22.60	3.76	5.24
ALB29600	-7.00	38	1	4.87	0.00	4.87	34.09	40.13	40.10	34.90	43.03	22.56	3.76	5.17
ALB29600	-7.00	38	2	4.15	0.00	4.15	34.09	40.13	40.10	33.36	42.91	21.84	3.76	4.22
ALB29600	-7.00	38	3	5.02	0.00	5.02	34.09	40.13	40.10	34.85	43.48	22.85	3.76	5.37
ALB29600	-7.00	38	4	5.36	0.00	5.36	34.09	40.13	40.10	35.43	43.23	23.28	3.76	5.84
ALB29600	-7.00	38	5	4.44	0.00	4.44	34.09	40.13	40.10	33.82	41.63	22.19	3.76	4.59
ALB29600	-7.00	38	6	4.94	0.00	4.94	34.09	40.13	40.10	34.86	43.73	22.69	3.76	5.26
ALG25100	-25.00	2	1	5.01	0.00	5.01	46.04	25.43	25.51	37.41	28.75	27.75	0.34	7.81
ALG25100	-25.00	2	2	4.69	0.00	4.69	46.04	25.43	25.51	37.39	27.13	27.41	0.34	7.09
ALG25100	-25.00	2	3	4.74	0.00	4.74	46.04	25.43	25.51	38.97	26.23	27.97	0.34	7.21
ALG25100	-25.00	2	4	3.59	0.00	3.59	46.04	25.43	25.51	38.02	23.74	25.57	0.34	4.97
ALG25100	-25.00	2	5	4.60	0.00	4.60	46.04	25.43	25.51	40.09	26.81	26.14	0.34	6.89
ALG25100	-25.00	2	6	3.61	0.00	3.61	46.04	25.43	25.51	38.76	27.87	22.61	0.34	4.99
ALG25100	-25.00	6	1	5.00	0.00	5.00	46.04	25.43	25.51	37.41	28.75	27.70	0.34	7.79
ALG25100	-25.00	6	2	4.68	0.00	4.68	46.04	25.43	25.51	37.39	27.13	27.36	0.34	7.07
ALG25100	-25.00	6	3	4.73	0.00	4.73	46.04	25.43	25.51	38.96	26.23	27.89	0.34	7.18
ALG25100	-25.00	6	4	3.57	0.00	3.57	46.04	25.43	25.51	38.00	23.74	25.48	0.34	4.94
ALG25100	-25.00	6	5	4.58	0.00	4.58	46.04	25.43	25.51	40.08	26.81	26.05	0.34	6.85
ALG25100	-25.00	6	6	3.57	0.00	3.57	46.04	25.43	25.51	38.75	27.87	22.51	0.34	4.93
ALG25100	-25.00	10	1	5.03	0.00	5.03	46.04	25.43	25.51	37.47	28.81	27.80	0.34	7.87
ALG25100	-25.00	10	2	4.71	0.00	4.71	46.04	25.43	25.51	37.45	27.17	27.46	0.34	7.14
ALG25100	-25.00	10	3	4.75	0.00	4.75	46.04	25.43	25.51	39.02	26.25	27.99	0.34	7.23
ALG25100	-25.00	10	4	3.60	0.00	3.60	46.04	25.43	25.51	38.06	23.75	25.58	0.34	4.98
ALG25100	-25.00	10	5	4.60	0.00	4.60	46.04	25.43	25.51	40.12	26.81	26.15	0.34	6.90
ALG25100	-25.00	10	6	3.61	0.00	3.61	46.04	25.43	25.51	38.78	27.87	22.61	0.34	5.00
ALG25100	-25.00	14	1	5.06	0.00	5.06	46.04	25.43	25.51	37.58	28.89	27.85	0.34	7.94
ALG25100	-25.00	14	2	4.74	0.00	4.74	46.04	25.43	25.51	37.57	27.22	27.50	0.34	7.21
ALG25100	-25.00	14	3	4.78	0.00	4.78	46.04	25.43	25.51	39.15	26.30	28.02	0.34	7.29
ALG25100	-25.00	14	4	3.62	0.00	3.62	46.04	25.43	25.51	38.23	23.78	25.59	0.34	5.03
ALG25100	-25.00	14	5	4.62	0.00	4.62	46.04	25.43	25.51	40.28	26.86	26.16	0.34	6.94
ALG25100	-25.00	14	6	3.63	0.00	3.63	46.04	25.43	25.51	38.90	27.97	22.61	0.34	5.03
ALG25100	-25.00	18	1	5.04	0.00	5.04	46.04	25.43	25.51	37.55	28.87	27.80	0.34	7.91
ALG25100	-25.00	18	2	4.73	0.00	4.73	46.04	25.43	25.51	37.54	27.21	27.45	0.34	7.18
ALG25100	-25.00	18	3	4.76	0.00	4.76	46.04	25.43	25.51	39.14	26.27	27.95	0.34	7.25
ALG25100	-25.00	18	4	3.60	0.00	3.60	46.04	25.43	25.51	38.25	23.75	25.51	0.34	4.98
ALG25100	-25.00	18	5	4.59	0.00	4.59	46.04	25.43	25.51	40.25	26.82	26.06	0.34	6.88
ALG25100	-25.00	18	6	3.57	0.00	3.57	46.04	25.43	25.51	38.81	27.88	22.51	0.34	4.93
ALG25200	-25.00	4	1	3.71	0.00	3.71	46.68	25.49	25.45	45.94	22.37	27.69	0.36	5.16
ALG25200	-25.00	4	2	3.67	0.00	3.67	46.68	25.49	25.45	47.57	22.76	26.25	0.36	5.09
ALG25200	-25.00	4	3	5.78	0.00	5.78	46.68	25.49	25.45	43.38	29.18	29.81	0.36	9.95
ALG25200	-25.00	4	4	6.52	0.00	6.52	46.68	25.49	25.45	50.76	30.86	34.47	0.36	13.10
ALG25200	-25.00	4	5	6.49	0.00	6.49	46.68	25.49	25.45	47.90	30.58	35.16	0.36	12.92
ALG25200	-25.00	4	6	5.93	0.00	5.93	46.68	25.49	25.45	42.92	30.08	30.17	0.36	10.45
ALG25200	-25.00	8	1	3.65	0.00	3.65	46.68	25.49	25.45	45.88	22.27	27.59	0.36	5.06
ALG25200	-25.00	8	2	3.61	0.00	3.61	46.68	25.49	25.45	47.51	22.66	26.15	0.36	5.00
ALG25200	-25.00	8	3	5.75	0.00	5.75	46.68	25.49	25.45	43.28	29.08	29.71	0.36	9.85
ALG25200	-25.00	8	4	6.51	0.00	6.51	46.68	25.49	25.45	50.68	30.77	34.38	0.36	13.01
ALG25200	-25.00	8	5	6.48	0.00	6.48	46.68	25.49	25.45	47.84	30.50	35.10	0.36	12.85
ALG25200	-25.00	8	6	5.92	0.00	5.92	46.68	25.49	25.45	42.90	30.06	30.15	0.36	10.43
ALG25200	-25.00	12	1	3.71	0.00	3.71	46.68	25.49	25.45	46.08	22.37	27.69	0.36	5.16
ALG25200	-25.00	12	2	3.67	0.00	3.67	46.68	25.49	25.45	47.74	22.76	26.25	0.36	5.10
ALG25200	-25.00	12	3	5.78	0.00	5.78	46.68	25.49	25.45	43.41	29.18	29.81	0.36	9.95
ALG25200	-25.00	12	4	6.53	0.00	6.53	46.68	25.49	25.45	50.91	30.87	34.47	0.36	13.11
ALG25200	-25.00	12	5	6.50	0.00	6.50	46.68	25.49	25.45	47.99	30.60	35.20	0.36	12.95
ALG25200	-25.00	12	6	5.95	0.00	5.95	46.68	25.49	25.45	43.02	30.16	30.24	0.36	10.53
ALG25200	-25.00	16	1	3.71	0.00	3.71	46.68	25.49	25.45	46.11	22.37	27.69	0.36	5.17
ALG25200	-25.00	16	2	3.67	0.00	3.67	46.68	25.49	25.45	47.76	22.76	26.25	0.36	5.10
ALG25200	-25.00	16	3	5.78	0.00	5.78	46.68	25.49	25.45	43.42	29.18	29.81	0.36	9.95
ALG25200	-25.00	16	4	6.53	0.00	6.53	46.68	25.49	25.45	50.97	30.87	34.48	0.36	13.12
ALG25200	-25.00	16	5	6.50	0.00	6.50	46.68	25.49	25.45	48.05	30.61	35.25	0.36	12.98
ALG25200	-25.00	16	6	5.97	0.00	5.97	46.68	25.49	25.45	43.11	30.23	30.32	0.36	10.61
ALG25200	-25.00	20	1	4.90	0.00	4.90	46.68	25.49	42.39	46.01	22.27	29.44	3.20	5.41
ALG25200	-25.00	20	2	5.52	0.00	5.52	46.68	25.49	42.39	47.64	22.66	34.98	3.20	6.33
ALG25200	-25.00	20	3	7.30	0.00	7.30	46.68	25.49	42.39	43.38	29.07	28.72	3.20	9.42
ALG25200	-25.00	20	4	8.30	0.00	8.30	46.68	25.49	42.39	50.81	30.77	31.14	3.20	11.80
ALG25200	-25.00	20	5	6.76	0.00	6.76	46.68	25.49	42.39	48.03	30.52	25.74	3.20	8.37
ALG25200	-25.00	20	6	4.48	0.00	4.48	46.68	25.49	42.39	43.11	30.19	21.56	3.20	4.84
AND34100	-37.00	4	1	1.01	0.00	1.01	43.26	29.75	31.46	26.68	23.24	23.30	4.84	0.39
AND34100	-37.00	4	2	0.87	0.00	0.87	43.26	29.75	31.46	26.45	23.17	23.26	4.84	0.23
AND34100	-37.00	4	3	0.80	0.00	0.80	43.26	29.75	31.46	26.35	23.09	23.25	4.84	0.15
AND34100	-37.00	4	4	0.99	0.00	0.99	43.26	29.75	31.46	26.66	23.18	23.32	4.84	0.37

AND34100	-37.00	4	5	0.97	0.00	0.97	43.26	29.75	31.46	26.60	23.24	23.28	4.84	0.34
AND34100	-37.00	8	1	0.96	0.00	0.96	43.26	29.75	31.46	26.59	23.19	23.29	4.84	0.32
AND34100	-37.00	8	2	0.81	0.00	0.81	43.26	29.75	31.46	26.36	23.12	23.25	4.84	0.16
AND34100	-37.00	8	3	0.74	0.00	0.74	43.26	29.75	31.46	26.27	23.04	23.24	4.84	0.09
AND34100	-37.00	8	4	0.94	0.00	0.94	43.26	29.75	31.46	26.57	23.13	23.31	4.84	0.30
AND34100	-37.00	8	5	0.91	0.00	0.91	43.26	29.75	31.46	26.52	23.19	23.27	4.84	0.28
AND34100	-37.00	12	1	1.04	0.00	1.04	43.26	29.75	31.46	26.69	23.29	23.34	4.84	0.41
AND34100	-37.00	12	2	0.89	0.00	0.89	43.26	29.75	31.46	26.46	23.22	23.30	4.84	0.25
AND34100	-37.00	12	3	0.82	0.00	0.82	43.26	29.75	31.46	26.37	23.14	23.29	4.84	0.18
AND34100	-37.00	12	4	1.02	0.00	1.02	43.26	29.75	31.46	26.67	23.23	23.36	4.84	0.39
AND34100	-37.00	12	5	0.99	0.00	0.99	43.26	29.75	31.46	26.62	23.29	23.32	4.84	0.37
AND34100	-37.00	16	1	0.97	0.00	0.97	43.26	29.75	31.46	26.61	23.24	23.30	4.84	0.35
AND34100	-37.00	16	2	0.83	0.00	0.83	43.26	29.75	31.46	26.38	23.17	23.26	4.84	0.18
AND34100	-37.00	16	3	0.76	0.00	0.76	43.26	29.75	31.46	26.28	23.09	23.25	4.84	0.11
AND34100	-37.00	16	4	0.95	0.00	0.95	43.26	29.75	31.46	26.59	23.17	23.32	4.84	0.32
AND34100	-37.00	16	5	0.93	0.00	0.93	43.26	29.75	31.46	26.53	23.24	23.28	4.84	0.30
AND34100	-37.00	20	1	1.06	0.00	1.06	43.26	29.75	30.72	26.71	23.35	23.52	4.57	0.47
AND34100	-37.00	20	2	0.94	0.00	0.94	43.26	29.75	30.72	26.48	23.27	23.60	4.57	0.33
AND34100	-37.00	20	3	0.86	0.00	0.86	43.26	29.75	30.72	26.38	23.19	23.56	4.57	0.25
AND34100	-37.00	20	4	1.03	0.00	1.03	43.26	29.75	30.72	26.69	23.28	23.44	4.57	0.43
AND34100	-37.00	20	5	1.03	0.00	1.03	43.26	29.75	30.72	26.63	23.34	23.57	4.57	0.43
ARS00300	17.00	4	1	7.26	0.00	7.26	48.37	29.85	25.60	38.62	32.10	32.37	2.11	10.85
ARS00300	17.00	4	2	8.55	0.00	8.55	48.37	29.85	25.60	41.61	43.84	42.50	2.11	16.73
ARS00300	17.00	4	3	8.50	0.00	8.50	48.37	29.85	25.60	43.12	43.34	36.44	2.11	16.36
ARS00300	17.00	4	4	6.75	0.00	6.75	48.37	29.85	25.60	38.12	28.99	32.52	2.11	9.54
ARS00300	17.00	4	5	6.94	0.00	6.94	48.37	29.85	25.60	46.83	38.58	26.48	2.11	9.99
ARS00300	17.00	4	6	5.67	0.00	5.67	48.37	29.85	25.60	48.65	35.38	23.65	2.11	7.28
ARS00300	17.00	8	1	7.27	0.00	7.27	48.36	29.85	25.60	38.64	32.11	32.46	2.11	10.89
ARS00300	17.00	8	2	8.55	0.00	8.55	48.36	29.85	25.60	41.63	43.92	42.54	2.11	16.76
ARS00300	17.00	8	3	8.51	0.00	8.51	48.36	29.85	25.60	43.14	43.42	36.53	2.11	16.41
ARS00300	17.00	8	4	6.77	0.00	6.77	48.36	29.85	25.60	38.16	29.00	32.61	2.11	9.57
ARS00300	17.00	8	5	6.97	0.00	6.97	48.36	29.85	25.60	46.89	38.61	26.58	2.11	10.08
ARS00300	17.00	8	6	5.72	0.00	5.72	48.36	29.85	25.60	48.75	35.40	23.74	2.11	7.37
ARS00300	17.00	12	1	7.27	0.00	7.27	48.36	29.85	25.60	38.65	32.11	32.46	2.11	10.90
ARS00300	17.00	12	2	8.55	0.00	8.55	48.36	29.85	25.60	41.65	43.91	42.53	2.11	16.77
ARS00300	17.00	12	3	8.51	0.00	8.51	48.36	29.85	25.60	43.18	43.41	36.52	2.11	16.43
ARS00300	17.00	12	4	6.77	0.00	6.77	48.36	29.85	25.60	38.18	29.00	32.59	2.11	9.58
ARS00300	17.00	12	5	6.97	0.00	6.97	48.36	29.85	25.60	46.99	38.61	26.57	2.11	10.08
ARS00300	17.00	12	6	5.71	0.00	5.71	48.36	29.85	25.60	48.96	35.39	23.74	2.11	7.37
ARS00300	17.00	16	1	7.25	0.00	7.25	48.42	29.85	25.60	38.55	32.01	32.47	2.11	10.83
ARS00300	17.00	16	2	8.55	0.00	8.55	48.42	29.85	25.60	41.55	43.88	42.64	2.11	16.70
ARS00300	17.00	16	3	8.51	0.00	8.51	48.42	29.85	25.60	43.08	43.39	36.55	2.11	16.38
ARS00300	17.00	16	4	6.74	0.00	6.74	48.42	29.85	25.60	38.11	28.90	32.61	2.11	9.51
ARS00300	17.00	16	5	6.97	0.00	6.97	48.42	29.85	25.60	46.88	38.54	26.58	2.11	10.08
ARS00300	17.00	16	6	5.71	0.00	5.71	48.42	29.85	25.60	48.96	35.31	23.74	2.11	7.37
ARS00300	17.00	20	1	7.54	0.00	7.54	48.33	29.85	25.59	38.64	32.13	36.73	2.10	11.73
ARS00300	17.00	20	2	8.47	0.00	8.47	48.33	29.85	25.59	41.63	44.13	38.67	2.10	16.16
ARS00300	17.00	20	3	8.48	0.00	8.48	48.33	29.85	25.59	43.14	43.63	36.10	2.10	16.25
ARS00300	17.00	20	4	6.97	0.00	6.97	48.33	29.85	25.59	38.19	29.01	36.06	2.10	10.09
ARS00300	17.00	20	5	8.30	0.00	8.30	48.33	29.85	25.59	46.87	38.64	32.79	2.10	15.01
ARS00300	17.00	20	6	7.77	0.00	7.77	48.33	29.85	25.59	48.82	35.36	29.88	2.10	12.53
ARS00301	17.00	4	1	11.73	0.00	11.73	62.26	45.41	45.62	38.62	32.10	32.37	20.22	10.85
ARS00301	17.00	4	2	17.27	0.00	17.27	62.26	45.41	45.62	41.61	43.84	42.50	20.22	16.73
ARS00301	17.00	4	3	16.93	0.00	16.93	62.26	45.41	45.62	43.12	43.34	36.44	20.22	16.36
ARS00301	17.00	4	4	10.44	0.00	10.44	62.26	45.41	45.62	38.12	28.99	32.52	20.22	9.54
ARS00301	17.00	4	5	10.89	0.00	10.89	62.26	45.41	45.62	46.83	38.58	26.48	20.22	9.99
ARS00301	17.00	4	6	8.23	0.00	8.23	62.26	45.41	45.62	48.65	35.38	23.65	20.22	7.28
ARS27500	17.00	2	1	7.96	0.00	7.96	43.66	25.58	29.87	42.82	36.36	33.71	1.90	14.06
ARS27500	17.00	2	2	8.53	0.00	8.53	43.66	25.58	29.87	47.34	39.80	38.38	1.90	18.36
ARS27500	17.00	2	3	6.73	0.00	6.73	43.66	25.58	29.87	42.40	27.01	35.26	1.90	9.77
ARS27500	17.00	2	4	5.55	0.00	5.55	43.66	25.58	29.87	44.14	23.74	35.67	1.90	7.24
ARS27500	17.00	2	5	7.01	0.00	7.01	43.66	25.58	29.87	44.27	27.50	36.93	1.90	10.54
ARS27500	17.00	2	6	6.22	0.00	6.22	43.66	25.58	29.87	49.70	24.90	37.58	1.90	8.59
ARS27500	17.00	6	1	7.97	0.00	7.97	43.65	25.58	29.87	42.92	36.43	33.75	1.90	14.12
ARS27500	17.00	6	2	8.53	0.00	8.53	43.65	25.58	29.87	47.43	39.86	38.46	1.90	18.44
ARS27500	17.00	6	3	6.76	0.00	6.76	43.65	25.58	29.87	42.41	27.11	35.33	1.90	9.85
ARS27500	17.00	6	4	5.60	0.00	5.60	43.65	25.58	29.87	44.23	23.84	35.69	1.90	7.33
ARS27500	17.00	6	5	7.04	0.00	7.04	43.65	25.58	29.87	44.27	27.59	36.99	1.90	10.62
ARS27500	17.00	6	6	6.27	0.00	6.27	43.65	25.58	29.87	49.73	25.00	37.67	1.90	8.68
ARS27500	17.00	10	1	7.99	0.00	7.99	43.66	25.58	29.87	43.05	36.50	33.83	1.90	14.22
ARS27500	17.00	10	2	8.54	0.00	8.54	43.66	25.58	29.87	47.61	39.90	38.52	1.90	18.53
ARS27500	17.00	10	3	6.77	0.00	6.77	43.66	25.58	29.87	42.57	27.13	35.38	1.90	9.89
ARS27500	17.00	10	4	5.64	0.00	5.64	43.66	25.58	29.87	44.38	23.92	35.78	1.90	7.42
ARS27500	17.00	10	5	7.07	0.00	7.07	43.66	25.58	29.87	44.44	27.65	37.05	1.90	10.70
ARS27500	17.00	10	6	6.27	0.00	6.27	43.66	25.58	29.87	50.00	25.00	37.70	1.90	8.69
ARS27500	17.00	14	1	8.01	0.00	8.01	43.65	25.58	29.87	43.24	36.58	33.84	1.90	14.30
ARS27500	17.00	14	2	8.55	0.00	8.55	43.65	25.58	29.87	47.95	39.98	38.55	1.90	18.67
ARS27500	17.00	14	3	7.00	0.00	7.00	43.65	25.58	29.87	53.17	27.16	35.39	1.90	10.49
ARS27500	17.00	14	4	5.70	0.00	5.70	43.65	25.58	29.87	44.96	24.00	35.80	1.90	7.52
ARS27500	17.00	14	5	7.23	0.00	7.23	43.65	25.58	29.87	54.08	27.72	37.07	1.90	11.18
ARS27500	17.00	14	6	6.30	0.00	6.30	43.65	25.58	29.87	54.66	25.00	37.72	1.90	8.75
ARS27500	17.00	18	1	8.01	0.00	8.01	43.63	25.58	29.87	43.16	36.63	33.87	1.90	14.30
ARS27500	17.00	18	2	8.55	0.00	8.55	43.63	25.58	29.87	47.74	40.09	38.63	1.90	18.67
ARS27500	17.00	18	3	6.86	0.00	6.86	43.63	25.58	29.87	44.32	27.18	35.41	1.90	10.13
ARS27500	17.00	18	4	5.69	0.00	5.69	43.63	25.58	29.87	44.82	24.00	35.76	1.90	7.52
ARS27500	17.00	18	5	7.16	0.00	7.16	43.63	25.58	29.87	46.81	27.73	37.08	1.90	10.96
ARS27500	17.00	18	6	6.29	0.00	6.29	43.63	25.58	29.87	53.11	25.01	37.76	1.90	8.74
ARS34000	17.00	23	1	1.14	0.00	1.14	30.00	25.58	24.75	41.48	21.55	23.51	-2.94	3.24
ARS34000	17.00	23	2	3.04	0.00	3.04	30.00	25.58	24.75	44.64	28.96	27.45	-2.94	8.83
ARS34000	17.00	23	3	2.22	0.00	2.22	30.00	25.58	24.75	42.40	33.73	22.39	-2.94	5.84

ARS34000	17.00	23	4	2.35	0.00	2.35	30.00	25.58	24.75	42.53	40.59	22.58	-2.94	6.24
ARS34000	17.00	23	5	2.26	0.00	2.26	30.00	25.58	24.75	42.35	36.07	22.39	-2.94	5.95
ARS34000	17.00	23	6	2.49	0.00	2.49	30.00	25.58	24.75	41.01	28.15	24.74	-2.94	6.69
ARS34001	17.00	23	1	4.18	0.00	4.18	45.78		48.78	41.48	21.55	23.51	15.45	3.24
ARS34001	17.00	23	2	9.60	0.00	9.60	45.78		48.78	44.64	28.96	27.45	15.45	8.83
ARS34001	17.00	23	3	6.72	0.00	6.72	45.78		48.78	42.40	33.73	22.39	15.45	5.84
ARS34001	17.00	23	4	7.11	0.00	7.11	45.78		48.78	42.53	40.59	22.58	15.45	6.24
ARS34001	17.00	23	5	6.83	0.00	6.83	45.78		48.78	42.35	36.07	22.39	15.45	5.95
ARS34001	17.00	23	6	7.54	0.00	7.54	45.78		48.78	41.01	28.15	24.74	15.45	6.69
AUT01600	-19.00	4	1	1.66	0.00	1.66	41.40	26.04	23.96	32.64	26.53	20.48	-0.43	2.35
AUT01600	-19.00	4	2	1.79	0.00	1.79	41.40	26.04	23.96	32.68	26.91	20.69	-0.43	2.54
AUT01600	-19.00	4	3	2.03	0.00	2.03	41.40	26.04	23.96	33.05	27.84	20.93	-0.43	2.91
AUT01600	-19.00	4	4	0.99	0.00	0.99	41.40	26.04	23.96	31.90	26.12	19.31	-0.43	1.39
AUT01600	-19.00	4	5	1.44	0.00	1.44	41.40	26.04	23.96	32.43	27.45	19.86	-0.43	2.03
AUT01600	-19.00	4	6	1.58	0.00	1.58	41.40	26.04	23.96	32.43	27.06	20.24	-0.43	2.23
AUT01600	-19.00	8	1	1.67	0.00	1.67	41.40	26.04	23.96	32.68	26.60	20.49	-0.43	2.38
AUT01600	-19.00	8	2	1.80	0.00	1.80	41.40	26.04	23.96	32.73	26.97	20.69	-0.43	2.57
AUT01600	-19.00	8	3	2.05	0.00	2.05	41.40	26.04	23.96	33.11	27.90	20.94	-0.43	2.94
AUT01600	-19.00	8	4	1.00	0.00	1.00	41.40	26.04	23.96	31.97	26.17	19.32	-0.43	1.42
AUT01600	-19.00	8	5	1.46	0.00	1.46	41.40	26.04	23.96	32.50	27.50	19.86	-0.43	2.05
AUT01600	-19.00	8	6	1.59	0.00	1.59	41.40	26.04	23.96	32.49	27.13	20.25	-0.43	2.26
AUT01600	-19.00	12	1	1.65	0.00	1.65	41.40	26.04	23.96	32.77	26.55	20.39	-0.43	2.33
AUT01600	-19.00	12	2	1.80	0.00	1.80	41.40	26.04	23.96	32.97	26.93	20.60	-0.43	2.56
AUT01600	-19.00	12	3	2.03	0.00	2.03	41.40	26.04	23.96	33.28	27.86	20.84	-0.43	2.91
AUT01600	-19.00	12	4	0.97	0.00	0.97	41.40	26.04	23.96	32.03	26.14	19.22	-0.43	1.36
AUT01600	-19.00	12	5	1.42	0.00	1.42	41.40	26.04	23.96	32.57	27.46	19.76	-0.43	2.00
AUT01600	-19.00	12	6	1.56	0.00	1.56	41.40	26.04	23.96	32.55	27.08	20.15	-0.43	2.20
AUT01600	-19.00	16	1	1.70	0.00	1.70	41.40	26.04	23.96	32.81	26.63	20.49	-0.43	2.41
AUT01600	-19.00	16	2	1.85	0.00	1.85	41.40	26.04	23.96	33.01	26.99	20.70	-0.43	2.64
AUT01600	-19.00	16	3	2.08	0.00	2.08	41.40	26.04	23.96	33.33	27.92	20.94	-0.43	3.00
AUT01600	-19.00	16	4	1.03	0.00	1.03	41.40	26.04	23.96	32.09	26.18	19.32	-0.43	1.45
AUT01600	-19.00	16	5	1.48	0.00	1.48	41.40	26.04	23.96	32.62	27.52	19.86	-0.43	2.09
AUT01600	-19.00	16	6	1.61	0.00	1.61	41.40	26.04	23.96	32.60	27.14	20.25	-0.43	2.29
AUT01600	-19.00	20	1	4.17	0.00	4.17	41.40	26.04	27.63	32.81	26.58	27.15	1.31	5.29
AUT01600	-19.00	20	2	4.35	0.00	4.35	41.40	26.04	27.63	33.01	26.94	27.52	1.31	5.58
AUT01600	-19.00	20	3	4.69	0.00	4.69	41.40	26.04	27.63	33.33	27.87	28.22	1.31	6.17
AUT01600	-19.00	20	4	3.80	0.00	3.80	41.40	26.04	27.63	32.08	26.15	26.62	1.31	4.70
AUT01600	-19.00	20	5	4.38	0.00	4.38	41.40	26.04	27.63	32.62	27.47	27.87	1.31	5.63
AUT01600	-19.00	20	6	4.29	0.00	4.29	41.40	26.04	27.63	32.59	27.09	27.77	1.31	5.49
AZR13400	-30.00	21	1	6.71	0.00	6.71	58.40	28.23	24.84	38.31	41.29	30.23	1.19	11.09
AZR13400	-30.00	21	2	6.22	0.00	6.22	58.40	28.23	24.84	36.29	41.06	29.25	1.19	9.61
AZR13400	-30.00	21	3	6.57	0.00	6.57	58.40	28.23	24.84	37.59	41.37	29.98	1.19	10.62
AZR13400	-30.00	21	4	6.55	0.00	6.55	58.40	28.23	24.84	37.44	41.49	29.99	1.19	10.56
AZR13400	-30.00	21	5	2.40	0.00	2.40	58.40	28.23	24.84	27.74	35.06	26.07	1.19	2.73
AZR13400	-30.00	25	1	6.44	0.00	6.44	58.39	28.23	24.84	38.40	32.69	30.33	1.19	10.24
AZR13400	-30.00	25	2	5.89	0.00	5.89	58.39	28.23	24.84	36.37	31.31	29.35	1.19	8.74
AZR13400	-30.00	25	3	6.29	0.00	6.29	58.39	28.23	24.84	37.67	32.39	30.08	1.19	9.79
AZR13400	-30.00	25	4	6.25	0.00	6.25	58.39	28.23	24.84	37.53	32.20	30.09	1.19	9.69
AZR13400	-30.00	25	5	2.24	0.00	2.24	58.39	28.23	24.84	27.84	28.91	26.17	1.19	2.51
AZR13400	-30.00	29	1	6.42	0.00	6.42	58.39	28.23	24.84	38.34	32.69	30.24	1.19	10.18
AZR13400	-30.00	29	2	5.86	0.00	5.86	58.39	28.23	24.84	36.31	31.31	29.26	1.19	8.68
AZR13400	-30.00	29	3	6.27	0.00	6.27	58.39	28.23	24.84	37.61	32.39	29.99	1.19	9.73
AZR13400	-30.00	29	4	6.23	0.00	6.23	58.39	28.23	24.84	37.47	32.20	30.00	1.19	9.63
AZR13400	-30.00	29	5	2.18	0.00	2.18	58.39	28.23	24.84	27.75	28.91	26.07	1.19	2.43
AZR13400	-30.00	33	1	6.44	0.00	6.44	58.39	28.23	24.84	38.43	32.69	30.24	1.19	10.22
AZR13400	-30.00	33	2	5.88	0.00	5.88	58.39	28.23	24.84	36.40	31.31	29.26	1.19	8.72
AZR13400	-30.00	33	3	6.28	0.00	6.28	58.39	28.23	24.84	37.70	32.39	30.00	1.19	9.77
AZR13400	-30.00	33	4	6.25	0.00	6.25	58.39	28.23	24.84	37.55	32.20	30.00	1.19	9.67
AZR13400	-30.00	33	5	2.23	0.00	2.23	58.39	28.23	24.84	27.85	28.92	26.08	1.19	2.50
AZR13400	-30.00	37	1	9.04	0.00	9.04	58.39	28.23	24.84	38.37	32.61	30.16	6.20	10.14
AZR13400	-30.00	37	2	8.07	0.00	8.07	58.39	28.23	24.84	36.33	31.22	29.23	6.20	8.67
AZR13400	-30.00	37	3	8.77	0.00	8.77	58.39	28.23	24.84	37.64	32.30	29.94	6.20	9.71
AZR13400	-30.00	37	4	8.71	0.00	8.71	58.39	28.23	24.84	37.49	32.12	29.96	6.20	9.61
AZR13400	-30.00	37	5	2.94	0.00	2.94	58.39	28.23	24.84	27.75	28.83	25.76	6.20	2.37
BDI27000	11.00	22	1	6.38	0.00	6.38	44.84	31.20	35.53	42.35	28.49	23.72	7.04	6.20
BDI27000	11.00	22	2	6.42	0.00	6.42	44.84	31.20	35.53	42.75	28.04	23.91	7.04	6.24
BDI27000	11.00	22	3	5.74	0.00	5.74	44.84	31.20	35.53	41.98	28.07	22.81	7.04	5.43
BDI27000	11.00	22	4	6.16	0.00	6.16	44.84	31.20	35.53	42.02	28.23	23.46	7.04	5.93
BDI27000	11.00	26	1	6.31	0.00	6.31	44.84	31.20	35.53	42.33	28.39	23.62	7.04	6.11
BDI27000	11.00	26	2	6.34	0.00	6.34	44.84	31.20	35.53	42.72	27.94	23.82	7.04	6.15
BDI27000	11.00	26	3	5.66	0.00	5.66	44.84	31.20	35.53	41.96	27.97	22.71	7.04	5.34
BDI27000	11.00	26	4	6.08	0.00	6.08	44.84	31.20	35.53	41.99	28.13	23.37	7.04	5.84
BDI27000	11.00	30	1	6.39	0.00	6.39	44.84	31.20	35.53	42.43	28.49	23.72	7.04	6.20
BDI27000	11.00	30	2	6.42	0.00	6.42	44.84	31.20	35.53	42.82	28.04	23.91	7.04	6.25
BDI27000	11.00	30	3	5.74	0.00	5.74	44.84	31.20	35.53	42.06	28.07	22.81	7.04	5.43
BDI27000	11.00	30	4	6.17	0.00	6.17	44.84	31.20	35.53	42.09	28.23	23.46	7.04	5.94
BDI27000	11.00	34	1	6.31	0.00	6.31	44.84	31.20	35.53	42.34	28.39	23.62	7.04	6.11
BDI27000	11.00	34	2	6.34	0.00	6.34	44.84	31.20	35.53	42.74	27.94	23.82	7.04	6.15
BDI27000	11.00	34	3	5.66	0.00	5.66	44.84	31.20	35.53	41.97	27.97	22.71	7.04	5.34
BDI27000	11.00	34	4	6.09	0.00	6.09	44.84	31.20	35.53	42.01	28.13	23.37	7.04	5.84
BDI27000	11.00	38	1	6.34	0.00	6.34	44.80	31.20	35.53	41.60	28.49	23.72	7.04	6.15
BDI27000	11.00	38	2	6.38	0.00	6.38	44.80	31.20	35.53	42.04	28.04	23.91	7.04	6.20
BDI27000	11.00	38	3	5.70	0.00	5.70	44.80	31.20	35.53	41.20	28.07	22.81	7.04	5.38
BDI27000	11.00	38	4	6.12	0.00	6.12	44.80	31.20	35.53	41.27	28.23	23.46	7.04	5.88
BEL01800	-19.00	21	1	4.81	0.00	4.81	56.97	29.51	28.43	34.21	26.30	25.04	3.90	5.04
BEL01800	-19.00	21	2	5.09	0.00	5.09	56.97	29.51	28.43	34.60	26.65	25.42	3.90	5.41
BEL01800	-19.00	21	3	5.19	0.00	5.19	56.97	29.51	28.43	34.89	26.69	25.50	3.90	5.54
BEL01800	-19.00	21	4	4.91	0.00	4.91	56.97	29.51	28.43	34.79	26.17	25.03	3.90	5.17
BEL01800	-19.00	21	5	3.93	0.00	3.93	56.97	29.51	28.43	34.06	24.72	23.59	3.90	3.90

BEL01800	-19.00	21	6	3.69	0.00	3.69	56.97	29.51	28.43	33.97	24.45	23.16	3.90	3.60
BEL01800	-19.00	25	1	4.98	0.00	4.98	56.96	29.77	28.43	34.06	27.31	24.95	4.01	5.23
BEL01800	-19.00	25	2	5.23	0.00	5.23	56.96	29.77	28.43	34.46	27.47	25.32	4.01	5.56
BEL01800	-19.00	25	3	5.30	0.00	5.30	56.96	29.77	28.43	34.75	27.38	25.40	4.01	5.66
BEL01800	-19.00	25	4	5.05	0.00	5.05	56.96	29.77	28.43	34.66	26.97	24.94	4.01	5.32
BEL01800	-19.00	25	5	4.17	0.00	4.17	56.96	29.77	28.43	33.92	25.88	23.49	4.01	4.17
BEL01800	-19.00	25	6	3.95	0.00	3.95	56.96	29.77	28.43	33.83	25.72	23.06	4.01	3.90
BEL01800	-19.00	29	1	4.47	0.00	4.47	56.95	29.77	28.43	33.39	26.64	24.27	4.01	4.55
BEL01800	-19.00	29	2	4.72	0.00	4.72	56.95	29.77	28.43	33.78	26.80	24.64	4.01	4.88
BEL01800	-19.00	29	3	4.80	0.00	4.80	56.95	29.77	28.43	34.08	26.71	24.72	4.01	4.99
BEL01800	-19.00	29	4	4.54	0.00	4.54	56.95	29.77	28.43	33.99	26.30	24.25	4.01	4.65
BEL01800	-19.00	29	5	3.62	0.00	3.62	56.95	29.77	28.43	33.25	25.21	22.81	4.01	3.49
BEL01800	-19.00	29	6	3.39	0.00	3.39	56.95	29.77	28.43	33.16	25.04	22.37	4.01	3.22
BEL01800	-19.00	33	1	4.71	0.00	4.71	56.95	29.77	28.43	33.79	26.76	24.65	4.01	4.87
BEL01800	-19.00	33	2	4.96	0.00	4.96	56.95	29.77	28.43	34.19	26.89	25.03	4.01	5.19
BEL01800	-19.00	33	3	5.03	0.00	5.03	56.95	29.77	28.43	34.48	26.78	25.10	4.01	5.29
BEL01800	-19.00	33	4	4.77	0.00	4.77	56.95	29.77	28.43	34.38	26.40	24.62	4.01	4.94
BEL01800	-19.00	33	5	3.87	0.00	3.87	56.95	29.77	28.43	33.64	25.38	23.15	4.01	3.80
BEL01800	-19.00	33	6	3.66	0.00	3.66	56.95	29.77	28.43	33.56	25.27	22.70	4.01	3.54
BEL01800	-19.00	37	1	5.07	0.00	5.07	56.95	29.77	28.43	34.20	27.40	25.07	4.01	5.35
BEL01800	-19.00	37	2	5.32	0.00	5.32	56.95	29.77	28.43	34.60	27.56	25.46	4.01	5.68
BEL01800	-19.00	37	3	5.39	0.00	5.39	56.95	29.77	28.43	34.89	27.47	25.55	4.01	5.79
BEL01800	-19.00	37	4	5.15	0.00	5.15	56.95	29.77	28.43	34.80	27.06	25.08	4.01	5.45
BEL01800	-19.00	37	5	4.26	0.00	4.26	56.95	29.77	28.43	34.06	25.98	23.62	4.01	4.29
BEL01800	-19.00	37	6	4.04	0.00	4.04	56.95	29.77	28.43	33.97	25.82	23.17	4.01	4.01
BEN23300	-19.00	3	1	5.06	0.00	5.06	40.74	28.35	28.23	45.22	23.25	28.38	2.56	5.96
BEN23300	-19.00	3	2	5.54	0.00	5.54	40.74	28.35	28.23	46.34	23.95	29.36	2.56	6.73
BEN23300	-19.00	3	3	6.36	0.00	6.36	40.74	28.35	28.23	47.90	25.45	30.66	2.56	8.19
BEN23300	-19.00	3	4	5.82	0.00	5.82	40.74	28.35	28.23	45.84	24.96	28.48	2.56	7.21
BEN23300	-19.00	3	5	5.47	0.00	5.47	40.74	28.35	28.23	46.07	23.40	31.24	2.56	6.61
BEN23300	-19.00	3	6	6.07	0.00	6.07	40.74	28.35	28.23	45.83	25.14	29.61	2.56	7.64
BEN23300	-19.00	7	1	5.02	0.00	5.02	40.74	28.35	28.23	45.12	23.21	28.29	2.56	5.90
BEN23300	-19.00	7	2	5.51	0.00	5.51	40.74	28.35	28.23	46.24	23.91	29.26	2.56	6.68
BEN23300	-19.00	7	3	6.34	0.00	6.34	40.74	28.35	28.23	47.80	25.42	30.57	2.56	8.14
BEN23300	-19.00	7	4	5.78	0.00	5.78	40.74	28.35	28.23	45.75	24.90	28.38	2.56	7.14
BEN23300	-19.00	7	5	5.44	0.00	5.44	40.74	28.35	28.23	45.98	23.37	31.14	2.56	6.57
BEN23300	-19.00	7	6	6.03	0.00	6.03	40.74	28.35	28.23	45.74	25.08	29.51	2.56	7.57
BEN23300	-19.00	11	1	5.06	0.00	5.06	40.74	28.35	28.23	45.22	23.25	28.39	2.56	5.96
BEN23300	-19.00	11	2	5.54	0.00	5.54	40.74	28.35	28.23	46.34	23.95	29.36	2.56	6.73
BEN23300	-19.00	11	3	6.36	0.00	6.36	40.74	28.35	28.23	47.90	25.45	30.66	2.56	8.19
BEN23300	-19.00	11	4	5.82	0.00	5.82	40.74	28.35	28.23	45.85	24.96	28.48	2.56	7.21
BEN23300	-19.00	11	5	5.47	0.00	5.47	40.74	28.35	28.23	46.08	23.40	31.24	2.56	6.62
BEN23300	-19.00	11	6	6.07	0.00	6.07	40.74	28.35	28.23	45.84	25.14	29.61	2.56	7.64
BEN23300	-19.00	15	1	5.02	0.00	5.02	40.74	28.35	28.23	45.12	23.21	28.29	2.56	5.90
BEN23300	-19.00	15	2	5.51	0.00	5.51	40.74	28.35	28.23	46.24	23.91	29.26	2.56	6.68
BEN23300	-19.00	15	3	6.34	0.00	6.34	40.74	28.35	28.23	47.80	25.42	30.56	2.56	8.14
BEN23300	-19.00	15	4	5.78	0.00	5.78	40.74	28.35	28.23	45.75	24.90	28.38	2.56	7.14
BEN23300	-19.00	15	5	5.44	0.00	5.44	40.74	28.35	28.23	45.98	23.37	31.14	2.56	6.57
BEN23300	-19.00	15	6	6.03	0.00	6.03	40.74	28.35	28.23	45.74	25.08	29.51	2.56	7.57
BEN23300	-19.00	19	1	5.04	0.00	5.04	40.74	28.35	28.23	45.15	23.22	28.38	2.56	5.93
BEN23300	-19.00	19	2	5.53	0.00	5.53	40.74	28.35	28.23	46.27	23.92	29.36	2.56	6.71
BEN23300	-19.00	19	3	6.35	0.00	6.35	40.74	28.35	28.23	47.83	25.43	30.66	2.56	8.17
BEN23300	-19.00	19	4	5.81	0.00	5.81	40.74	28.35	28.23	45.78	24.92	28.48	2.56	7.18
BEN23300	-19.00	19	5	5.46	0.00	5.46	40.74	28.35	28.23	46.01	23.38	31.24	2.56	6.59
BEN23300	-19.00	19	6	6.05	0.00	6.05	40.74	28.35	28.23	45.77	25.10	29.60	2.56	7.61
BFA10700	-30.00	21	1	4.23	0.00	4.23	37.96	44.31	26.33	39.03	27.62	22.19	2.72	4.67
BFA10700	-30.00	21	2	6.72	0.00	6.72	37.96	44.31	26.33	42.27	29.49	27.31	2.72	8.74
BFA10700	-30.00	21	3	6.28	0.00	6.28	37.96	44.31	26.33	39.92	27.94	27.38	2.72	7.89
BFA10700	-30.00	21	4	4.93	0.00	4.93	37.96	44.31	26.33	39.90	29.51	22.99	2.72	5.68
BFA10700	-30.00	21	5	4.05	0.00	4.05	37.96	44.31	26.33	38.33	25.64	22.65	2.72	4.42
BFA10700	-30.00	25	1	4.15	0.00	4.15	37.96	27.59	26.33	38.93	36.33	22.18	0.94	5.49
BFA10700	-30.00	25	2	6.18	0.00	6.18	37.96	27.59	26.33	42.17	35.38	27.29	0.94	9.96
BFA10700	-30.00	25	3	5.76	0.00	5.76	37.96	27.59	26.33	39.83	30.80	27.37	0.94	8.79
BFA10700	-30.00	25	4	4.55	0.00	4.55	37.96	27.59	26.33	39.81	34.92	22.98	0.94	6.21
BFA10700	-30.00	25	5	4.30	0.00	4.30	37.96	27.59	26.33	38.23	35.75	22.64	0.94	5.76
BFA10700	-30.00	29	1	4.16	0.00	4.16	37.96	27.59	26.33	39.03	36.44	22.19	0.94	5.51
BFA10700	-30.00	29	2	6.20	0.00	6.20	37.96	27.59	26.33	42.27	35.48	27.31	0.94	9.99
BFA10700	-30.00	29	3	5.78	0.00	5.78	37.96	27.59	26.33	39.92	30.90	27.38	0.94	8.84
BFA10700	-30.00	29	4	4.56	0.00	4.56	37.96	27.59	26.33	39.90	35.02	22.99	0.94	6.23
BFA10700	-30.00	29	5	4.32	0.00	4.32	37.96	27.59	26.33	38.33	35.85	22.65	0.94	5.79
BFA10700	-30.00	33	1	4.10	0.00	4.10	37.96	27.59	26.33	38.93	36.34	22.09	0.94	5.41
BFA10700	-30.00	33	2	6.16	0.00	6.16	37.96	27.59	26.33	42.17	35.38	27.21	0.94	9.89
BFA10700	-30.00	33	3	5.74	0.00	5.74	37.96	27.59	26.33	39.83	30.80	27.28	0.94	8.74
BFA10700	-30.00	33	4	4.51	0.00	4.51	37.96	27.59	26.33	39.80	34.92	22.89	0.94	6.13
BFA10700	-30.00	33	5	4.26	0.00	4.26	37.96	27.59	26.33	38.23	35.75	22.55	0.94	5.69
BFA10700	-30.00	37	1	4.15	0.00	4.15	37.96	27.59	26.33	39.02	36.34	22.19	0.94	5.51
BFA10700	-30.00	37	2	6.19	0.00	6.19	37.96	27.59	26.33	42.26	35.38	27.31	0.94	9.98
BFA10700	-30.00	37	3	5.77	0.00	5.77	37.96	27.59	26.33	39.92	30.80	27.39	0.94	8.82
BFA10700	-30.00	37	4	4.56	0.00	4.56	37.96	27.59	26.33	39.90	34.92	22.99	0.94	6.22
BFA10700	-30.00	37	5	4.32	0.00	4.32	37.96	27.59	26.33	38.31	35.76	22.65	0.94	5.79
BGD22000	74.00	15	1	9.94	0.00	9.94	42.56	38.56	28.55	44.54	32.61	32.61	5.25	12.80
BGD22000	74.00	15	2	9.29	0.00	9.29	42.56	38.56	28.55	43.01	32.87	29.98	5.25	11.36
BGD22000	74.00	15	3	9.74	0.00	9.74	42.56	38.56	28.55	44.48	33.35	31.05	5.25	12.32
BGD22000	74.00	15	4	9.62	0.00	9.62	42.56	38.56	28.55	42.78	32.63	31.61	5.25	12.04
BGD22000	74.00	15	5	7.88	0.00	7.88	42.56	38.56	28.55	34.07	32.98	35.43	5.25	8.86
BGD22000	74.00	15	6	8.74	0.00	8.74	42.56	38.56	28.55	38.20	30.14	33.77	5.25	10.30
BGD22000	74.00	18	1	5.09	0.00	5.09	66.30	28.53	38.55	36.33	24.36	25.06	6.12	4.83
BGD22000	74.00	18	2	4.81	0.00	4.81	66.30	28.53	38.55	33.97	24.61	25.34	6.12	4.50
BGD22000	74.00	18	3	4.75	0.00	4.75	66.30	28.53	38.55	35.34	24.36	24.51	6.12	4.43
BGD22000	74.00	18	4	3.86	0.00	3.86	66.30	28.53	38.55	35.38	23.15	23.19	6.12	3.41
BGD22000	74.00	18	5	3.85	0.00	3.85	66.30	28.53	38.55	36.61	22.94	22.97	6.12	3.39

BGD22000	74.00	18	6	2.68	0.00	2.68	66.30	28.53	38.55	35.37	21.53	21.78	6.12	2.10
BGD22000	74.00	20	1	3.82	0.00	3.82	61.89	25.10	25.15	39.63	25.03	25.04	0.11	5.57
BGD22000	74.00	20	2	3.70	0.00	3.70	61.89	25.10	25.15	36.32	25.31	25.33	0.11	5.34
BGD22000	74.00	20	3	3.39	0.00	3.39	61.89	25.10	25.15	37.26	24.48	24.46	0.11	4.79
BGD22000	74.00	20	4	2.75	0.00	2.75	61.89	25.10	25.15	38.17	23.16	23.15	0.11	3.73
BGD22000	74.00	20	5	2.78	0.00	2.78	61.89	25.10	25.15	42.27	22.95	22.96	0.11	3.79
BGD22000	74.00	20	6	1.98	0.00	1.98	61.89	25.10	25.15	40.61	21.75	21.77	0.11	2.58
BGD22000	74.00	22	1	3.81	0.00	3.81	46.06	25.13	25.15	39.72	25.11	25.06	0.02	5.63
BGD22000	74.00	22	2	3.69	0.00	3.69	46.06	25.13	25.15	36.41	25.40	25.35	0.02	5.40
BGD22000	74.00	22	3	3.39	0.00	3.39	46.06	25.13	25.15	37.36	24.53	24.51	0.02	4.85
BGD22000	74.00	22	4	2.75	0.00	2.75	46.06	25.13	25.15	38.27	23.22	23.19	0.02	3.79
BGD22000	74.00	22	5	2.78	0.00	2.78	46.06	25.13	25.15	42.36	23.04	22.97	0.02	3.84
BGD22000	74.00	22	6	1.99	0.00	1.99	46.06	25.13	25.15	40.69	21.85	21.78	0.02	2.63
BGD22000	74.00	24	1	4.27	0.00	4.27	46.06	25.13	25.12	39.20	25.03	27.83	0.01	6.56
BGD22000	74.00	24	2	3.83	0.00	3.83	46.06	25.13	25.12	36.23	25.32	26.28	0.01	5.68
BGD22000	74.00	24	3	3.94	0.00	3.94	46.06	25.13	25.12	37.21	24.49	27.70	0.01	5.90
BGD22000	74.00	24	4	3.52	0.00	3.52	46.06	25.13	25.12	38.09	23.17	27.12	0.01	5.11
BGD22000	74.00	24	5	3.67	0.00	3.67	46.06	25.13	25.12	41.06	22.95	27.62	0.01	5.37
BGD22000	74.00	24	6	2.90	0.00	2.90	46.06	25.13	25.12	38.62	21.75	26.23	0.01	4.03
BHR25500	17.00	27	1	6.55	0.00	6.55	47.33	30.89	31.22	42.34	27.62	24.94	5.73	6.75
BHR25500	17.00	31	1	6.57	0.00	6.57	47.33	30.89	31.22	42.44	27.62	24.96	5.73	6.77
BHR25500	17.00	35	1	6.63	0.00	6.63	47.33	30.89	31.22	42.53	27.72	25.04	5.73	6.86
BHR25500	17.00	39	1	6.57	0.00	6.57	47.33	30.89	31.22	42.51	27.62	24.96	5.73	6.78
BOT29700	-1.00	2	1	4.97	0.00	4.97	36.66	28.38	32.83	33.30	39.80	24.36	2.77	5.72
BOT29700	-1.00	2	2	4.45	0.00	4.45	36.66	28.38	32.83	33.38	37.77	23.05	2.77	4.96
BOT29700	-1.00	2	3	5.02	0.00	5.02	36.66	28.38	32.83	33.21	28.49	26.60	2.77	5.79
BOT29700	-1.00	2	4	5.97	0.00	5.97	36.66	28.38	32.83	34.00	30.13	29.29	2.77	7.32
BOT29700	-1.00	2	5	6.09	0.00	6.09	36.66	28.38	32.83	33.15	38.10	29.08	2.77	7.52
BOT29700	-1.00	2	6	6.81	0.00	6.81	36.66	28.38	32.83	34.99	40.32	29.34	2.77	8.87
BOT29700	-1.00	6	1	5.00	0.00	5.00	36.66	28.38	32.83	33.40	39.83	24.36	2.77	5.77
BOT29700	-1.00	6	2	4.47	0.00	4.47	36.66	28.38	32.83	33.48	37.83	23.05	2.77	5.00
BOT29700	-1.00	6	3	5.06	0.00	5.06	36.66	28.38	32.83	33.31	28.58	26.60	2.77	5.86
BOT29700	-1.00	6	4	6.01	0.00	6.01	36.66	28.38	32.83	34.10	30.22	29.29	2.77	7.39
BOT29700	-1.00	6	5	6.13	0.00	6.13	36.66	28.38	32.83	33.25	38.15	29.08	2.77	7.59
BOT29700	-1.00	6	6	6.84	0.00	6.84	36.66	28.38	32.83	35.09	40.36	29.34	2.77	8.94
BOT29700	-1.00	10	1	5.07	0.00	5.07	36.66	28.38	32.83	33.50	39.90	24.46	2.77	5.87
BOT29700	-1.00	10	2	4.54	0.00	4.54	36.66	28.38	32.83	33.58	37.87	23.15	2.77	5.10
BOT29700	-1.00	10	3	5.11	0.00	5.11	36.66	28.38	32.83	33.41	28.59	26.70	2.77	5.94
BOT29700	-1.00	10	4	6.06	0.00	6.06	36.66	28.38	32.83	34.21	30.23	29.39	2.77	7.47
BOT29700	-1.00	10	5	6.18	0.00	6.18	36.66	28.38	32.83	33.35	38.20	29.18	2.77	7.69
BOT29700	-1.00	10	6	6.89	0.00	6.89	36.66	28.38	32.83	35.19	40.42	29.44	2.77	9.03
BOT29700	-1.00	14	1	5.03	0.00	5.03	36.66	28.38	32.83	33.50	39.80	24.36	2.77	5.81
BOT29700	-1.00	14	2	4.50	0.00	4.50	36.66	28.38	32.83	33.58	37.77	23.05	2.77	5.03
BOT29700	-1.00	14	3	5.08	0.00	5.08	36.66	28.38	32.83	33.41	28.49	26.60	2.77	5.88
BOT29700	-1.00	14	4	6.04	0.00	6.04	36.66	28.38	32.83	34.21	30.13	29.29	2.77	7.43
BOT29700	-1.00	14	5	6.17	0.00	6.17	36.66	28.38	32.83	33.35	38.11	29.08	2.77	7.66
BOT29700	-1.00	14	6	6.87	0.00	6.87	36.66	28.38	32.83	35.19	40.32	29.34	2.77	9.00
BOT29700	-1.00	18	1	5.10	0.00	5.10	36.66	28.38	32.83	33.59	39.91	24.46	2.77	5.91
BOT29700	-1.00	18	2	4.57	0.00	4.57	36.66	28.38	32.83	33.67	37.88	23.15	2.77	5.13
BOT29700	-1.00	18	3	5.14	0.00	5.14	36.66	28.38	32.83	33.51	28.59	26.70	2.77	5.98
BOT29700	-1.00	18	4	6.09	0.00	6.09	36.66	28.38	32.83	34.30	30.23	29.39	2.77	7.52
BOT29700	-1.00	18	5	6.22	0.00	6.22	36.66	28.38	32.83	33.45	38.21	29.18	2.77	7.75
BOT29700	-1.00	18	6	6.92	0.00	6.92	36.66	28.38	32.83	35.29	40.42	29.44	2.77	9.09
BRM29800	74.00	17	1	7.75	0.00	7.75	46.30	52.03	25.82	49.60	37.42	26.40	3.57	9.95
BRM29800	74.00	17	2	9.30	0.00	9.30	46.30	52.03	25.82	47.53	47.04	30.92	3.57	14.26
BRM29800	74.00	17	3	8.41	0.00	8.41	46.30	52.03	25.82	38.96	44.76	30.22	3.57	11.48
BRM29800	74.00	17	4	8.69	0.00	8.69	46.30	52.03	25.82	37.94	41.52	33.83	3.57	12.24
BRM29800	74.00	17	5	7.80	0.00	7.80	46.30	52.03	25.82	43.42	31.57	28.27	3.57	10.07
BRM29800	74.00	17	6	4.71	0.00	4.71	46.30	52.03	25.82	38.66	30.04	22.17	3.57	5.02
BRM29800	74.00	19	1	4.88	0.00	4.88	46.58	25.80	25.82	43.35	26.37	26.37	0.69	7.10
BRM29800	74.00	19	2	6.45	0.00	6.45	46.58	25.80	25.82	46.13	30.89	30.96	0.69	11.52
BRM29800	74.00	19	3	5.90	0.00	5.90	46.58	25.80	25.82	38.71	30.19	30.30	0.69	9.62
BRM29800	74.00	19	4	6.40	0.00	6.40	46.58	25.80	25.82	37.77	33.80	34.06	0.69	11.30
BRM29800	74.00	19	5	5.48	0.00	5.48	46.58	25.80	25.82	40.09	28.24	28.37	0.69	8.47
BRM29800	74.00	19	6	2.35	0.00	2.35	46.58	25.80	25.82	38.52	22.15	22.19	0.69	2.85
BRM29800	74.00	21	1	4.98	0.00	4.98	48.54	25.80	25.82	50.52	26.35	26.34	0.73	7.28
BRM29800	74.00	21	2	6.50	0.00	6.50	48.54	25.80	25.82	47.50	30.93	30.88	0.73	11.61
BRM29800	74.00	21	3	5.94	0.00	5.94	48.54	25.80	25.82	38.87	30.27	30.22	0.73	9.67
BRM29800	74.00	21	4	6.45	0.00	6.45	48.54	25.80	25.82	37.85	34.04	33.99	0.73	11.38
BRM29800	74.00	21	5	5.69	0.00	5.69	48.54	25.80	25.82	43.77	28.34	28.33	0.73	8.95
BRM29800	74.00	21	6	2.34	0.00	2.34	48.54	25.80	25.82	38.62	22.16	22.09	0.73	2.82
BRM29800	74.00	23	1	6.67	0.00	6.67	46.08	25.80	44.20	44.61	26.41	28.29	3.49	7.99
BRM29800	74.00	23	2	8.52	0.00	8.52	46.08	25.80	44.20	47.10	30.96	31.54	3.49	11.89
BRM29800	74.00	23	3	7.63	0.00	7.63	46.08	25.80	44.20	38.92	30.29	30.49	3.49	9.79
BRM29800	74.00	23	4	8.35	0.00	8.35	46.08	25.80	44.20	37.90	34.06	34.13	3.49	11.44
BRM29800	74.00	23	5	7.01	0.00	7.01	46.08	25.80	44.20	40.21	28.40	28.48	3.49	8.60
BRM29800	74.00	23	6	2.99	0.00	2.99	46.08	25.80	44.20	38.61	22.16	22.13	3.49	2.84
BUL02000	-1.00	4	1	1.78	0.00	1.78	48.12	25.28	25.06	33.43	20.77	24.46	0.09	2.29
BUL02000	-1.00	4	2	1.47	0.00	1.47	48.12	25.28	25.06	32.06	20.75	23.97	0.09	1.87
BUL02000	-1.00	4	3	2.17	0.00	2.17	48.12	25.28	25.06	33.77	21.35	25.21	0.09	2.86
BUL02000	-1.00	4	4	1.53	0.00	1.53	48.12	25.28	25.06	32.56	20.95	23.47	0.09	1.95
BUL02000	-1.00	4	5	1.50	0.00	1.50	48.12	25.28	25.06	32.64	20.56	24.01	0.09	1.91
BUL02000	-1.00	4	6	1.81	0.00	1.81	48.12	25.28	25.06	33.26	21.06	24.14	0.09	2.34
BUL02000	-1.00	8	1	1.81	0.00	1.81	48.12	25.28	25.06	33.53	20.77	24.56	0.09	2.33
BUL02000	-1.00	8	2	1.51	0.00	1.51	48.12	25.28	25.06	32.15	20.75	24.07	0.09	1.92
BUL02000	-1.00	8	3	2.20	0.00	2.20	48.12	25.28	25.06	33.87	21.35	25.31	0.09	2.91
BUL02000	-1.00	8	4	1.57	0.00	1.57	48.12	25.28	25.06	32.65	20.96	23.57	0.09	2.00
BUL02000	-1.00	8	5	1.54	0.00	1.54	48.12	25.28	25.06	32.74	20.56	24.11	0.09	1.95
BUL02000	-1.00	8	6	1.84	0.00	1.84	48.12	25.28	25.06	33.35	21.06	24.24	0.09	2.38
BUL02000	-1.00	12	1	1.85	0.00	1.85	48.12	25.28	25.06	33.57	20.87	24.57	0.09	2.40

BUL02000	-1.00	12	2	1.55	0.00	1.55	48.12	25.28	25.06	32.20	20.85	24.08	0.09	1.98
BUL02000	-1.00	12	3	2.25	0.00	2.25	48.12	25.28	25.06	33.90	21.45	25.32	0.09	2.97
BUL02000	-1.00	12	4	1.61	0.00	1.61	48.12	25.28	25.06	32.69	21.06	23.57	0.09	2.06
BUL02000	-1.00	12	5	1.58	0.00	1.58	48.12	25.28	25.06	32.77	20.66	24.12	0.09	2.02
BUL02000	-1.00	12	6	1.88	0.00	1.88	48.12	25.28	25.06	33.39	21.16	24.25	0.09	2.44
BUL02000	-1.00	16	1	1.81	0.00	1.81	48.12	25.28	25.06	33.48	20.78	24.57	0.09	2.33
BUL02000	-1.00	16	2	1.51	0.00	1.51	48.12	25.28	25.06	32.13	20.76	24.08	0.09	1.91
BUL02000	-1.00	16	3	2.20	0.00	2.20	48.12	25.28	25.06	33.81	21.36	25.32	0.09	2.91
BUL02000	-1.00	16	4	1.57	0.00	1.57	48.12	25.28	25.06	32.61	20.96	23.57	0.09	1.99
BUL02000	-1.00	16	5	1.53	0.00	1.53	48.12	25.28	25.06	32.68	20.58	24.12	0.09	1.95
BUL02000	-1.00	16	6	1.84	0.00	1.84	48.12	25.28	25.06	33.30	21.06	24.25	0.09	2.38
BUL02000	-1.00	20	1	3.16	0.00	3.16	48.12	25.28	30.32	33.57	20.90	34.19	1.99	3.47
BUL02000	-1.00	20	2	2.94	0.00	2.94	48.12	25.28	30.32	32.22	20.86	41.02	1.99	3.18
BUL02000	-1.00	20	3	3.59	0.00	3.59	48.12	25.28	30.32	33.91	21.48	38.34	1.99	4.07
BUL02000	-1.00	20	4	3.15	0.00	3.15	48.12	25.28	30.32	32.70	21.06	40.58	1.99	3.47
BUL02000	-1.00	20	5	2.96	0.00	2.96	48.12	25.28	30.32	32.77	20.69	39.08	1.99	3.21
BUL02000	-1.00	20	6	3.36	0.00	3.36	48.12	25.28	30.32	33.39	21.17	41.06	1.99	3.74
CAF25800	-13.00	24	1	9.38	0.00	9.38	50.66	29.34	64.58	40.34	28.70	33.07	7.14	10.15
CAF25800	-13.00	24	2	9.63	0.00	9.63	50.66	29.34	64.58	41.72	28.57	33.82	7.14	10.52
CAF25800	-13.00	24	3	9.12	0.00	9.12	50.66	29.34	64.58	48.69	26.50	34.80	7.14	9.76
CAF25800	-13.00	24	4	6.79	0.00	6.79	50.66	29.34	64.58	48.40	23.39	31.36	7.14	6.67
CAF25800	-13.00	24	5	6.69	0.00	6.69	50.66	29.34	64.58	38.55	24.52	29.39	7.14	6.55
CAF25800	-13.00	24	6	7.12	0.00	7.12	50.66	29.34	64.58	39.00	25.05	30.02	7.14	7.08
CAF25800	-13.00	28	1	9.34	0.00	9.34	50.66	29.34	64.56	40.36	28.60	32.97	7.14	10.08
CAF25800	-13.00	28	2	9.58	0.00	9.58	50.66	29.34	64.56	41.75	28.48	33.72	7.14	10.45
CAF25800	-13.00	28	3	9.06	0.00	9.06	50.66	29.34	64.56	48.86	26.40	34.70	7.14	9.67
CAF25800	-13.00	28	4	6.71	0.00	6.71	50.66	29.34	64.56	48.66	23.29	31.26	7.14	6.58
CAF25800	-13.00	28	5	6.62	0.00	6.62	50.66	29.34	64.56	38.57	24.42	29.29	7.14	6.47
CAF25800	-13.00	28	6	7.06	0.00	7.06	50.66	29.34	64.56	39.02	24.95	29.92	7.14	7.01
CAF25800	-13.00	32	1	9.39	0.00	9.39	50.66	29.34	64.56	40.35	28.70	33.07	7.14	10.16
CAF25800	-13.00	32	2	9.63	0.00	9.63	50.66	29.34	64.56	41.74	28.58	33.82	7.14	10.53
CAF25800	-13.00	32	3	9.12	0.00	9.12	50.66	29.34	64.56	48.84	26.50	34.80	7.14	9.76
CAF25800	-13.00	32	4	6.79	0.00	6.79	50.66	29.34	64.56	48.65	23.39	31.36	7.14	6.68
CAF25800	-13.00	32	5	6.69	0.00	6.69	50.66	29.34	64.56	38.57	24.52	29.39	7.14	6.55
CAF25800	-13.00	32	6	7.13	0.00	7.13	50.66	29.34	64.56	39.02	25.05	30.02	7.14	7.09
CAF25800	-13.00	36	1	9.32	0.00	9.32	50.66	29.34	64.56	40.27	28.60	32.97	7.14	10.06
CAF25800	-13.00	36	2	9.57	0.00	9.57	50.66	29.34	64.56	41.66	28.48	33.72	7.14	10.43
CAF25800	-13.00	36	3	9.06	0.00	9.06	50.66	29.34	64.56	48.80	26.40	34.70	7.14	9.67
CAF25800	-13.00	36	4	6.71	0.00	6.71	50.66	29.34	64.56	48.64	23.29	31.26	7.14	6.58
CAF25800	-13.00	36	5	6.62	0.00	6.62	50.66	29.34	64.56	38.53	24.42	29.29	7.14	6.46
CAF25800	-13.00	36	6	7.05	0.00	7.05	50.66	29.34	64.56	38.97	24.95	29.92	7.14	7.00
CAF25800	-13.00	40	1	9.98	0.00	9.98	50.66	29.34	64.56	40.36	28.61		7.15	11.08
CAF25800	-13.00	40	2	10.15	0.00	10.15	50.66	29.34	64.56	41.75	28.48		7.15	11.35
CAF25800	-13.00	40	3	9.45	0.00	9.45	50.66	29.34	64.56	48.85	26.40		7.15	10.25
CAF25800	-13.00	40	4	7.28	0.00	7.28	50.66	29.34	64.56	48.66	23.36		7.15	7.28
CAF25800	-13.00	40	5	7.48	0.00	7.48	50.66	29.34	64.56	38.57	24.49		7.15	7.54
CAF25800	-13.00	40	6	7.88	0.00	7.88	50.66	29.34	64.56	39.02	25.02		7.15	8.05
CBG29900	68.00	18	1	6.90	0.00	6.90	66.08	25.85	51.21	38.38	28.36	28.33	3.83	8.15
CBG29900	68.00	18	2	7.15	0.00	7.15	66.08	25.85	51.21	37.85	29.14	29.11	3.83	8.58
CBG29900	68.00	18	3	6.49	0.00	6.49	66.08	25.85	51.21	37.15	27.85	27.86	3.83	7.48
CBG29900	68.00	18	4	6.33	0.00	6.33	66.08	25.85	51.21	37.51	27.41	27.41	3.83	7.23
CBG29900	68.00	18	5	7.05	0.00	7.05	66.08	25.85	51.21	38.32	28.72	28.66	3.83	8.40
CBG29900	68.00	18	6	7.33	0.00	7.33	66.08	25.85	51.21	38.16	29.43	29.43	3.83	8.89
CBG29900	68.00	20	1	7.32	0.00	7.32	35.03	51.19	51.28	38.42	28.30	28.30	4.99	8.13
CBG29900	68.00	20	2	7.60	0.00	7.60	35.03	51.19	51.28	37.92	29.08	29.07	4.99	8.57
CBG29900	68.00	20	3	6.87	0.00	6.87	35.03	51.19	51.28	37.21	27.84	27.79	4.99	7.46
CBG29900	68.00	20	4	6.69	0.00	6.69	35.03	51.19	51.28	37.56	27.38	27.35	4.99	7.21
CBG29900	68.00	20	5	7.48	0.00	7.48	35.03	51.19	51.28	38.38	28.64	28.65	4.99	8.38
CBG29900	68.00	20	6	7.80	0.00	7.80	35.03	51.19	51.28	38.23	29.40	29.37	4.99	8.88
CBG29900	68.00	22	1	5.73	0.00	5.73	35.03	51.26	25.87	38.44	28.27	28.28	1.39	8.11
CBG29900	68.00	22	2	5.93	0.00	5.93	35.03	51.26	25.87	37.95	29.04	29.06	1.39	8.56
CBG29900	68.00	22	3	5.41	0.00	5.41	35.03	51.26	25.87	37.25	27.77	27.78	1.39	7.44
CBG29900	68.00	22	4	5.28	0.00	5.28	35.03	51.26	25.87	37.58	27.32	27.33	1.39	7.19
CBG29900	68.00	22	5	5.85	0.00	5.85	35.03	51.26	25.87	38.40	28.63	28.64	1.39	8.38
CBG29900	68.00	22	6	6.06	0.00	6.06	35.03	51.26	25.87	38.27	29.34	29.36	1.39	8.86
CBG29900	68.00	24	1	7.90	0.00	7.90	63.40	25.85	70.54	37.86	28.26	56.11	3.84	9.97
CBG29900	68.00	24	2	8.09	0.00	8.09	63.40	25.85	70.54	37.79	29.04	55.98	3.84	10.38
CBG29900	68.00	24	3	7.59	0.00	7.59	63.40	25.85	70.54	37.14	27.75	56.19	3.84	9.38
CBG29900	68.00	24	4	7.48	0.00	7.48	63.40	25.85	70.54	37.27	27.31	55.86	3.84	9.16
CBG29900	68.00	24	5	8.02	0.00	8.02	63.40	25.85	70.54	37.99	28.62	56.07	3.84	10.23
CBG29900	68.00	24	6	8.25	0.00	8.25	63.40	25.85	70.54	38.16	29.33	56.79	3.84	10.71
CHN15400	62.00	2	1	4.16	0.00	4.16	43.51	24.27	24.29	40.15	25.62	29.80	-0.89	7.57
CHN15400	62.00	2	2	4.86	0.00	4.86	43.51	24.27	24.29	45.29	29.35	29.07	-0.89	9.87
CHN15400	62.00	2	3	4.85	0.00	4.85	43.51	24.27	24.29	46.81	29.91	28.36	-0.89	9.83
CHN15400	62.00	2	4	4.27	0.00	4.27	43.51	24.27	24.29	44.28	27.95	26.49	-0.89	7.89
CHN15400	62.00	2	5	3.41	0.00	3.41	43.51	24.27	24.29	39.00	23.51	28.50	-0.89	5.76
CHN15400	62.00	2	6	3.16	0.00	3.16	43.51	24.27	24.29	42.17	23.24	26.20	-0.89	5.23
CHN15400	62.00	6	1	4.25	0.00	4.25	49.74	24.26	24.29	40.15	25.72	29.85	-0.78	7.64
CHN15400	62.00	6	2	4.96	0.00	4.96	49.74	24.26	24.29	45.29	29.45	29.17	-0.78	9.96
CHN15400	62.00	6	3	4.96	0.00	4.96	49.74	24.26	24.29	46.83	30.01	28.46	-0.78	9.93
CHN15400	62.00	6	4	4.38	0.00	4.38	49.74	24.26	24.29	44.28	28.04	26.59	-0.78	7.99
CHN15400	62.00	6	5	3.51	0.00	3.51	49.74	24.26	24.29	39.00	23.60	28.60	-0.78	5.85
CHN15400	62.00	6	6	3.26	0.00	3.26	49.74	24.26	24.29	42.17	23.34	26.29	-0.78	5.33
CHN15400	62.00	10	1	4.15	0.00	4.15	43.29	24.27	24.29	40.16	25.63	29.81	-0.90	7.58
CHN15400	62.00	10	2	4.85	0.00	4.85	43.29	24.27	24.29	45.32	29.35	29.08	-0.90	9.88
CHN15400	62.00	10	3	4.84	0.00	4.84	43.29	24.27	24.29	46.86	29.91	28.36	-0.90	9.83
CHN15400	62.00	10	4	4.26	0.00	4.26	43.29	24.27	24.29	44.29	27.91	26.49	-0.90	7.88
CHN15400	62.00	10	5	3.41	0.00	3.41	43.29	24.27	24.29	39.00	23.50	28.50	-0.90	5.76
CHN15400	62.00	10	6	3.16	0.00	3.16	43.29	24.27	24.29	42.18	23.24	26.20	-0.90	5.23
CHN15401	62.00	14	1	7.27	0.00	7.27	57.67	26.03	53.84	46.76	25.73	32.14	4.01	8.66

CHN15401	62.00	14	2	9.24	0.00	9.24	57.67	26.03	53.84	54.29	29.45	39.85	4.01	12.99
CHN15401	62.00	14	3	9.49	0.00	9.49	57.67	26.03	53.84	53.59	30.01	45.67	4.01	13.78
CHN15401	62.00	14	4	8.81	0.00	8.81	57.67	26.03	53.84	52.80	28.05	42.75	4.01	11.81
CHN15401	62.00	14	5	6.36	0.00	6.36	57.67	26.03	53.84	42.62	23.60	40.06	4.01	7.18
CHN15401	62.00	14	6	6.41	0.00	6.41	57.67	26.03	53.84	49.92	23.34	46.01	4.01	7.26
CHN15500	62.00	1	1	5.37	0.00	5.37	50.55		24.25	50.62		22.74	2.18	6.70
CHN15500	62.00	1	2	6.06	0.00	6.06	50.55		24.25	41.06		24.53	2.18	7.96
CHN15500	62.00	1	3	5.12	0.00	5.12	50.55		24.25	41.95		22.59	2.18	6.29
CHN15500	62.00	1	4	6.12	0.00	6.12	50.55		24.25	41.84		24.56	2.18	8.08
CHN15500	62.00	1	5	6.42	0.00	6.42	50.55		24.25	39.17		25.79	2.18	8.69
CHN15500	62.00	1	6	5.40	0.00	5.40	50.55		24.25	39.61		23.36	2.18	6.75
CHN15500	62.00	5	1	2.12	0.00	2.12	47.22	24.23	24.28	50.31	22.02	22.64	-0.82	3.29
CHN15500	62.00	5	2	2.83	0.00	2.83	47.22	24.23	24.28	40.92	23.24	24.43	-0.82	4.53
CHN15500	62.00	5	3	2.47	0.00	2.47	47.22	24.23	24.28	36.47	24.90	22.49	-0.82	3.87
CHN15500	62.00	5	4	2.63	0.00	2.63	47.22	24.23	24.28	36.36	23.38	24.46	-0.82	4.17
CHN15500	62.00	5	5	2.76	0.00	2.76	47.22	24.23	24.28	38.22	22.63	25.69	-0.82	4.41
CHN15500	62.00	5	6	2.84	0.00	2.84	47.22	24.23	24.28	39.51	24.71	23.26	-0.82	4.55
CHN15500	62.00	9	1	2.19	0.00	2.19	50.04	24.26	24.24	50.10	22.12	22.74	-0.79	3.39
CHN15500	62.00	9	2	2.89	0.00	2.89	50.04	24.26	24.24	40.78	23.34	24.52	-0.79	4.61
CHN15500	62.00	9	3	2.53	0.00	2.53	50.04	24.26	24.24	36.55	25.00	22.59	-0.79	3.97
CHN15500	62.00	9	4	2.70	0.00	2.70	50.04	24.26	24.24	36.44	23.48	24.56	-0.79	4.26
CHN15500	62.00	9	5	2.83	0.00	2.83	50.04	24.26	24.24	38.23	22.72	25.79	-0.79	4.49
CHN15500	62.00	9	6	2.90	0.00	2.90	50.04	24.26	24.24	39.52	24.76	23.36	-0.79	4.63
CHN15501	62.00	13	1	2.63	0.00	2.63	49.02	25.16	26.09	50.38	22.04	22.69	0.53	3.32
CHN15501	62.00	13	2	3.42	0.00	3.42	49.02	25.16	26.09	41.20	23.25	24.45	0.53	4.56
CHN15501	62.00	13	3	3.00	0.00	3.00	49.02	25.16	26.09	36.55	24.90	22.51	0.53	3.89
CHN15501	62.00	13	4	3.19	0.00	3.19	49.02	25.16	26.09	36.43	23.38	24.49	0.53	4.19
CHN15501	62.00	13	5	3.34	0.00	3.34	49.02	25.16	26.09	38.23	22.63	25.75	0.53	4.42
CHN15501	62.00	13	6	3.47	0.00	3.47	49.02	25.16	26.09	39.52	24.81	23.34	0.53	4.63
CHN15600	62.00	4	1	3.88	0.00	3.88	43.42	24.27	24.28	43.12	27.33	25.18	-0.90	6.85
CHN15600	62.00	4	2	4.30	0.00	4.30	43.42	24.27	24.28	46.89	26.44	27.97	-0.90	7.98
CHN15600	62.00	4	3	4.04	0.00	4.04	43.42	24.27	24.28	47.06	24.82	28.87	-0.90	7.26
CHN15600	62.00	4	4	2.75	0.00	2.75	43.42	24.27	24.28	41.89	21.95	26.55	-0.90	4.45
CHN15600	62.00	4	5	2.23	0.00	2.23	43.42	24.27	24.28	45.29	20.92	25.37	-0.90	3.52
CHN15600	62.00	4	6	2.54	0.00	2.54	43.42	24.27	24.28	46.61	22.49	23.88	-0.90	4.06
CHN15600	62.00	8	1	3.92	0.00	3.92	48.78	24.27	24.28	43.10	27.33	25.08	-0.78	6.79
CHN15600	62.00	8	2	4.35	0.00	4.35	48.78	24.27	24.28	46.90	26.44	27.83	-0.78	7.93
CHN15600	62.00	8	3	4.06	0.00	4.06	48.78	24.27	24.28	50.09	24.82	28.20	-0.78	7.12
CHN15600	62.00	8	4	2.92	0.00	2.92	48.78	24.27	24.28	52.01	21.94	26.67	-0.78	4.66
CHN15600	62.00	8	5	2.29	0.00	2.29	48.78	24.27	24.28	52.09	20.92	25.27	-0.78	3.54
CHN15600	62.00	8	6	2.56	0.00	2.56	48.78	24.27	24.28	46.62	22.49	23.78	-0.78	4.01
CHN15600	62.00	12	1	3.71	0.00	3.71	43.27	24.27	23.54	47.43	27.33	25.18	-1.27	7.01
CHN15600	62.00	12	2	4.07	0.00	4.07	43.27	24.27	23.54	51.09	26.44	27.97	-1.27	8.07
CHN15600	62.00	12	3	3.83	0.00	3.83	43.27	24.27	23.54	52.52	24.82	28.90	-1.27	7.35
CHN15600	62.00	12	4	2.70	0.00	2.70	43.27	24.27	23.54	46.38	21.95	27.04	-1.27	4.70
CHN15600	62.00	12	5	2.09	0.00	2.09	43.27	24.27	23.54	46.99	20.92	25.45	-1.27	3.56
CHN15600	62.00	12	6	2.39	0.00	2.39	43.27	24.27	23.54	50.68	22.49	23.88	-1.27	4.09
CHN15700	62.00	3	1	5.10	0.00	5.10	53.92	24.23	24.25	40.63	30.94	30.63	-0.79	10.54
CHN15700	62.00	3	2	4.78	0.00	4.78	53.92	24.23	24.25	48.87	27.26	29.99	-0.79	9.28
CHN15700	62.00	3	3	3.63	0.00	3.63	53.92	24.23	24.25	51.32	26.97	23.88	-0.79	6.11
CHN15700	62.00	3	4	5.14	0.00	5.14	53.92	24.23	24.25	46.02	32.06	28.74	-0.79	10.74
CHN15700	62.00	3	5	5.30	0.00	5.30	53.92	24.23	24.25	41.22	32.45	31.36	-0.79	11.50
CHN15700	62.00	3	6	4.49	0.00	4.49	53.92	24.23	24.25	48.73	30.70	25.63	-0.79	8.35
CHN15700	62.00	7	1	5.10	0.00	5.10	50.25	24.27	24.28	40.63	30.85	30.63	-0.77	10.51
CHN15700	62.00	7	2	4.77	0.00	4.77	50.25	24.27	24.28	48.80	27.16	29.99	-0.77	9.22
CHN15700	62.00	7	3	3.62	0.00	3.62	50.25	24.27	24.28	51.28	26.87	23.88	-0.77	6.08
CHN15700	62.00	7	4	5.16	0.00	5.16	50.25	24.27	24.28	46.02	31.96	28.85	-0.77	10.78
CHN15700	62.00	7	5	5.31	0.00	5.31	50.25	24.27	24.28	41.22	32.35	31.40	-0.77	11.49
CHN15700	62.00	7	6	4.50	0.00	4.50	50.25	24.27	24.28	48.72	30.60	25.66	-0.77	8.35
CHN15700	62.00	11	1	5.14	0.00	5.14	53.92	24.22	24.24	40.72	30.80	31.21	-0.79	10.73
CHN15700	62.00	11	2	4.79	0.00	4.79	53.92	24.22	24.24	48.89	27.23	30.18	-0.79	9.33
CHN15700	62.00	11	3	3.63	0.00	3.63	53.92	24.22	24.24	51.34	26.97	23.88	-0.79	6.11
CHN15700	62.00	11	4	5.04	0.00	5.04	53.92	24.22	24.24	46.03	31.39	28.37	-0.79	10.31
CHN15700	62.00	11	5	5.26	0.00	5.26	53.92	24.22	24.24	41.31	31.82	31.43	-0.79	11.34
CHN15700	62.00	11	6	4.49	0.00	4.49	53.92	24.22	24.24	48.74	30.69	25.64	-0.79	8.35
CHN15800	79.80	15	1	7.91	0.00	7.91	45.42	24.35	50.45	47.14	30.18	37.74	2.13	13.03
CHN15800	79.80	15	2	8.77	0.00	8.77	45.42	24.35	50.45	47.54	37.16	46.11	2.13	18.84
CHN15800	79.80	15	3	8.84	0.00	8.84	45.42	24.35	50.45	46.19	39.89	51.56	2.13	19.83
CHN15800	79.80	15	4	8.52	0.00	8.52	45.42	24.35	50.45	41.45	39.19	49.91	2.13	16.34
CHN15800	79.80	15	5	7.09	0.00	7.09	45.42	24.35	50.45	39.20	28.90	35.71	2.13	10.36
CHN15800	79.80	15	6	7.73	0.00	7.73	45.42	24.35	50.45	39.33	34.89	33.95	2.13	12.35
CHN15800	79.80	19	1	-2.23	-2.23	0.00	33.51	17.19	17.20	33.68	23.46	23.35	-8.12	3.27
CHN15800	79.80	19	2	-1.77	-1.78	0.01	33.51	17.19	17.20	33.67	27.31	27.10	-8.12	5.86
CHN15800	79.80	19	3	-1.58	-1.62	0.04	33.51	17.19	17.20	35.22	28.83	28.73	-8.12	7.42
CHN15800	79.80	19	4	-1.68	-1.72	0.04	33.51	17.19	17.20	34.34	27.96	27.91	-8.12	6.57
CHN15800	79.80	19	5	-2.40	-2.40	0.00	33.51	17.19	17.20	34.18	22.42	22.33	-8.12	2.54
CHN15800	79.80	19	6	-1.77	-1.78	0.01	33.51	17.19	17.20	34.99	26.44	26.38	-8.12	5.82
CHN15800	79.80	23	1	-2.15	-2.15	0.00	33.54	17.18	17.23	33.78	23.50	24.06	-8.11	3.57
CHN15800	79.80	23	2	-1.72	-1.74	0.02	33.54	17.18	17.23	33.78	27.09	28.24	-8.11	6.15
CHN15800	79.80	23	3	-1.52	-1.57	0.05	33.54	17.18	17.23	35.33	28.63	31.06	-8.11	7.98
CHN15800	79.80	23	4	-1.59	-1.66	0.07	33.54	17.18	17.23	34.45	27.53	31.24	-8.11	7.20
CHN15800	79.80	23	5	-2.41	-2.41	0.00	33.54	17.18	17.23	34.44	22.43	22.03	-8.11	2.46
CHN15800	79.80	23	6	-1.68	-1.69	0.01	33.54	17.18	17.23	35.10	26.38	28.36	-8.11	6.44
CHN15900	79.80	18	1	-2.10	-2.10	0.00	33.58	17.18	17.20	35.91	24.07	23.21	-8.12	3.87
CHN15900	79.80	18	2	-2.20	-2.20	0.00	33.58	17.18	17.20	35.23	25.16	21.81	-8.12	3.38
CHN15900	79.80	18	3	-2.28	-2.28	0.00	33.58	17.18	17.20	34.98	23.27	22.34	-8.12	3.01
CHN15900	79.80	18	4	-2.56	-2.56	0.00	33.58	17.18	17.20	35.22	21.69	21.26	-8.12	1.92
CHN15900	79.80	18	5	-1.95	-1.95	0.00	33.58	17.18	17.20	35.57	26.00	23.59	-8.12	4.64

CHN15900	79.80	18	6	-3.09	-3.09	0.00	33.58	17.18	17.20	35.24	19.94	19.39	-8.12	0.28
CHN15900	79.80	20	1	-2.04	-2.04	0.00	33.54	17.18	17.24	36.00	23.28	24.61	-8.11	4.11
CHN15900	79.80	20	2	-2.46	-2.47	0.01	33.54	17.18	17.24	34.96	21.88	21.90	-8.11	2.25
CHN15900	79.80	20	3	-2.20	-2.20	0.00	33.54	17.18	17.24	35.08	22.41	24.03	-8.11	3.33
CHN15900	79.80	20	4	-2.51	-2.51	0.00	33.54	17.18	17.24	34.77	21.34	22.17	-8.11	2.09
CHN15900	79.80	20	5	-1.94	-1.94	0.00	33.54	17.18	17.24	35.56	23.67	25.84	-8.11	4.63
CHN15900	79.80	20	6	-3.04	-3.04	0.00	33.54	17.18	17.24	35.33	19.46	20.14	-8.11	0.41
CHN15900	79.80	22	1	-2.03	-2.03	0.00	33.52	17.22	17.20	36.02	24.58	23.38	-8.11	4.15
CHN15900	79.80	22	2	-2.46	-2.46	0.00	33.52	17.22	17.20	35.39	21.87	21.87	-8.11	2.29
CHN15900	79.80	22	3	-2.20	-2.20	0.00	33.52	17.22	17.20	35.28	24.00	22.37	-8.11	3.34
CHN15900	79.80	22	4	-2.50	-2.50	0.00	33.52	17.22	17.20	35.32	22.14	21.29	-8.11	2.13
CHN15900	79.80	22	5	-1.91	-1.91	0.00	33.52	17.22	17.20	35.68	25.82	24.03	-8.11	4.82
CHN15900	79.80	22	6	-3.01	-3.01	0.00	33.52	17.22	17.20	35.33	20.11	19.66	-8.11	0.50
CHN16000	92.00	3	1	4.28	0.00	4.28	45.10	23.45	23.47	43.30	29.36	29.41	-1.64	9.85
CHN16000	92.00	3	2	3.73	0.00	3.73	45.10	23.45	23.47	36.90	28.41	28.40	-1.64	7.79
CHN16000	92.00	3	3	3.15	0.00	3.15	45.10	23.45	23.47	35.14	26.83	26.82	-1.64	6.15
CHN16000	92.00	3	4	3.50	0.00	3.50	45.10	23.45	23.47	41.21	26.57	26.54	-1.64	7.10
CHN16000	92.00	3	5	1.93	0.00	1.93	45.10	23.45	23.47	34.76	23.49	23.49	-1.64	3.56
CHN16000	92.00	3	6	4.23	0.00	4.23	45.10	23.45	23.47	43.94	29.06	29.05	-1.64	9.62
CHN16000	92.00	7	1	4.57	0.00	4.57	45.08	23.45	23.20	43.30	29.26	41.22	-1.78	12.08
CHN16000	92.00	7	2	4.08	0.00	4.08	45.08	23.45	23.20	36.90	28.31	39.74	-1.78	9.42
CHN16000	92.00	7	3	3.47	0.00	3.47	45.08	23.45	23.20	35.13	26.73	31.85	-1.78	7.26
CHN16000	92.00	7	4	3.92	0.00	3.92	45.08	23.45	23.20	41.21	26.47	32.38	-1.78	8.80
CHN16000	92.00	7	5	2.67	0.00	2.67	45.08	23.45	23.20	34.75	23.39	30.44	-1.78	5.19
CHN16000	92.00	7	6	4.55	0.00	4.55	45.08	23.45	23.20	43.94	28.96	41.01	-1.78	11.94
CHN16000	92.00	11	1	4.92	0.00	4.92	45.10	23.17	23.30	43.32	38.74	41.73	-1.87	17.06
CHN16000	92.00	11	2	4.52	0.00	4.52	45.10	23.17	23.30	36.90	40.00	40.98	-1.87	12.33
CHN16000	92.00	11	3	3.87	0.00	3.87	45.10	23.17	23.30	35.14	31.91	31.58	-1.87	8.85
CHN16000	92.00	11	4	4.35	0.00	4.35	45.10	23.17	23.30	41.22	31.38	31.52	-1.87	11.20
CHN16000	92.00	11	5	3.29	0.00	3.29	45.10	23.17	23.30	34.77	28.65	27.80	-1.87	6.90
CHN16000	92.00	11	6	4.73	0.00	4.73	45.10	23.17	23.30	43.96	32.63	38.51	-1.87	14.27
CHN16100	92.00	2	1	3.15	0.00	3.15	50.16	23.45	23.45	52.75	23.06	29.17	-1.59	6.08
CHN16100	92.00	2	2	2.30	0.00	2.30	50.16	23.45	23.45	41.04	26.98	21.55	-1.59	4.22
CHN16100	92.00	2	3	3.22	0.00	3.22	50.16	23.45	23.45	40.21	24.64	27.14	-1.59	6.24
CHN16100	92.00	2	4	3.86	0.00	3.86	50.16	23.45	23.45	52.81	25.58	29.58	-1.59	8.09
CHN16100	92.00	2	5	3.62	0.00	3.62	50.16	23.45	23.45	48.62	27.63	25.50	-1.59	7.34
CHN16100	92.00	2	6	2.57	0.00	2.57	50.16	23.45	23.45	36.41	27.32	22.92	-1.59	4.76
CHN16100	92.00	4	1	3.11	0.00	3.11	50.21	23.43	23.45	51.04	29.14	22.96	-1.60	5.99
CHN16100	92.00	4	2	2.31	0.00	2.31	50.21	23.43	23.45	39.29	21.52	27.83	-1.60	4.25
CHN16100	92.00	4	3	3.16	0.00	3.16	50.21	23.43	23.45	39.92	27.11	24.46	-1.60	6.10
CHN16100	92.00	4	4	3.81	0.00	3.81	50.21	23.43	23.45	47.55	29.55	25.48	-1.60	7.93
CHN16100	92.00	4	5	3.57	0.00	3.57	50.21	23.43	23.45	43.28	25.47	27.82	-1.60	7.20
CHN16100	92.00	4	6	2.54	0.00	2.54	50.21	23.43	23.45	35.93	22.89	27.55	-1.60	4.70
CHN16100	92.00	6	1	3.15	0.00	3.15	50.49	23.43	23.45	52.84	23.04	29.27	-1.60	6.09
CHN16100	92.00	6	2	2.43	0.00	2.43	50.49	23.43	23.45	41.14	27.90	21.65	-1.60	4.48
CHN16100	92.00	6	3	3.21	0.00	3.21	50.49	23.43	23.45	40.31	24.53	27.24	-1.60	6.22
CHN16100	92.00	6	4	3.86	0.00	3.86	50.49	23.43	23.45	52.89	25.56	29.68	-1.60	8.10
CHN16100	92.00	6	5	3.67	0.00	3.67	50.49	23.43	23.45	48.67	27.89	25.60	-1.60	7.50
CHN16100	92.00	6	6	2.63	0.00	2.63	50.49	23.43	23.45	36.51	27.62	23.02	-1.60	4.90
CHN16200	92.00	1	1	7.04	0.00	7.04	49.07		23.47	42.32		28.84	1.39	11.76
CHN16200	92.00	1	2	6.82	0.00	6.82	49.07		23.47	40.96		28.24	1.39	10.98
CHN16200	92.00	1	3	5.33	0.00	5.33	49.07		23.47	38.13		24.29	1.39	7.28
CHN16200	92.00	1	4	4.68	0.00	4.68	49.07		23.47	34.66		23.96	1.39	6.09
CHN16200	92.00	1	5	6.70	0.00	6.70	49.07		23.47	41.35		27.64	1.39	10.61
CHN16200	92.00	1	6	4.05	0.00	4.05	49.07		23.47	37.54		21.71	1.39	5.04
CHN16200	92.00	5	1	4.15	0.00	4.15	45.30	23.45	23.47	42.15	28.91	28.85	-1.64	9.27
CHN16200	92.00	5	2	3.96	0.00	3.96	45.30	23.45	23.47	40.83	28.31	28.25	-1.64	8.57
CHN16200	92.00	5	3	2.54	0.00	2.54	45.30	23.45	23.47	37.94	24.36	24.29	-1.64	4.75
CHN16200	92.00	5	4	2.03	0.00	2.03	45.30	23.45	23.47	33.77	24.03	23.96	-1.64	3.74
CHN16200	92.00	5	5	3.80	0.00	3.80	45.30	23.45	23.47	40.50	27.72	27.64	-1.64	8.01
CHN16200	92.00	5	6	1.21	0.00	1.21	45.30	23.45	23.47	36.73	21.77	21.71	-1.64	2.32
CHN16200	92.00	9	1	4.53	0.00	4.53	45.35	23.18	23.19	42.13	30.90	38.28	-1.91	12.71
CHN16200	92.00	9	2	4.36	0.00	4.36	45.35	23.18	23.19	40.81	29.61	37.54	-1.91	11.46
CHN16200	92.00	9	3	2.98	0.00	2.98	45.35	23.18	23.19	37.91	23.95	29.65	-1.91	6.12
CHN16200	92.00	9	4	3.34	0.00	3.34	45.35	23.18	23.19	33.67	29.67	29.70	-1.91	7.13
CHN16200	92.00	9	5	4.35	0.00	4.35	45.35	23.18	23.19	40.40	31.68	32.48	-1.91	11.40
CHN16200	92.00	9	6	1.66	0.00	1.66	45.35	23.18	23.19	36.63	22.45	23.26	-1.91	3.29
CHN16300	79.80	1	1	13.64	0.00	13.64	50.59		45.71	40.07		31.77	18.86	12.90
CHN16300	79.80	1	2	15.09	0.00	15.09	50.59		45.71	41.55		33.41	18.86	14.47
CHN16300	79.80	1	3	15.71	0.00	15.71	50.59		45.71	43.00		33.45	18.86	15.15
CHN16300	79.80	1	4	12.86	0.00	12.86	50.59		45.71	38.42		31.90	18.86	12.08
CHN16300	79.80	1	5	15.82	0.00	15.82	50.59		45.71	42.93		33.72	18.86	15.27
CHN16400	79.80	5	1	13.92	0.00	13.92	53.31	47.19	47.21	43.04	33.06	33.89	19.71	13.15
CHN16400	79.80	5	2	11.68	0.00	11.68	53.31	47.19	47.21	39.75	31.29	31.74	19.71	10.82
CHN16400	79.80	5	3	14.16	0.00	14.16	53.31	47.19	47.21	42.84	33.45	34.35	19.71	13.41
CHN16400	79.80	5	4	13.00	0.00	13.00	53.31	47.19	47.21	41.31	32.54	33.06	19.71	12.18
CHN16400	79.80	5	5	12.98	0.00	12.98	53.31	47.19	47.21	41.64	32.34	32.95	19.71	12.17
CHN16400	79.80	5	6	12.56	0.00	12.56	53.31	47.19	47.21	40.54	32.14	32.86	19.71	11.73
CHN16500	79.80	9	1	11.35	0.00	11.35	52.98	44.46	30.25	43.51	35.57	31.26	7.95	12.84
CHN16500	79.80	9	2	11.69	0.00	11.69	52.98	44.46	30.25	40.49	35.40	35.53	7.95	13.46
CHN16500	79.80	9	3	11.77	0.00	11.77	52.98	44.46	30.25	39.72	35.16	39.36	7.95	13.61
CHN16500	79.80	9	4	12.86	0.00	12.86	52.98	44.46	30.25	44.90	35.37	38.89	7.95	16.05
CHN16500	79.80	9	5	12.28	0.00	12.28	52.98	44.46	30.25	44.95	33.73	36.34	7.95	14.67
CHN16500	79.80	9	6	10.58	0.00	10.58	52.98	44.46	30.25	42.61	34.08	29.93	7.95	11.56
CHN16600	92.00	24	1	18.12	0.00	18.12	66.60	54.36	55.23	45.31	37.75	38.98	28.95	17.19
CHN16600	92.00	24	2	19.33	0.00	19.33	66.60	54.36	55.23	46.06	40.31	39.54	28.95	18.43
CHN16600	92.00	24	3	15.83	0.00	15.83	66.60	54.36	55.23	39.87	38.88	44.16	28.95	14.87

CHN16600	92.00	24	4	19.04	0.00	19.04	66.60	54.36	55.23	44.58	39.49	42.70	28.95	18.13
CHN16600	92.00	24	5	18.26	0.00	18.26	66.60	54.36	55.23	42.86	41.25	42.04	28.95	17.33
CHN16600	92.00	24	6	17.71	0.00	17.71	66.60	54.36	55.23	44.76	38.45	37.60	28.95	16.78
CHN16700	92.00	17	1	10.38	0.00	10.38	68.31	27.43	53.07	49.16	30.14	44.01	5.42	13.64
CHN16700	92.00	17	2	7.87	0.00	7.87	68.31	27.43	53.07	56.75	25.16	35.38	5.42	8.75
CHN16700	92.00	17	3	8.71	0.00	8.71	68.31	27.43	53.07	50.42	26.53	37.92	5.42	10.12
CHN16700	92.00	17	4	10.57	0.00	10.57	68.31	27.43	53.07	48.95	30.82	42.52	5.42	14.16
CHN16700	92.00	17	5	10.67	0.00	10.67	68.31	27.43	53.07	54.16	30.92	41.95	5.42	14.47
CHN16700	92.00	17	6	9.46	0.00	9.46	68.31	27.43	53.07	57.45	28.14	36.58	5.42	11.53
CHN16800	92.00	22	1	6.84	0.00	6.84	54.49	22.62	62.29	45.93	30.90	41.52	0.60	13.81
CHN16800	92.00	22	2	7.00	0.00	7.00	54.49	22.62	62.29	50.83	31.45	42.92	0.60	14.87
CHN16800	92.00	22	3	7.08	0.00	7.08	54.49	22.62	62.29	51.22	32.19	42.94	0.60	15.54
CHN16800	92.00	22	4	6.76	0.00	6.76	54.49	22.62	62.29	45.77	30.47	39.90	0.60	13.33
CHN16800	92.00	22	5	5.99	0.00	5.99	54.49	22.62	62.29	37.53	28.84	43.33	0.60	10.08
CHN16800	92.00	22	6	6.37	0.00	6.37	54.49	22.62	62.29	42.45	28.56	44.38	0.60	11.47
CHN16900	92.00	16	1	6.75	0.00	6.75	55.52	29.97	27.32	42.00	28.60	26.94	3.41	8.20
CHN16900	92.00	16	2	7.20	0.00	7.20	55.52	29.97	27.32	42.09	28.72	28.47	3.41	9.01
CHN16900	92.00	16	3	7.22	0.00	7.22	55.52	29.97	27.32	40.92	28.29	29.49	3.41	9.06
CHN16900	92.00	16	4	6.83	0.00	6.83	55.52	29.97	27.32	39.67	27.34	29.38	3.41	8.34
CHN16900	92.00	16	5	5.48	0.00	5.48	55.52	29.97	27.32	38.19	28.02	24.52	3.41	6.17
CHN16900	92.00	16	6	6.90	0.00	6.90	55.52	29.97	27.32	39.42	28.90	28.05	3.41	8.47
CHN17000	92.00	12	1	5.60	0.00	5.60	55.64	29.37	28.28	39.88	24.09	28.22	3.75	6.18
CHN17000	92.00	12	2	6.24	0.00	6.24	55.64	29.37	28.28	41.70	25.06	28.83	3.75	7.13
CHN17000	92.00	12	3	5.69	0.00	5.69	55.64	29.37	28.28	37.79	24.99	27.81	3.75	6.31
CHN17000	92.00	12	4	5.86	0.00	5.86	55.64	29.37	28.28	39.25	26.28	26.12	3.75	6.56
CHN17000	92.00	12	5	5.81	0.00	5.81	55.64	29.37	28.28	40.48	26.22	25.72	3.75	6.49
CHN17000	92.00	12	6	6.22	0.00	6.22	55.64	29.37	28.28	41.47	26.49	26.58	3.75	7.10
CHN17100	92.00	10	1	6.03	0.00	6.03	64.69	29.28	29.30	45.82	24.28	27.86	4.28	6.57
CHN17100	92.00	10	2	6.47	0.00	6.47	64.69	29.28	29.30	46.53	26.25	26.44	4.28	7.21
CHN17100	92.00	10	3	6.33	0.00	6.33	64.69	29.28	29.30	46.83	27.02	25.39	4.28	7.00
CHN17100	92.00	10	4	6.06	0.00	6.06	64.69	29.28	29.30	43.35	25.60	26.16	4.28	6.62
CHN17100	92.00	10	5	5.71	0.00	5.71	64.69	29.28	29.30	44.04	24.36	26.56	4.28	6.13
CHN17100	92.00	10	6	5.78	0.00	5.78	64.69	29.28	29.30	47.66	23.77	27.73	4.28	6.22
CHN17200	92.00	14	1	5.31	0.00	5.31	68.90	30.51	25.38	46.90	26.72	24.85	2.22	6.58
CHN17200	92.00	14	2	4.05	0.00	4.05	68.90	30.51	25.38	49.44	25.13	22.59	2.22	4.63
CHN17200	92.00	14	3	4.27	0.00	4.27	68.90	30.51	25.38	47.52	25.90	22.70	2.22	4.94
CHN17200	92.00	14	4	4.48	0.00	4.48	68.90	30.51	25.38	47.12	26.18	23.06	2.22	5.26
CHN17200	92.00	14	5	5.13	0.00	5.13	68.90	30.51	25.38	45.41	25.94	24.96	2.22	6.28
CHN17200	92.00	14	6	5.03	0.00	5.03	68.90	30.51	25.38	46.76	25.74	24.75	2.22	6.11
CHN17300	92.00	8	1	4.49	0.00	4.49	64.72	27.29	27.30	50.02	28.46	22.21	2.28	5.25
CHN17300	92.00	8	2	4.75	0.00	4.75	64.72	27.29	27.30	47.58	27.63	22.98	2.28	5.63
CHN17300	92.00	8	3	5.04	0.00	5.04	64.72	27.29	27.30	46.50	27.53	23.69	2.28	6.09
CHN17300	92.00	8	4	5.50	0.00	5.50	64.72	27.29	27.30	46.65	28.04	24.60	2.28	6.86
CHN17300	92.00	8	5	5.32	0.00	5.32	64.72	27.29	27.30	46.20	28.20	24.09	2.28	6.54
CHN17300	92.00	8	6	5.36	0.00	5.36	64.72	27.29	27.30	47.88	28.92	23.88	2.28	6.61
CHN17400	92.00	15	1	4.94	0.00	4.94	55.58	25.37	30.15	36.23	24.47	29.31	2.10	6.04
CHN17400	92.00	15	2	3.67	0.00	3.67	55.58	25.37	30.15	34.96	22.16	27.96	2.10	4.13
CHN17400	92.00	15	3	3.93	0.00	3.93	55.58	25.37	30.15	36.05	22.38	28.05	2.10	4.50
CHN17400	92.00	15	4	4.06	0.00	4.06	55.58	25.37	30.15	36.43	22.62	27.91	2.10	4.69
CHN17400	92.00	15	5	5.80	0.00	5.80	55.58	25.37	30.15	37.98	26.04	30.33	2.10	7.54
CHN17400	92.00	15	6	5.79	0.00	5.79	55.58	25.37	30.15	37.37	26.95	28.95	2.10	7.52
CHN17500	92.00	21	1	5.54	0.00	5.54	73.29	47.13	23.68	56.80	29.81	24.59	1.66	7.44
CHN17500	92.00	21	2	6.18	0.00	6.18	73.29	47.13	23.68	58.21	30.64	26.13	1.66	8.80
CHN17500	92.00	21	3	4.55	0.00	4.55	73.29	47.13	23.68	53.25	26.87	23.27	1.66	5.68
CHN17500	92.00	21	4	5.71	0.00	5.71	73.29	47.13	23.68	56.14	29.87	25.03	1.66	7.78
CHN17500	92.00	21	5	5.20	0.00	5.20	73.29	47.13	23.68	54.92	28.52	24.18	1.66	6.80
CHN17500	92.00	21	6	5.37	0.00	5.37	73.29	47.13	23.68	54.10	28.42	24.67	1.66	7.12
CHN17600	79.80	21	1	3.12	0.00	3.12	47.26	27.58	27.60	33.90	23.33	23.38	2.43	3.28
CHN17600	79.80	21	2	2.01	0.00	2.01	47.26	27.58	27.60	33.73	21.63	21.69	2.43	1.87
CHN17600	79.80	21	3	2.33	0.00	2.33	47.26	27.58	27.60	33.42	22.18	22.25	2.43	2.27
CHN17600	79.80	21	4	3.56	0.00	3.56	47.26	27.58	27.60	34.55	23.90	23.95	2.43	3.87
CHN17600	79.80	21	5	3.35	0.00	3.35	47.26	27.58	27.60	34.67	23.49	23.55	2.43	3.57
CHN17600	79.80	21	6	2.80	0.00	2.80	47.26	27.58	27.60	34.71	22.62	22.69	2.43	2.87
CHN17700	79.80	24	1	4.56	0.00	4.56	46.46	27.12	61.84	34.07	21.87	55.87	4.81	4.46
CHN17700	79.80	24	2	5.17	0.00	5.17	46.46	27.12	61.84	35.35	22.46	54.23	4.81	5.24
CHN17700	79.80	24	3	5.65	0.00	5.65	46.46	27.12	61.84	35.61	23.20	56.74	4.81	5.85
CHN17700	79.80	24	4	4.96	0.00	4.96	46.46	27.12	61.84	35.69	22.01	51.38	4.81	4.97
CHN17700	79.80	24	5	3.97	0.00	3.97	46.46	27.12	61.84	34.59	20.77	48.11	4.81	3.75
CHN17700	79.80	24	6	5.13	0.00	5.13	46.46	27.12	61.84	34.87	22.55	55.76	4.81	5.18
CHN17800	79.80	12	1	16.07	0.00	16.07	57.76	53.56	59.34	44.76	35.90	35.28	25.92	15.16
CHN17800	79.80	12	2	15.78	0.00	15.78	57.76	53.56	59.34	47.15	35.18	34.05	25.92	14.87
CHN17800	79.80	12	3	16.43	0.00	16.43	57.76	53.56	59.34	45.84	36.11	35.30	25.92	15.52
CHN17800	79.80	12	4	15.63	0.00	15.63	57.76	53.56	59.34	43.16	35.56	35.75	25.92	14.71
CHN17800	79.80	12	5	15.68	0.00	15.68	57.76	53.56	59.34	50.52	36.19	32.66	25.92	14.76
CHN17800	79.80	12	6	14.95	0.00	14.95	57.76	53.56	59.34	50.83	33.65	32.90	25.92	14.02
CHN17900	92.00	19	1	9.72	0.00	9.72	61.07	53.97	53.99	45.96	27.96	27.96	26.88	8.74
CHN17900	92.00	19	2	12.39	0.00	12.39	61.07	53.97	53.99	43.11	31.28	31.20	26.88	11.42
CHN17900	92.00	19	3	14.85	0.00	14.85	61.07	53.97	53.99	44.16	34.11	34.07	26.88	13.91
CHN17900	92.00	19	4	14.64	0.00	14.64	61.07	53.97	53.99	43.37	34.09	34.06	26.88	13.69
CHN17900	92.00	19	5	14.19	0.00	14.19	61.07	53.97	53.99	44.36	33.19	33.17	26.88	13.23
CHN17900	92.00	19	6	11.80	0.00	11.80	61.07	53.97	53.99	44.79	30.32	30.29	26.88	10.83

CHN18000	92.00	13	1	5.29	0.00	5.29	48.37	23.64	23.48	46.14	38.28	38.37	-1.50	17.49
CHN18000	92.00	13	2	5.28	0.00	5.28	48.37	23.64	23.48	42.68	41.78	41.95	-1.50	17.27
CHN18000	92.00	13	3	4.75	0.00	4.75	48.37	23.64	23.48	39.27	41.99	30.58	-1.50	11.73
CHN18000	92.00	13	4	5.12	0.00	5.12	48.37	23.64	23.48	40.65	40.55	37.07	-1.50	14.82
CHN18000	92.00	13	5	5.27	0.00	5.27	48.37	23.64	23.48	42.43	41.89	42.11	-1.50	17.13
CHN18000	92.00	13	6	4.34	0.00	4.34	48.37	23.64	23.48	36.76	37.97	29.02	-1.50	9.62
CHN18100	79.80	14	1	7.52	0.00	7.52	61.73	50.80	29.06	52.42	33.28	24.16	7.02	7.62
CHN18100	79.80	14	2	8.50	0.00	8.50	61.73	50.80	29.06	53.21	32.62	25.80	7.02	8.94
CHN18100	79.80	14	3	7.67	0.00	7.67	61.73	50.80	29.06	55.92	30.46	24.90	7.02	7.82
CHN18100	79.80	14	4	7.63	0.00	7.63	61.73	50.80	29.06	52.52	30.01	24.99	7.02	7.77
CHN18100	79.80	14	5	6.78	0.00	6.78	61.73	50.80	29.06	46.31	29.28	23.92	7.02	6.69
CHN18100	79.80	14	6	7.61	0.00	7.61	61.73	50.80	29.06	55.56	30.96	24.67	7.02	7.74
CHN18200	79.80	17	1	5.47	0.00	5.47	45.71	54.97	26.42	33.29	39.72	24.62	4.10	5.86
CHN18200	79.80	17	2	4.24	0.00	4.24	45.71	54.97	26.42	33.75	36.46	21.83	4.10	4.25
CHN18200	79.80	17	3	5.93	0.00	5.93	45.71	54.97	26.42	33.96	40.64	25.24	4.10	6.51
CHN18200	79.80	17	4	5.52	0.00	5.52	45.71	54.97	26.42	33.91	38.67	24.29	4.10	5.93
CHN18200	79.80	17	5	4.20	0.00	4.20	45.71	54.97	26.42	33.65	34.78	21.87	4.10	4.20
CHN18200	79.80	17	6	4.29	0.00	4.29	45.71	54.97	26.42	32.66	36.64	22.45	4.10	4.30
CHN18300	62.00	22	1	17.10	0.00	17.10	57.53	60.75	58.13	43.40	42.49	35.87	26.69	16.19
CHN18300	62.00	22	2	14.55	0.00	14.55	57.53	60.75	58.13	40.02	40.17	34.30	26.69	13.60
CHN18300	62.00	22	3	19.27	0.00	19.27	57.53	60.75	58.13	47.34	45.99	36.60	26.69	18.43
CHN18300	62.00	22	4	20.14	0.00	20.14	57.53	60.75	58.13	48.73	45.40	37.47	26.69	19.34
CHN18300	62.00	22	5	19.68	0.00	19.68	57.53	60.75	58.13	47.93	45.99	36.99	26.69	18.86
CHN18300	62.00	22	6	18.97	0.00	18.97	57.53	60.75	58.13	45.97	44.54	37.15	26.69	18.12
CHN18400	62.00	20	1	17.84	0.00	17.84	55.45	55.71	57.82	43.92	37.53	41.82	24.51	17.03
CHN18400	62.00	20	2	14.59	0.00	14.59	55.45	55.71	57.82	39.35	35.80	40.88	24.51	13.68
CHN18400	62.00	20	3	19.65	0.00	19.65	55.45	55.71	57.82	48.67	36.95	44.89	24.51	18.95
CHN18400	62.00	20	4	20.87	0.00	20.87	55.45	55.71	57.82	52.44	39.36	40.73	24.51	20.27
CHN18400	62.00	20	5	18.36	0.00	18.36	55.45	55.71	57.82	51.04	36.87	37.35	24.51	17.57
CHN18400	62.00	20	6	15.93	0.00	15.93	55.45	55.71	57.82	42.01	35.07	41.13	24.51	15.05
CHN18500	62.00	18	1	18.80	0.00	18.80	56.38	54.68	52.11	46.52	41.69	37.34	24.19	18.06
CHN18500	62.00	18	2	17.85	0.00	17.85	56.38	54.68	52.11	44.91	38.86	37.93	24.19	17.05
CHN18500	62.00	18	3	16.65	0.00	16.65	56.38	54.68	52.11	42.51	39.57	37.09	24.19	15.81
CHN18500	62.00	18	4	15.24	0.00	15.24	56.38	54.68	52.11	49.45	33.77	33.65	24.19	14.35
CHN18500	62.00	18	5	17.12	0.00	17.12	56.38	54.68	52.11	42.43	39.50	39.32	24.19	16.29
CHN18500	62.00	18	6	19.40	0.00	19.40	56.38	54.68	52.11	47.79	42.28	37.57	24.19	18.69
CHN18600	62.00	16	1	19.51	0.00	19.51	63.87	55.09	51.22	51.94	47.13	35.51	26.78	18.67
CHN18600	62.00	16	2	20.56	0.00	20.56	63.87	55.09	51.22	51.49	41.38	38.32	26.78	19.77
CHN18600	62.00	16	3	18.27	0.00	18.27	63.87	55.09	51.22	45.60	38.02	38.98	26.78	17.39
CHN18600	62.00	16	4	18.96	0.00	18.96	63.87	55.09	51.22	50.88	42.75	35.46	26.78	18.10
CHN18600	62.00	16	5	20.11	0.00	20.11	63.87	55.09	51.22	50.54	45.47	36.75	26.78	19.30
CHN18600	62.00	16	6	20.74	0.00	20.74	63.87	55.09	51.22	49.75	39.88	40.77	26.78	19.96
CHN18700	79.80	10	1	10.38	0.00	10.38	50.99	30.67	48.17	44.64	28.39	35.06	8.35	11.04
CHN18700	79.80	10	2	10.45	0.00	10.45	50.99	30.67	48.17	43.14	28.77	35.33	8.35	11.15
CHN18700	79.80	10	3	10.98	0.00	10.98	50.99	30.67	48.17	49.36	29.02	35.60	8.35	11.95
CHN18700	79.80	10	4	7.71	0.00	7.71	50.99	30.67	48.17	38.54	27.78	27.24	8.35	7.53
CHN18700	79.80	10	5	8.98	0.00	8.98	50.99	30.67	48.17	38.91	27.83	32.08	8.35	9.12
CHN18700	79.80	10	6	10.09	0.00	10.09	50.99	30.67	48.17	47.49	28.90	31.11	8.35	10.63
CHN18800	62.00	24	1	17.81	0.00	17.81	56.21	52.02	67.96	46.42	34.46	63.88	24.67	16.99
CHN18800	62.00	24	2	16.03	0.00	16.03	56.21	52.02	67.96	40.56	36.75	62.80	24.67	15.15
CHN18800	62.00	24	3	15.54	0.00	15.54	56.21	52.02	67.96	42.29	33.11	63.79	24.67	14.65
CHN18800	62.00	24	4	14.12	0.00	14.12	56.21	52.02	67.96	39.60	32.92	63.85	24.67	13.20
CHN18800	62.00	24	5	16.06	0.00	16.06	56.21	52.02	67.96	42.76	33.69	63.48	24.67	15.18
CHN18800	62.00	24	6	20.97	0.00	20.97	56.21	52.02	67.96	48.29	38.62	64.18	24.67	20.36
CKH05200	158.00	2	1	10.74	0.00	10.74	73.78	39.68	27.96	53.47	33.37	33.27	5.68	14.18
CKH05200	158.00	2	2	11.82	0.00	11.82	73.78	39.68	27.96	52.97	35.09	44.62	5.68	18.25
CKH05200	158.00	2	3	11.61	0.00	11.61	73.78	39.68	27.96	51.97	34.06	43.59	5.68	17.22
CKH05200	158.00	2	4	11.92	0.00	11.92	73.78	39.68	27.96	53.66	35.68	45.65	5.68	18.88
CKH05200	158.00	2	5	11.87	0.00	11.87	73.78	39.68	27.96	54.67	35.12	46.64	5.68	18.55
CKH05200	158.00	6	1	10.71	0.00	10.71	73.78	39.68	27.96	53.47	33.27	33.17	5.68	14.08
CKH05200	158.00	6	2	11.80	0.00	11.80	73.78	39.68	27.96	52.96	34.99	44.53	5.68	18.16
CKH05200	158.00	6	3	11.59	0.00	11.59	73.78	39.68	27.96	51.96	33.96	43.50	5.68	17.13
CKH05200	158.00	6	4	11.91	0.00	11.91	73.78	39.68	27.96	53.66	35.58	45.56	5.68	18.79
CKH05200	158.00	6	5	11.85	0.00	11.85	73.78	39.68	27.96	54.67	35.02	46.55	5.68	18.45
CKH05200	158.00	10	1	10.73	0.00	10.73	73.78	39.68	27.96	53.56	33.37	33.17	5.68	14.14
CKH05200	158.00	10	2	11.82	0.00	11.82	73.78	39.68	27.96	53.06	35.09	44.54	5.68	18.25
CKH05200	158.00	10	3	11.61	0.00	11.61	73.78	39.68	27.96	52.06	34.06	43.51	5.68	17.22
CKH05200	158.00	10	4	11.92	0.00	11.92	73.78	39.68	27.96	53.76	35.68	45.57	5.68	18.88
CKH05200	158.00	10	5	11.87	0.00	11.87	73.78	39.68	27.96	54.76	35.12	46.56	5.68	18.55
CKH05200	158.00	14	1	10.74	0.00	10.74	73.80	39.68	27.96	53.69	33.36	33.27	5.68	14.18
CKH05200	158.00	14	2	11.81	0.00	11.81	73.80	39.68	27.96	53.15	35.07	44.65	5.68	18.25
CKH05200	158.00	14	3	11.61	0.00	11.61	73.80	39.68	27.96	52.15	34.03	43.61	5.68	17.21
CKH05200	158.00	14	4	11.92	0.00	11.92	73.80	39.68	27.96	53.85	35.64	45.67	5.68	18.87
CKH05200	158.00	14	5	11.87	0.00	11.87	73.80	39.68	27.96	54.86	35.09	46.66	5.68	18.54
CKH05201	158.00	2	1	8.57	0.00	8.57	61.83	25.90	30.66	53.47	33.37	33.27	2.64	14.18
CKH05201	158.00	2	2	9.19	0.00	9.19	61.83	25.90	30.66	52.97	35.09	44.62	2.64	18.25
CKH05201	158.00	2	3	9.08	0.00	9.08	61.83	25.90	30.66	51.97	34.06	43.59	2.64	17.22
CKH05201	158.00	2	4	9.25	0.00	9.25	61.83	25.90	30.66	53.66	35.68	45.65	2.64	18.88
CKH05201	158.00	2	5	9.22	0.00	9.22	61.83	25.90	30.66	54.67	35.12	46.64	2.64	18.55
CKH05201	158.00	6	1	8.55	0.00	8.55	61.83	25.90	30.66	53.47	33.27	33.17	2.64	14.08
CKH05201	158.00	6	2	9.18	0.00	9.18	61.83	25.90	30.66	52.96	34.99	44.53	2.64	18.16
CKH05201	158.00	6	3	9.06	0.00	9.06	61.83	25.90	30.66	51.96	33.96	43.50	2.64	17.13
CKH05201	158.00	6	4	9.24	0.00	9.24	61.83	25.90	30.66	53.66	35.58	45.56	2.64	18.79

CKH05201	158.00	6	5	9.21	0.00	9.21	61.83	25.90	30.66	54.67	35.02	46.55	2.64	18.45
CKH05201	158.00	10	1	8.56	0.00	8.56	61.83	25.90	30.66	53.56	33.37	33.17	2.64	14.14
CKH05201	158.00	10	2	9.19	0.00	9.19	61.83	25.90	30.66	53.06	35.09	44.54	2.64	18.25
CKH05201	158.00	10	3	9.08	0.00	9.08	61.83	25.90	30.66	52.06	34.06	43.51	2.64	17.22
CKH05201	158.00	10	4	9.25	0.00	9.25	61.83	25.90	30.66	53.76	35.68	45.57	2.64	18.88
CKH05201	158.00	10	5	9.22	0.00	9.22	61.83	25.90	30.66	54.76	35.12	46.56	2.64	18.55
CKH05201	158.00	14	1	8.57	0.00	8.57	61.83	25.90	30.66	53.69	33.36	33.27	2.64	14.18
CKH05201	158.00	14	2	9.19	0.00	9.19	61.83	25.90	30.66	53.15	35.07	44.65	2.64	18.25
CKH05201	158.00	14	3	9.08	0.00	9.08	61.83	25.90	30.66	52.15	34.03	43.61	2.64	17.21
CKH05201	158.00	14	4	9.25	0.00	9.25	61.83	25.90	30.66	53.85	35.64	45.67	2.64	18.87
CKH05201	158.00	14	5	9.22	0.00	9.22	61.83	25.90	30.66	54.86	35.09	46.66	2.64	18.54
CKH05300	158.00	4	1	11.57	0.00	11.57	68.74	28.40	40.51	42.26	43.26	36.08	6.13	15.75
CKH05300	158.00	4	2	10.77	0.00	10.77	68.74	28.40	40.51	42.89	33.22	35.09	6.13	13.54
CKH05300	158.00	4	3	11.26	0.00	11.26	68.74	28.40	40.51	47.05	32.70	37.73	6.13	14.81
CKH05300	158.00	4	4	10.84	0.00	10.84	68.74	28.40	40.51	46.93	31.43	36.53	6.13	13.70
CKH05300	158.00	4	5	11.39	0.00	11.39	68.74	28.40	40.51	46.38	34.03	36.58	6.13	15.19
CKH05300	158.00	8	1	11.55	0.00	11.55	68.74	28.40	40.51	42.16	43.21	36.08	6.13	15.69
CKH05300	158.00	8	2	10.74	0.00	10.74	68.74	28.40	40.51	42.79	33.12	35.09	6.13	13.47
CKH05300	158.00	8	3	11.23	0.00	11.23	68.74	28.40	40.51	46.95	32.60	37.73	6.13	14.73
CKH05300	158.00	8	4	10.81	0.00	10.81	68.74	28.40	40.51	46.83	31.33	36.52	6.13	13.63
CKH05300	158.00	8	5	11.37	0.00	11.37	68.74	28.40	40.51	46.28	33.93	36.58	6.13	15.12
CKH05300	158.00	12	1	11.57	0.00	11.57	68.74	28.40	40.51	42.26	43.25	36.08	6.13	15.75
CKH05300	158.00	12	2	10.75	0.00	10.75	68.74	28.40	40.51	42.89	33.12	35.08	6.13	13.50
CKH05300	158.00	12	3	11.24	0.00	11.24	68.74	28.40	40.51	47.05	32.60	37.73	6.13	14.74
CKH05300	158.00	12	4	10.81	0.00	10.81	68.74	28.40	40.51	46.93	31.33	36.52	6.13	13.64
CKH05300	158.00	12	5	11.37	0.00	11.37	68.74	28.40	40.51	46.38	33.94	36.57	6.13	15.14
CKH05300	158.00	16	1	12.30	0.00	12.30	68.75	28.40	63.70	42.27	43.88	58.88	6.39	17.81
CKH05300	158.00	16	2	11.49	0.00	11.49	68.75	28.40	63.70	42.92	33.27	57.13	6.39	15.00
CKH05300	158.00	16	3	11.76	0.00	11.76	68.75	28.40	63.70	47.08	32.75	54.83	6.39	15.82
CKH05300	158.00	16	4	11.42	0.00	11.42	68.75	28.40	63.70	46.98	31.53	54.31	6.39	14.79
CKH05300	158.00	16	5	12.06	0.00	12.06	68.75	28.40	63.70	46.42	34.26	58.93	6.39	16.84
CKH05301	158.00	4	1	8.88	0.00	8.88	63.72	30.64	25.92	42.26	43.26	36.08	2.65	15.75
CKH05301	158.00	4	2	8.43	0.00	8.43	63.72	30.64	25.92	42.89	33.22	35.09	2.65	13.54
CKH05301	158.00	4	3	8.71	0.00	8.71	63.72	30.64	25.92	47.05	32.70	37.73	2.65	14.81
CKH05301	158.00	4	4	8.47	0.00	8.47	63.72	30.64	25.92	46.93	31.43	36.53	2.65	13.70
CKH05301	158.00	4	5	8.78	0.00	8.78	63.72	30.64	25.92	46.38	34.03	36.58	2.65	15.19
CKH05301	158.00	8	1	8.87	0.00	8.87	63.72	30.64	25.92	42.16	43.21	36.08	2.65	15.69
CKH05301	158.00	8	2	8.41	0.00	8.41	63.72	30.64	25.92	42.79	33.12	35.09	2.65	13.47
CKH05301	158.00	8	3	8.69	0.00	8.69	63.72	30.64	25.92	46.95	32.60	37.73	2.65	14.73
CKH05301	158.00	8	4	8.45	0.00	8.45	63.72	30.64	25.92	46.83	31.33	36.52	2.65	13.63
CKH05301	158.00	8	5	8.77	0.00	8.77	63.72	30.64	25.92	46.28	33.93	36.58	2.65	15.12
CKH05301	158.00	12	1	8.88	0.00	8.88	63.73	30.64	25.92	42.26	43.25	36.08	2.65	15.75
CKH05301	158.00	12	2	8.42	0.00	8.42	63.73	30.64	25.92	42.89	33.12	35.08	2.65	13.50
CKH05301	158.00	12	3	8.70	0.00	8.70	63.73	30.64	25.92	47.05	32.60	37.73	2.65	14.74
CKH05301	158.00	12	4	8.46	0.00	8.46	63.73	30.64	25.92	46.93	31.33	36.52	2.65	13.64
CKH05301	158.00	12	5	8.77	0.00	8.77	63.73	30.64	25.92	46.38	33.94	36.57	2.65	15.14
CKH05301	158.00	16	1	13.92	0.00	13.92	63.73	30.64	62.65	42.27	43.88	58.88	8.62	17.81
CKH05301	158.00	16	2	12.80	0.00	12.80	63.73	30.64	62.65	42.92	33.27	57.13	8.62	15.00
CKH05301	158.00	16	3	13.17	0.00	13.17	63.73	30.64	62.65	47.08	32.75	54.83	8.62	15.82
CKH05301	158.00	16	4	12.69	0.00	12.69	63.73	30.64	62.65	46.98	31.53	54.31	8.62	14.79
CKH05301	158.00	16	5	13.58	0.00	13.58	63.73	30.64	62.65	46.42	34.26	58.93	8.62	16.84
CLN21900	50.00	2	1	6.19	0.00	6.19	77.77	29.53	29.46	44.97	28.12	24.42	4.48	6.71
CLN21900	50.00	2	2	7.64	0.00	7.64	77.77	29.53	29.46	49.97	29.67	26.88	4.48	8.96
CLN21900	50.00	2	3	8.66	0.00	8.66	77.77	29.53	29.46	52.21	30.49	29.47	4.48	10.86
CLN21900	50.00	2	4	7.72	0.00	7.72	77.77	29.53	29.46	50.24	29.12	27.42	4.48	9.10
CLN21900	50.00	6	1	6.15	0.00	6.15	65.61	29.53	29.55	44.87	28.12	24.32	4.53	6.64
CLN21900	50.00	6	2	7.62	0.00	7.62	65.61	29.53	29.55	49.88	29.67	26.78	4.53	8.89
CLN21900	50.00	6	3	8.65	0.00	8.65	65.61	29.53	29.55	52.13	30.49	29.37	4.53	10.80
CLN21900	50.00	6	4	7.71	0.00	7.71	65.61	29.53	29.55	50.16	29.12	27.32	4.53	9.04
CLN21900	50.00	10	1	6.18	0.00	6.18	78.21	29.53	29.46	44.99	28.22	24.35	4.48	6.69
CLN21900	50.00	10	2	7.64	0.00	7.64	78.21	29.53	29.46	50.03	29.76	26.81	4.48	8.95
CLN21900	50.00	10	3	8.66	0.00	8.66	78.21	29.53	29.46	52.33	30.59	29.41	4.48	10.87
CLN21900	50.00	10	4	7.73	0.00	7.73	78.21	29.53	29.46	50.35	29.22	27.36	4.48	9.10
CLN21900	50.00	14	1	6.25	0.00	6.25	65.62	29.53	29.55	45.08	28.32	24.42	4.53	6.77
CLN21900	50.00	14	2	7.70	0.00	7.70	65.62	29.53	29.55	50.28	29.86	26.88	4.53	9.03
CLN21900	50.00	14	3	8.73	0.00	8.73	65.62	29.53	29.55	52.78	30.69	29.47	4.53	10.95
CLN21900	50.00	14	4	7.79	0.00	7.79	65.62	29.53	29.55	50.73	29.32	27.42	4.53	9.18
CME30000	-13.00	1	1	5.09	0.00	5.09	60.52		25.37	47.84		21.69	3.36	5.63
CME30000	-13.00	1	2	6.12	0.00	6.12	60.52		25.37	50.96		23.21	3.36	7.17
CME30000	-13.00	1	3	6.88	0.00	6.88	60.52		25.37	52.53		24.50	3.36	8.46
CME30000	-13.00	1	4	6.40	0.00	6.40	60.52		25.37	52.09		23.67	3.36	7.63
CME30000	-13.00	1	5	7.96	0.00	7.96	60.52		25.37	53.12		26.75	3.36	10.69
CME30000	-13.00	1	6	8.39	0.00	8.39	60.52		25.37	52.92		27.86	3.36	11.77
CME30000	-13.00	5	1	2.11	0.00	2.11	60.52	20.27	25.37	47.93	33.49	21.79	-2.90	5.45
CME30000	-13.00	5	2	2.58	0.00	2.58	60.52	20.27	25.37	51.04	33.34	23.31	-2.90	6.86
CME30000	-13.00	5	3	2.82	0.00	2.82	60.52	20.27	25.37	52.61	31.40	24.60	-2.90	7.74
CME30000	-13.00	5	4	1.88	0.00	1.88	60.52	20.27	25.37	52.17	24.05	23.73	-2.90	4.86
CME30000	-13.00	5	5	2.53	0.00	2.53	60.52	20.27	25.37	53.20	24.91	26.81	-2.90	6.72
CME30000	-13.00	5	6	3.25	0.00	3.25	60.52	20.27	25.37	53.00	29.84	27.94	-2.90	9.73
CME30000	-13.00	9	1	2.07	0.00	2.07	60.52	20.27	25.37	47.83	33.47	21.69	-2.90	5.35
CME30000	-13.00	9	2	2.55	0.00	2.55	60.52	20.27	25.37	50.94	33.28	23.21	-2.90	6.76
CME30000	-13.00	9	3	2.79	0.00	2.79	60.52	20.27	25.37	52.50	31.32	24.50	-2.90	7.65
CME30000	-13.00	9	4	1.85	0.00	1.85	60.52	20.27	25.37	52.07	23.95	23.67	-2.90	4.78
CME30000	-13.00	9	5	2.51	0.00	2.51	60.52	20.27	25.37	53.09	24.81	26.75	-2.90	6.64
CME30000	-13.00	9	6	3.23	0.00	3.23	60.52	20.27	25.37	52.89	29.75	27.86	-2.90	9.64
CME30000	-13.00	13	1	2.11	0.00	2.11	60.52	20.27	25.37	47.91	33.50	21.79	-2.90	5.45
CME30000	-13.00	13	2	2.58	0.00	2.58	60.52	20.27	25.37	51.02	33.35	23.31	-2.90	6.86
CME30000	-13.00	13	3	2.82	0.00	2.82	60.52	20.27	25.37	52.60	31.41	24.60	-2.90	7.74
CME30000	-13.00	13	4	1.88	0.00	1.88	60.52	20.27	25.37	52.18	24.05	23.73	-2.90	4.86
CME30000	-13.00	13	5	2.53	0.00	2.53	60.52	20.27	25.37	53.17	24.91	26.81	-2.90	6.72

CME30000	-13.00	13	6	3.25	0.00	3.25	60.52	20.27	25.37	52.96	29.84	27.94	-2.90	9.73
CME30000	-13.00	17	1	2.07	0.00	2.07	60.53	20.27	25.37	47.93	33.40	21.69	-2.90	5.35
CME30000	-13.00	17	2	2.55	0.00	2.55	60.53	20.27	25.37	51.07	33.25	23.21	-2.90	6.76
CME30000	-13.00	17	3	2.79	0.00	2.79	60.53	20.27	25.37	52.66	31.31	24.50	-2.90	7.64
CME30000	-13.00	17	4	1.84	0.00	1.84	60.53	20.27	25.37	52.20	23.95	23.63	-2.90	4.76
CME30000	-13.00	17	5	2.50	0.00	2.50	60.53	20.27	25.37	53.03	24.81	26.71	-2.90	6.62
CME30000	-13.00	17	6	3.23	0.00	3.23	60.53	20.27	25.37	52.85	29.74	27.84	-2.90	9.63
CNR13000	-30.00	23	1	8.23	0.00	8.23	69.56	33.29	30.80	42.34	27.37	29.01	6.86	8.61
CNR13000	-30.00	23	2	8.37	0.00	8.37	69.56	33.29	30.80	43.28	27.51	29.10	6.86	8.81
CNR13000	-30.00	23	3	8.42	0.00	8.42	69.56	33.29	30.80	42.17	27.47	29.70	6.86	8.89
CNR13000	-30.00	23	4	8.79	0.00	8.79	69.56	33.29	30.80	43.68	28.12	29.71	6.86	9.40
CNR13000	-30.00	23	5	9.06	0.00	9.06	69.56	33.29	30.80	43.79	28.54	30.16	6.86	9.80
CNR13000	-30.00	23	6	8.36	0.00	8.36	69.56	33.29	30.80	43.31	27.46	29.14	6.86	8.80
CNR13000	-30.00	27	1	8.22	0.00	8.22	69.91	33.29	30.80	42.32	27.36	29.02	6.86	8.61
CNR13000	-30.00	27	2	8.37	0.00	8.37	69.91	33.29	30.80	43.24	27.50	29.10	6.86	8.81
CNR13000	-30.00	27	3	8.42	0.00	8.42	69.91	33.29	30.80	42.14	27.46	29.70	6.86	8.88
CNR13000	-30.00	27	4	8.78	0.00	8.78	69.91	33.29	30.80	43.65	28.11	29.71	6.86	9.40
CNR13000	-30.00	27	5	9.05	0.00	9.05	69.91	33.29	30.80	43.76	28.53	30.16	6.86	9.80
CNR13000	-30.00	27	6	8.36	0.00	8.36	69.91	33.29	30.80	43.28	27.45	29.14	6.86	8.80
CNR13000	-30.00	31	1	8.23	0.00	8.23	69.91	33.29	30.80	42.42	27.37	29.02	6.86	8.62
CNR13000	-30.00	31	2	8.37	0.00	8.37	69.91	33.29	30.80	43.34	27.51	29.10	6.86	8.82
CNR13000	-30.00	31	3	8.43	0.00	8.43	69.91	33.29	30.80	42.24	27.47	29.70	6.86	8.90
CNR13000	-30.00	31	4	8.79	0.00	8.79	69.91	33.29	30.80	43.74	28.12	29.71	6.86	9.41
CNR13000	-30.00	31	5	9.06	0.00	9.06	69.91	33.29	30.80	43.85	28.54	30.16	6.86	9.81
CNR13000	-30.00	31	6	8.37	0.00	8.37	69.91	33.29	30.80	43.37	27.46	29.15	6.86	8.81
CNR13000	-30.00	35	1	8.24	0.00	8.24	69.91	33.29	30.80	42.51	27.37	29.02	6.86	8.64
CNR13000	-30.00	35	2	8.39	0.00	8.39	69.91	33.29	30.80	43.43	27.51	29.11	6.86	8.83
CNR13000	-30.00	35	3	8.44	0.00	8.44	69.91	33.29	30.80	42.33	27.48	29.71	6.86	8.91
CNR13000	-30.00	35	4	8.80	0.00	8.80	69.91	33.29	30.80	43.84	28.13	29.72	6.86	9.43
CNR13000	-30.00	35	5	9.07	0.00	9.07	69.91	33.29	30.80	43.95	28.55	30.17	6.86	9.83
CNR13000	-30.00	35	6	8.38	0.00	8.38	69.91	33.29	30.80	43.47	27.46	29.15	6.86	8.82
CNR13000	-30.00	39	1	8.14	0.00	8.14	69.91	33.14	30.80	42.51	27.15	29.02	6.80	8.52
CNR13000	-30.00	39	2	8.22	0.00	8.22	69.91	33.14	30.80	43.42	27.14	29.11	6.80	8.62
CNR13000	-30.00	39	3	8.24	0.00	8.24	69.91	33.14	30.80	42.33	27.03	29.70	6.80	8.66
CNR13000	-30.00	39	4	8.66	0.00	8.66	69.91	33.14	30.80	43.83	27.82	29.71	6.80	9.25
CNR13000	-30.00	39	5	8.95	0.00	8.95	69.91	33.14	30.80	43.94	28.26	30.16	6.80	9.67
CNR13000	-30.00	39	6	8.29	0.00	8.29	69.91	33.14	30.80	43.46	27.27	29.15	6.80	8.72
COG23500	-13.00	22	1	8.24	0.00	8.24	57.25	70.75	26.72	45.40	38.29	26.44	4.70	9.85
COG23500	-13.00	22	2	6.91	0.00	6.91	57.25	70.75	26.72	44.51	36.63	24.13	4.70	7.66
COG23500	-13.00	22	3	6.06	0.00	6.06	57.25	70.75	26.72	47.79	35.11	22.78	4.70	6.45
COG23500	-13.00	22	4	6.90	0.00	6.90	57.25	70.75	26.72	36.95	32.07	26.16	4.70	7.65
COG23500	-13.00	22	5	5.06	0.00	5.06	57.25	70.75	26.72	36.07	34.05	22.38	4.70	5.12
COG23500	-13.00	22	6	7.58	0.00	7.58	57.25	70.75	26.72	40.75	33.70	26.17	4.70	8.72
COG23500	-13.00	26	1	8.20	0.00	8.20	57.25	70.87	26.72	45.45	38.30	26.35	4.70	9.78
COG23500	-13.00	26	2	6.85	0.00	6.85	57.25	70.87	26.72	44.57	36.64	24.03	4.70	7.58
COG23500	-13.00	26	3	6.00	0.00	6.00	57.25	70.87	26.72	47.98	35.12	22.68	4.70	6.36
COG23500	-13.00	26	4	6.87	0.00	6.87	57.25	70.87	26.72	36.98	32.07	26.06	4.70	7.60
COG23500	-13.00	26	5	5.03	0.00	5.03	57.25	70.87	26.72	36.09	34.06	22.33	4.70	5.09
COG23500	-13.00	26	6	7.55	0.00	7.55	57.25	70.87	26.72	40.79	33.71	26.07	4.70	8.65
COG23500	-13.00	30	1	8.25	0.00	8.25	57.25	70.84	26.72	45.46	38.30	26.44	4.70	9.86
COG23500	-13.00	30	2	6.91	0.00	6.91	57.25	70.84	26.72	44.58	36.64	24.13	4.70	7.67
COG23500	-13.00	30	3	6.07	0.00	6.07	57.25	70.84	26.72	47.98	35.12	22.78	4.70	6.45
COG23500	-13.00	30	4	6.91	0.00	6.91	57.25	70.84	26.72	36.98	32.07	26.16	4.70	7.66
COG23500	-13.00	30	5	5.06	0.00	5.06	57.25	70.84	26.72	36.09	34.06	22.38	4.70	5.12
COG23500	-13.00	30	6	7.59	0.00	7.59	57.25	70.84	26.72	40.79	33.71	26.17	4.70	8.73
COG23500	-13.00	34	1	8.20	0.00	8.20	57.25	70.84	26.72	45.37	38.30	26.35	4.70	9.77
COG23500	-13.00	34	2	6.85	0.00	6.85	57.25	70.84	26.72	44.49	36.64	24.03	4.70	7.57
COG23500	-13.00	34	3	6.00	0.00	6.00	57.25	70.84	26.72	47.91	35.12	22.68	4.70	6.36
COG23500	-13.00	34	4	6.86	0.00	6.86	57.25	70.84	26.72	36.92	32.07	26.06	4.70	7.59
COG23500	-13.00	34	5	5.02	0.00	5.02	57.25	70.84	26.72	35.99	34.06	22.33	4.70	5.07
COG23500	-13.00	34	6	7.54	0.00	7.54	57.25	70.84	26.72	40.73	33.71	26.07	4.70	8.64
COG23500	-13.00	38	1	8.20	0.00	8.20	57.25	70.84	26.72	45.45	38.30	26.35	4.70	9.78
COG23500	-13.00	38	2	6.85	0.00	6.85	57.25	70.84	26.72	44.57	36.64	24.03	4.70	7.58
COG23500	-13.00	38	3	6.00	0.00	6.00	57.25	70.84	26.72	47.96	35.12	22.68	4.70	6.36
COG23500	-13.00	38	4	6.87	0.00	6.87	57.25	70.84	26.72	36.98	32.07	26.07	4.70	7.61
COG23500	-13.00	38	5	5.03	0.00	5.03	57.25	70.84	26.72	36.09	34.06	22.33	4.70	5.09
COG23500	-13.00	38	6	7.55	0.00	7.55	57.25	70.84	26.72	40.79	33.71	26.07	4.70	8.65
COM20700	29.00	3	1	9.14	0.00	9.14	44.70	38.77	33.81	36.26	33.81	29.27	9.18	9.10
COM20700	29.00	3	2	9.02	0.00	9.02	44.70	38.77	33.81	36.09	33.70	29.12	9.18	8.94
COM20700	29.00	3	3	9.86	0.00	9.86	44.70	38.77	33.81	37.34	34.13	30.20	9.18	10.01
COM20700	29.00	3	4	10.07	0.00	10.07	44.70	38.77	33.81	37.81	33.74	30.53	9.18	10.29
COM20700	29.00	3	5	10.03	0.00	10.03	44.70	38.77	33.81	37.88	33.34	30.52	9.18	10.24
COM20700	29.00	3	6	9.91	0.00	9.91	44.70	38.77	33.81	37.65	33.39	30.34	9.18	10.08
COM20700	29.00	7	1	9.11	0.00	9.11	44.70	38.77	33.81	36.24	33.80	29.19	9.18	9.06
COM20700	29.00	7	2	8.98	0.00	8.98	44.70	38.77	33.81	36.07	33.69	29.04	9.18	8.90
COM20700	29.00	7	3	9.83	0.00	9.83	44.70	38.77	33.81	37.33	34.12	30.12	9.18	9.97
COM20700	29.00	7	4	10.04	0.00	10.04	44.70	38.77	33.81	37.80	33.73	30.45	9.18	10.25
COM20700	29.00	7	5	10.00	0.00	10.00	44.70	38.77	33.81	37.87	33.34	30.45	9.18	10.20
COM20700	29.00	7	6	9.88	0.00	9.88	44.70	38.77	33.81	37.64	33.38	30.26	9.18	10.04
COM20700	29.00	11	1	9.18	0.00	9.18	44.70	38.77	33.81	36.34	33.86	29.29	9.18	9.15
COM20700	29.00	11	2	9.06	0.00	9.06	44.70	38.77	33.81	36.17	33.75	29.14	9.18	8.99
COM20700	29.00	11	3	9.90	0.00	9.90	44.70	38.77	33.81	37.43	34.17	30.21	9.18	10.06
COM20700	29.00	11	4	10.10	0.00	10.10	44.70	38.77	33.81	37.90	33.77	30.55	9.18	10.34
COM20700	29.00	11	5	10.07	0.00	10.07	44.70	38.77	33.81	37.97	33.38	30.54	9.18	10.29
COM20700	29.00	11	6	9.95	0.00	9.95	44.70	38.77	33.81	37.74	33.42	30.35	9.18	10.13
COM20700	29.00	15	1	9.23	0.00	9.23	44.70	38.77	33.81	36.42	33.95	29.30	9.18	9.20
COM20700	29.00	15	2	9.10	0.00	9.10	44.70	38.77	33.81	36.25	33.84	29.15	9.18	9.05
COM20700	29.00	15	3	9.94	0.00	9.94	44.70	38.77	33.81	37.51	34.26	30.23	9.18	10.12
COM20700	29.00	15	4	10.15	0.00	10.15	44.70	38.77	33.81	37.99	33.87	30.56	9.18	10.40
COM20700	29.00	15	5	10.11	0.00	10.11	44.70	38.77	33.81	38.06	33.47	30.55	9.18	10.35
COM20700	29.00	15	6	9.99	0.00	9.99	44.70	38.77	33.81	37.83	33.52	30.37	9.18	10.19

CPV30100	-30.00	24	1	8.00	0.00	8.00	75.97	66.32	97.45	48.89	26.23	25.95	42.05	7.01
CPV30100	-30.00	24	2	9.00	0.00	9.00	75.97	66.32	97.45	48.46	26.78	27.47	42.05	8.00
CPV30100	-30.00	24	3	9.52	0.00	9.52	75.97	66.32	97.45	49.83	27.45	27.77	42.05	8.52
CPV30100	-30.00	24	4	8.74	0.00	8.74	75.97	66.32	97.45	49.15	26.68	26.98	42.05	7.74
CPV30100	-30.00	24	5	9.15	0.00	9.15	75.97	66.32	97.45	49.49	27.07	27.41	42.05	8.15
CPV30100	-30.00	24	6	9.88	0.00	9.88	75.97	66.32	97.45	49.99	27.89	28.06	42.05	8.88
CPV30100	-30.00	28	1	7.94	0.00	7.94	75.97	66.32	63.79	48.85	26.13	25.93	38.91	6.94
CPV30100	-30.00	28	2	8.93	0.00	8.93	75.97	66.32	63.79	48.42	26.68	27.44	38.91	7.93
CPV30100	-30.00	28	3	9.45	0.00	9.45	75.97	66.32	63.79	49.79	27.35	27.75	38.91	8.45
CPV30100	-30.00	28	4	8.67	0.00	8.67	75.97	66.32	63.79	49.12	26.58	26.96	38.91	7.68
CPV30100	-30.00	28	5	9.08	0.00	9.08	75.97	66.32	63.79	49.46	26.97	27.39	38.91	8.08
CPV30100	-30.00	28	6	9.81	0.00	9.81	75.97	66.32	63.79	49.96	27.79	28.03	38.91	8.81
CPV30100	-30.00	32	1	8.00	0.00	8.00	75.96	97.43	66.34	48.74	26.23	25.95	42.06	7.00
CPV30100	-30.00	32	2	8.99	0.00	8.99	75.96	97.43	66.34	48.32	26.78	27.47	42.06	7.99
CPV30100	-30.00	32	3	9.51	0.00	9.51	75.96	97.43	66.34	49.68	27.45	27.77	42.06	8.51
CPV30100	-30.00	32	4	8.73	0.00	8.73	75.96	97.43	66.34	49.01	26.68	26.98	42.06	7.73
CPV30100	-30.00	32	5	9.14	0.00	9.14	75.96	97.43	66.34	49.35	27.07	27.41	42.06	8.14
CPV30100	-30.00	32	6	9.87	0.00	9.87	75.96	97.43	66.34	49.86	27.89	28.06	42.06	8.87
CPV30100	-30.00	36	1	8.04	0.00	8.04	84.42	63.77	66.34	48.87	26.23	26.02	39.71	7.04
CPV30100	-30.00	36	2	9.03	0.00	9.03	84.42	63.77	66.34	48.44	26.78	27.54	39.71	8.03
CPV30100	-30.00	36	3	9.55	0.00	9.55	84.42	63.77	66.34	49.81	27.45	27.85	39.71	8.55
CPV30100	-30.00	36	4	8.77	0.00	8.77	84.42	63.77	66.34	49.13	26.68	27.06	39.71	7.77
CPV30100	-30.00	36	5	9.18	0.00	9.18	84.42	63.77	66.34	49.48	27.07	27.49	39.71	8.18
CPV30100	-30.00	36	6	9.91	0.00	9.91	84.42	63.77	66.34	49.98	27.89	28.12	39.71	8.91
CPV30100	-30.00	40	1	10.98	0.00	10.98	92.69	63.76	91.52	48.72	26.13		41.72	9.98
CPV30100	-30.00	40	2	11.49	0.00	11.49	92.69	63.76	91.52	48.30	26.68		41.72	10.49
CPV30100	-30.00	40	3	12.19	0.00	12.19	92.69	63.76	91.52	49.66	27.35		41.72	11.19
CPV30100	-30.00	40	4	11.42	0.00	11.42	92.69	63.76	91.52	48.97	26.58		41.72	10.42
CPV30100	-30.00	40	5	11.81	0.00	11.81	92.69	63.76	91.52	49.32	26.97		41.72	10.81
CPV30100	-30.00	40	6	12.62	0.00	12.62	92.69	63.76	91.52	49.84	27.79		41.72	11.62
CTI23700	-30.00	22	1	4.54	0.00	4.54	57.54	23.85	24.59	46.15	27.00	28.68	-0.81	8.56
CTI23700	-30.00	22	2	3.82	0.00	3.82	57.54	23.85	24.59	44.05	26.16	25.48	-0.81	6.59
CTI23700	-30.00	22	3	3.07	0.00	3.07	57.54	23.85	24.59	39.69	23.53	25.41	-0.81	4.97
CTI23700	-30.00	22	4	3.12	0.00	3.12	57.54	23.85	24.59	39.81	22.81	27.23	-0.81	5.08
CTI23700	-30.00	22	5	2.77	0.00	2.77	57.54	23.85	24.59	40.33	22.02	26.52	-0.81	4.41
CTI23700	-30.00	22	6	3.15	0.00	3.15	57.54	23.85	24.59	40.86	23.12	26.41	-0.81	5.14
CTI23700	-30.00	26	1	4.52	0.00	4.52	57.53	23.85	24.59	46.11	26.98	28.59	-0.81	8.50
CTI23700	-30.00	26	2	3.79	0.00	3.79	57.53	23.85	24.59	43.98	26.13	25.38	-0.81	6.53
CTI23700	-30.00	26	3	3.04	0.00	3.04	57.53	23.85	24.59	39.60	23.50	25.31	-0.81	4.91
CTI23700	-30.00	26	4	3.10	0.00	3.10	57.53	23.85	24.59	39.73	22.79	27.14	-0.81	5.04
CTI23700	-30.00	26	5	2.75	0.00	2.75	57.53	23.85	24.59	40.27	22.00	26.42	-0.81	4.37
CTI23700	-30.00	26	6	3.13	0.00	3.13	57.53	23.85	24.59	40.82	23.10	26.31	-0.81	5.10
CTI23700	-30.00	30	1	4.54	0.00	4.54	57.53	23.85	24.59	46.18	27.00	28.67	-0.81	8.56
CTI23700	-30.00	30	2	3.81	0.00	3.81	57.53	23.85	24.59	44.07	26.16	25.42	-0.81	6.57
CTI23700	-30.00	30	3	3.06	0.00	3.06	57.53	23.85	24.59	39.70	23.53	25.36	-0.81	4.96
CTI23700	-30.00	30	4	3.12	0.00	3.12	57.53	23.85	24.59	39.82	22.81	27.23	-0.81	5.08
CTI23700	-30.00	30	5	2.77	0.00	2.77	57.53	23.85	24.59	40.34	22.02	26.52	-0.81	4.41
CTI23700	-30.00	30	6	3.15	0.00	3.15	57.53	23.85	24.59	40.87	23.12	26.41	-0.81	5.14
CTI23700	-30.00	34	1	4.56	0.00	4.56	57.53	23.85	24.59	46.20	27.08	28.69	-0.81	8.60
CTI23700	-30.00	34	2	3.84	0.00	3.84	57.53	23.85	24.59	44.08	26.23	25.48	-0.81	6.63
CTI23700	-30.00	34	3	3.09	0.00	3.09	57.53	23.85	24.59	39.71	23.60	25.41	-0.81	5.01
CTI23700	-30.00	34	4	3.15	0.00	3.15	57.53	23.85	24.59	39.82	22.89	27.24	-0.81	5.14
CTI23700	-30.00	34	5	2.80	0.00	2.80	57.53	23.85	24.59	40.35	22.10	26.52	-0.81	4.47
CTI23700	-30.00	34	6	3.18	0.00	3.18	57.53	23.85	24.59	40.87	23.20	26.41	-0.81	5.20
CTI23700	-30.00	38	1	4.53	0.00	4.53	57.51	23.85	24.59	46.02	27.00	28.59	-0.81	8.52
CTI23700	-30.00	38	2	3.80	0.00	3.80	57.51	23.85	24.59	43.98	26.15	25.38	-0.81	6.54
CTI23700	-30.00	38	3	3.05	0.00	3.05	57.51	23.85	24.59	39.67	23.52	25.31	-0.81	4.93
CTI23700	-30.00	38	4	3.11	0.00	3.11	57.51	23.85	24.59	39.80	22.80	27.14	-0.81	5.06
CTI23700	-30.00	38	5	2.76	0.00	2.76	57.51	23.85	24.59	40.32	22.02	26.45	-0.81	4.39
CTI23700	-30.00	38	6	3.14	0.00	3.14	57.51	23.85	24.59	40.83	23.12	26.35	-0.81	5.12
CVA08300	-37.00	27	1	7.55	0.00	7.55	52.11	39.48	39.34	36.20	27.11	27.37	13.72	6.77
CVA08300	-37.00	27	2	7.10	0.00	7.10	52.11	39.48	39.34	35.40	26.89	26.91	13.72	6.29
CVA08300	-37.00	27	3	8.30	0.00	8.30	52.11	39.48	39.34	36.63	27.79	28.62	13.72	7.56
CVA08300	-37.00	27	4	6.39	0.00	6.39	52.11	39.48	39.34	34.69	25.79	26.55	13.72	5.55
CVA08300	-37.00	27	5	7.78	0.00	7.78	52.11	39.48	39.34	35.79	27.66	27.89	13.72	7.01
CVA08300	-37.00	27	6	9.02	0.00	9.02	52.11	39.48	39.34	37.12	29.08	29.08	13.72	8.32
CVA08300	-37.00	31	1	7.62	0.00	7.62	52.11	39.48	39.34	36.30	27.21	27.39	13.72	6.84
CVA08300	-37.00	31	2	7.17	0.00	7.17	52.11	39.48	39.34	35.50	26.99	26.93	13.72	6.36
CVA08300	-37.00	31	3	8.37	0.00	8.37	52.11	39.48	39.34	36.95	27.89	28.43	13.72	7.63
CVA08300	-37.00	31	4	6.45	0.00	6.45	52.11	39.48	39.34	34.99	25.88	26.37	13.72	5.62
CVA08300	-37.00	31	5	7.84	0.00	7.84	52.11	39.48	39.34	35.89	27.76	27.89	13.72	7.07
CVA08300	-37.00	31	6	9.08	0.00	9.08	52.11	39.48	39.34	37.21	29.18	29.10	13.72	8.39
CVA08300	-37.00	35	1	7.57	0.00	7.57	52.11	39.48	39.34	36.26	27.13	27.38	13.72	6.79
CVA08300	-37.00	35	2	7.13	0.00	7.13	52.11	39.48	39.34	35.48	26.90	26.92	13.72	6.32
CVA08300	-37.00	35	3	8.33	0.00	8.33	52.11	39.48	39.34	36.68	27.81	28.63	13.72	7.58
CVA08300	-37.00	35	4	6.42	0.00	6.42	52.11	39.48	39.34	34.75	25.81	26.55	13.72	5.58
CVA08300	-37.00	35	5	7.81	0.00	7.81	52.11	39.48	39.34	35.87	27.68	27.90	13.72	7.04
CVA08300	-37.00	35	6	9.05	0.00	9.05	52.11	39.48	39.34	37.19	29.09	29.09	13.72	8.35
CVA08300	-37.00	39	1	7.67	0.00	7.67	52.11	39.50	39.34	36.30	27.34	27.39	13.73	6.89
CVA08300	-37.00	39	2	7.16	0.00	7.16	52.11	39.50	39.34	35.54	26.92	26.94	13.73	6.35
CVA08300	-37.00	39	3	8.37	0.00	8.37	52.11	39.50	39.34	36.67	27.93	28.64	13.73	7.63
CVA08300	-37.00	39	4	6.43	0.00	6.43	52.11	39.50	39.34	34.75	25.86	26.55	13.73	5.60
CVA08300	-37.00	39	5	7.83	0.00	7.83	52.11	39.50	39.34	35.93	27.65	27.90	13.73	7.06
CVA08300	-37.00	39	6	9.06	0.00	9.06	52.11	39.50	39.34	37.26	29.05	29.11	13.73	8.37
CVA08500	-37.00	23	1	5.60	0.00	5.60	48.51	35.21	35.42	34.29	24.50	26.73	9.69	4.96
CVA08500	-37.00	23	2	7.10	0.00	7.10	48.51	35.21	35.42	35.39	27.41	27.34	9.69	6.61
CVA08500	-37.00	23	3	5.51	0.00	5.51	48.51	35.21	35.42	33.60	25.56	25.74	9.69	4.86
CVA08500	-37.00	23	4	6.29	0.00	6.29	48.51	35.21	35.42	35.49	25.97	26.13	9.69	5.71
CVA08500	-37.00	23	5	7.40	0.00	7.40	48.51	35.21	35.42	37.15	27.02	27.27	9.69	6.94
CVA08500	-37.00	23	6	5.90	0.00	5.90	48.51	35.21	35.42	35.27	24.54	26.84	9.69	5.28

CYP08600	5.00	21	1	7.66	0.00	7.66	57.96	33.93	43.61	34.30	28.67	28.98	11.39	7.04
CYP08600	5.00	21	2	7.23	0.00	7.23	57.96	33.93	43.61	34.30	28.90	27.24	11.39	6.58
CYP08600	5.00	21	3	8.07	0.00	8.07	57.96	33.93	43.61	34.90	29.32	28.97	11.39	7.49
CYP08600	5.00	21	4	6.72	0.00	6.72	57.96	33.93	43.61	33.82	28.37	26.59	11.39	6.03
CYP08600	5.00	21	5	7.75	0.00	7.75	57.96	33.93	43.61	34.79	29.31	28.01	11.39	7.14
CYP08600	5.00	21	6	7.78	0.00	7.78	57.96	33.93	43.61	34.67	29.19	28.38	11.39	7.18
CYP08600	5.00	25	1	8.56	0.00	8.56	57.95	42.46	43.61	34.24	31.92	28.95	17.57	7.67
CYP08600	5.00	25	2	7.75	0.00	7.75	57.95	42.46	43.61	34.23	30.47	27.18	17.57	6.84
CYP08600	5.00	25	3	8.85	0.00	8.85	57.95	42.46	43.61	34.83	31.86	28.93	17.57	7.97
CYP08600	5.00	25	4	7.12	0.00	7.12	57.95	42.46	43.61	33.73	29.49	26.53	17.57	6.20
CYP08600	5.00	25	5	8.35	0.00	8.35	57.95	42.46	43.61	34.71	31.08	27.96	17.57	7.45
CYP08600	5.00	25	6	8.53	0.00	8.53	57.95	42.46	43.61	34.60	31.70	28.34	17.57	7.64
CYP08600	5.00	29	1	8.66	0.00	8.66	57.95	42.46	43.61	34.24	32.24	29.13	17.57	7.77
CYP08600	5.00	29	2	7.84	0.00	7.84	57.95	42.46	43.61	34.22	30.69	27.33	17.57	6.94
CYP08600	5.00	29	3	8.95	0.00	8.95	57.95	42.46	43.61	34.83	32.13	29.09	17.57	8.07
CYP08600	5.00	29	4	7.21	0.00	7.21	57.95	42.46	43.61	33.73	29.69	26.68	17.57	6.29
CYP08600	5.00	29	5	8.44	0.00	8.44	57.95	42.46	43.61	34.71	31.31	28.11	17.57	7.55
CYP08600	5.00	29	6	8.62	0.00	8.62	57.95	42.46	43.61	34.60	31.97	28.50	17.57	7.73
CYP08600	5.00	33	1	8.27	0.00	8.27	57.95	42.26	43.61	34.24	29.66	29.43	17.47	7.37
CYP08600	5.00	33	2	7.52	0.00	7.52	57.95	42.26	43.61	34.22	28.82	27.48	17.47	6.61
CYP08600	5.00	33	3	8.58	0.00	8.58	57.95	42.26	43.61	34.82	29.87	29.34	17.47	7.69
CYP08600	5.00	33	4	6.90	0.00	6.90	57.95	42.26	43.61	33.73	27.98	26.82	17.47	5.97
CYP08600	5.00	33	5	8.11	0.00	8.11	57.95	42.26	43.61	34.70	29.37	28.28	17.47	7.21
CYP08600	5.00	33	6	8.27	0.00	8.27	57.95	42.26	43.61	34.60	29.73	28.70	17.47	7.37
CYP08600	5.00	37	1	8.82	0.00	8.82	57.95	42.46	43.64	34.24	31.73	30.01	17.58	7.93
CYP08600	5.00	37	2	7.93	0.00	7.93	57.95	42.46	43.64	34.23	30.34	27.75	17.58	7.03
CYP08600	5.00	37	3	9.11	0.00	9.11	57.95	42.46	43.64	34.83	31.70	29.92	17.58	8.24
CYP08600	5.00	37	4	7.32	0.00	7.32	57.95	42.46	43.64	33.74	29.38	27.15	17.58	6.41
CYP08600	5.00	37	5	8.57	0.00	8.57	57.95	42.46	43.64	34.72	30.95	28.68	17.58	7.68
CYP08600	5.00	37	6	8.72	0.00	8.72	57.95	42.46	43.64	34.61	31.54	29.03	17.58	7.84
DJI09900	23.00	21	1	4.87	0.00	4.87	44.99	34.20	35.15	38.29	31.07	21.13	8.53	4.26
DJI09900	23.00	21	2	5.00	0.00	5.00	44.99	34.20	35.15	37.04	33.27	21.31	8.53	4.40
DJI09900	23.00	21	3	5.12	0.00	5.12	44.99	34.20	35.15	37.52	33.02	21.42	8.53	4.54
DJI09900	23.00	21	4	5.48	0.00	5.48	44.99	34.20	35.15	38.56	32.59	21.79	8.53	4.94
DJI09900	23.00	21	5	5.32	0.00	5.32	44.99	34.20	35.15	38.74	31.86	21.60	8.53	4.75
DJI09900	23.00	21	6	5.95	0.00	5.95	44.99	34.20	35.15	38.77	33.53	22.31	8.53	5.45
DJI09900	23.00	25	1	5.04	0.00	5.04	44.99	34.40	35.15	38.32	32.30	21.24	8.61	4.44
DJI09900	23.00	25	2	5.11	0.00	5.11	44.99	34.40	35.15	37.06	34.01	21.41	8.61	4.52
DJI09900	23.00	25	3	5.25	0.00	5.25	44.99	34.40	35.15	37.54	33.94	21.52	8.61	4.67
DJI09900	23.00	25	4	5.63	0.00	5.63	44.99	34.40	35.15	38.58	33.70	21.89	8.61	5.09
DJI09900	23.00	25	5	5.47	0.00	5.47	44.99	34.40	35.15	38.77	32.97	21.70	8.61	4.92
DJI09900	23.00	25	6	6.07	0.00	6.07	44.99	34.40	35.15	38.79	34.39	22.41	8.61	5.59
DJI09900	23.00	29	1	5.04	0.00	5.04	44.99	34.40	35.15	38.33	32.31	21.23	8.61	4.44
DJI09900	23.00	29	2	5.11	0.00	5.11	44.99	34.40	35.15	37.06	34.02	21.41	8.61	4.52
DJI09900	23.00	29	3	5.25	0.00	5.25	44.99	34.40	35.15	37.55	33.96	21.51	8.61	4.67
DJI09900	23.00	29	4	5.63	0.00	5.63	44.99	34.40	35.15	38.58	33.71	21.89	8.61	5.09
DJI09900	23.00	29	5	5.47	0.00	5.47	44.99	34.40	35.15	38.77	32.98	21.70	8.61	4.92
DJI09900	23.00	29	6	6.07	0.00	6.07	44.99	34.40	35.15	38.79	34.40	22.41	8.61	5.59
DJI09900	23.00	33	1	5.12	0.00	5.12	44.99	34.40	35.15	38.36	32.40	21.33	8.61	4.53
DJI09900	23.00	33	2	5.19	0.00	5.19	44.99	34.40	35.15	37.08	34.11	21.51	8.61	4.61
DJI09900	23.00	33	3	5.33	0.00	5.33	44.99	34.40	35.15	37.57	34.05	21.61	8.61	4.76
DJI09900	23.00	33	4	5.72	0.00	5.72	44.99	34.40	35.15	38.62	33.80	21.99	8.61	5.18
DJI09900	23.00	33	5	5.56	0.00	5.56	44.99	34.40	35.15	38.81	33.07	21.80	8.61	5.01
DJI09900	23.00	33	6	6.15	0.00	6.15	44.99	34.40	35.15	38.82	34.49	22.51	8.61	5.68
DJI09900	23.00	37	1	5.12	0.00	5.12	44.99	34.40	35.15	38.36	32.41	21.33	8.61	4.53
DJI09900	23.00	37	2	5.19	0.00	5.19	44.99	34.40	35.15	37.08	34.11	21.51	8.61	4.61
DJI09900	23.00	37	3	5.33	0.00	5.33	44.99	34.40	35.15	37.57	34.05	21.61	8.61	4.76
DJI09900	23.00	37	4	5.71	0.00	5.71	44.99	34.40	35.15	38.61	33.81	21.99	8.61	5.18
DJI09900	23.00	37	5	5.56	0.00	5.56	44.99	34.40	35.15	38.80	33.07	21.80	8.61	5.01
DJI09900	23.00	37	6	6.15	0.00	6.15	44.99	34.40	35.15	38.82	34.49	22.51	8.61	5.68
DNK08900	5.00	12	1	6.99	0.00	6.99	54.33	34.49	35.09	36.47	29.86	24.97	9.62	6.49
DNK08900	5.00	12	2	7.09	0.00	7.09	54.33	34.49	35.09	38.01	30.12	24.53	9.62	6.60
DNK08900	5.00	12	3	8.31	0.00	8.31	54.33	34.49	35.09	35.57	31.54	28.16	9.62	8.00
DNK08900	5.00	12	4	8.55	0.00	8.55	54.33	34.49	35.09	38.12	31.54	26.88	9.62	8.29
DNK08900	5.00	12	5	6.99	0.00	6.99	54.33	34.49	35.09	35.41	29.65	25.63	9.62	6.49
DNK08900	5.00	12	6	9.16	0.00	9.16	54.33	34.49	35.09	37.29	32.15	28.65	9.62	9.02
DNK08900	5.00	16	1	7.06	0.00	7.06	54.33	34.49	35.09	36.55	29.88	25.07	9.62	6.57
DNK08900	5.00	16	2	7.16	0.00	7.16	54.33	34.49	35.09	38.09	30.14	24.63	9.62	6.68
DNK08900	5.00	16	3	8.37	0.00	8.37	54.33	34.49	35.09	35.64	31.57	28.26	9.62	8.08
DNK08900	5.00	16	4	8.62	0.00	8.62	54.33	34.49	35.09	38.20	31.56	26.98	9.62	8.37
DNK08900	5.00	16	5	7.06	0.00	7.06	54.33	34.49	35.09	35.49	29.67	25.73	9.62	6.57
DNK08900	5.00	16	6	9.22	0.00	9.22	54.33	34.49	35.09	37.37	32.18	28.75	9.62	9.10
DNK08901	5.00	20	1	6.51	0.00	6.51	54.33	34.49	35.70	36.53	29.88	24.00	9.88	5.93
DNK08901	5.00	20	2	7.25	0.00	7.25	54.33	34.49	35.70	38.07	30.14	24.75	9.88	6.75
DNK08901	5.00	20	3	8.71	0.00	8.71	54.33	34.49	35.70	35.63	31.56	29.26	9.88	8.43
DNK08901	5.00	20	4	8.38	0.00	8.38	54.33	34.49	35.70	38.19	31.56	26.40	9.88	8.04
DNK08901	5.00	20	5	6.51	0.00	6.51	54.33	34.49	35.70	35.48	29.67	24.51	9.88	5.93
DNK08901	5.00	20	6	9.45	0.00	9.45	54.33	34.49	35.70	37.36	32.17	29.28	9.88	9.31
DNK09000	5.00	24	1	5.34	0.00	5.34	35.70	28.39	35.70	35.82	27.14	26.49	2.67	6.34
DNK09000	5.00	24	2	5.47	0.00	5.47	35.70	28.39	35.70	34.86	25.05	34.35	2.67	6.55
DNK09000	5.00	24	3	5.79	0.00	5.79	35.70	28.39	35.70	35.25	25.72	34.44	2.67	7.08
DNK09000	5.00	24	4	7.64	0.00	7.64	35.70	28.39	35.70	39.59	29.88	35.16	2.67	10.93
DNK09000	5.00	24	5	6.88	0.00	6.88	35.70	28.39	35.70	37.03	27.97	36.41	2.67	9.12
DNK09000	5.00	24	6	7.48	0.00	7.48	35.70	28.39	35.70	38.83	30.14	33.52	2.67	10.50
DNK09000	5.00	36	1	5.74	0.00	5.74	35.69	28.39	35.70	36.48	27.86	27.08	2.66	7.00
DNK09000	5.00	36	2	5.88	0.00	5.88	35.69	28.39	35.70	35.54	25.75	34.92	2.66	7.24
DNK09000	5.00	36	3	6.18	0.00	6.18	35.69	28.39	35.70	35.93	26.42	35.01	2.66	7.76
DNK09000	5.00	36	4	7.79	0.00	7.79	35.69	28.39	35.70	39.52	30.60	35.72	2.66	11.34
DNK09000	5.00	36	5	7.14	0.00	7.14	35.69	28.39	35.70	37.47	28.67	36.95	2.66	9.70

DNK09000	5.00	36	6	7.70	0.00	7.70	35.69	28.39	35.70	39.27	30.85	34.12	2.66	11.09
DNK09100	5.00	27	1	5.09	0.00	5.09	50.30	28.43	27.92	36.53	26.01	25.55	3.08	5.75
DNK09100	5.00	27	2	7.54	0.00	7.54	50.30	28.43	27.92	42.71	29.47	30.05	3.08	10.09
DNK09100	5.00	27	3	7.86	0.00	7.86	50.30	28.43	27.92	43.46	30.23	30.80	3.08	10.85
DNK09100	5.00	27	4	6.48	0.00	6.48	50.30	28.43	27.92	39.75	27.62	27.92	3.08	7.97
DNK09100	5.00	27	5	6.68	0.00	6.68	50.30	28.43	27.92	40.27	27.93	28.30	3.08	8.34
DNK09100	5.00	27	6	4.72	0.00	4.72	50.30	28.43	27.92	35.93	25.55	25.00	3.08	5.21
DNK09100	5.00	35	1	5.28	0.00	5.28	50.30	28.43	27.92	36.63	28.40	24.62	3.08	6.03
DNK09100	5.00	35	2	8.12	0.00	8.12	50.30	28.43	27.92	42.81	38.92	28.84	3.08	11.53
DNK09100	5.00	35	3	8.38	0.00	8.38	50.30	28.43	27.92	43.56	39.67	29.60	3.08	12.29
DNK09100	5.00	35	4	7.02	0.00	7.02	50.30	28.43	27.92	39.85	33.69	26.80	3.08	8.99
DNK09100	5.00	35	5	7.26	0.00	7.26	50.30	28.43	27.92	40.37	34.88	27.16	3.08	9.48
DNK09100	5.00	35	6	4.94	0.00	4.94	50.30	28.43	27.92	36.03	28.09	24.08	3.08	5.53
E 12900	-30.00	23	1	5.72	0.00	5.72	46.84		26.63	35.38	24.31	31.94	4.37	6.09
E 12900	-30.00	23	2	6.12	0.00	6.12	46.84		26.63	35.03	25.57	31.74	4.37	6.66
E 12900	-30.00	23	3	7.67	0.00	7.67	46.84		26.63	40.23	26.91	33.31	4.37	9.08
E 12900	-30.00	23	4	7.56	0.00	7.56	46.84		26.63	39.47	26.96	32.86	4.37	8.89
E 12900	-30.00	23	5	8.45	0.00	8.45	46.84		26.63	41.51	28.29	35.39	4.37	10.54
E 12900	-30.00	23	6	6.79	0.00	6.79	46.84		26.63	42.17	24.47	34.33	4.37	7.64
E 12900	-30.00	27	1	6.37	0.00	6.37	46.84	39.74	26.63	40.08	24.41	32.00	4.18	7.12
E 12900	-30.00	27	2	6.32	0.00	6.32	46.84	39.74	26.63	36.02	25.65	31.79	4.18	7.04
E 12900	-30.00	27	3	7.64	0.00	7.64	46.84	39.74	26.63	40.32	27.01	33.41	4.18	9.18
E 12900	-30.00	27	4	7.53	0.00	7.53	46.84	39.74	26.63	39.57	27.06	32.97	4.18	8.99
E 12900	-30.00	27	5	8.44	0.00	8.44	46.84	39.74	26.63	42.13	28.39	35.49	4.18	10.74
E 12900	-30.00	27	6	6.78	0.00	6.78	46.84	39.74	26.63	42.32	24.57	34.43	4.18	7.75
E 12900	-30.00	31	1	6.34	0.00	6.34	46.84	39.74	26.63	41.01	24.34	31.18	4.18	7.06
E 12900	-30.00	31	2	6.28	0.00	6.28	46.84	39.74	26.63	36.15	25.58	31.29	4.18	6.97
E 12900	-30.00	31	3	7.60	0.00	7.60	46.84	39.74	26.63	40.31	26.92	33.33	4.18	9.11
E 12900	-30.00	31	4	7.49	0.00	7.49	46.84	39.74	26.63	39.56	26.97	32.88	4.18	8.92
E 12900	-30.00	31	5	8.41	0.00	8.41	46.84	39.74	26.63	42.12	28.31	35.41	4.18	10.67
E 12900	-30.00	31	6	6.76	0.00	6.76	46.84	39.74	26.63	42.32	24.53	34.34	4.18	7.70
E 12900	-30.00	35	1	6.36	0.00	6.36	46.84	39.74	26.63	40.14	24.38	31.97	4.18	7.10
E 12900	-30.00	35	2	6.30	0.00	6.30	46.84	39.74	26.63	36.04	25.59	31.76	4.18	7.01
E 12900	-30.00	35	3	7.61	0.00	7.61	46.84	39.74	26.63	40.41	26.93	33.35	4.18	9.13
E 12900	-30.00	35	4	7.51	0.00	7.51	46.84	39.74	26.63	39.66	26.98	32.91	4.18	8.95
E 12900	-30.00	35	5	8.42	0.00	8.42	46.84	39.74	26.63	42.21	28.32	35.44	4.18	10.70
E 12900	-30.00	35	6	6.80	0.00	6.80	46.84	39.74	26.63	42.41	24.59	34.38	4.18	7.76
E 12900	-30.00	39	1	6.39	0.00	6.39	46.84	39.74	26.63	39.95	24.45	32.04	4.18	7.14
E 12900	-30.00	39	2	6.37	0.00	6.37	46.84	39.74	26.63	36.00	25.78	31.85	4.18	7.11
E 12900	-30.00	39	3	7.30	0.00	7.30	46.84	39.74	26.63	40.49	26.09	33.44	4.18	8.59
E 12900	-30.00	39	4	7.34	0.00	7.34	46.84	39.74	26.63	39.76	26.46	33.00	4.18	8.65
E 12900	-30.00	39	5	8.26	0.00	8.26	46.84	39.74	26.63	42.28	27.80	35.53	4.18	10.36
E 12900	-30.00	39	6	6.81	0.00	6.81	46.84	39.74	26.63	42.51	24.60	34.46	4.18	7.79
EGY02600	-7.00	4	1	-1.62	-1.71	0.09	23.38	35.56	31.60	26.77	29.32	28.19	-6.77	1.97
EGY02600	-7.00	4	2	-1.41	-1.51	0.10	23.38	35.56	31.60	26.76	42.35	33.51	-6.77	2.59
EGY02600	-7.00	4	3	-1.37	-1.47	0.10	23.38	35.56	31.60	26.82	47.54	35.67	-6.77	2.73
EGY02600	-7.00	4	4	-1.36	-1.45	0.09	23.38	35.56	31.60	26.87	47.53	36.06	-6.77	2.78
EGY02600	-7.00	4	5	-1.02	-1.11	0.09	23.38	35.56	31.60	28.16	43.73	34.53	-6.77	3.99
EGY02600	-7.00	4	6	-1.27	-1.35	0.08	23.38	35.56	31.60	27.53	32.93	31.30	-6.77	3.07
EGY02600	-7.00	8	1	-1.59	-1.68	0.09	23.38	35.56	31.60	26.87	29.41	28.28	-6.77	2.07
EGY02600	-7.00	8	2	-1.38	-1.48	0.10	23.38	35.56	31.60	26.86	42.35	33.56	-6.77	2.69
EGY02600	-7.00	8	3	-1.34	-1.44	0.10	23.38	35.56	31.60	26.92	47.57	35.75	-6.77	2.83
EGY02600	-7.00	8	4	-1.33	-1.42	0.09	23.38	35.56	31.60	26.96	47.57	36.13	-6.77	2.87
EGY02600	-7.00	8	5	-1.00	-1.09	0.09	23.38	35.56	31.60	28.25	43.76	34.62	-6.77	4.08
EGY02600	-7.00	8	6	-1.24	-1.32	0.08	23.38	35.56	31.60	27.63	33.00	31.39	-6.77	3.16
EGY02600	-7.00	12	1	-1.59	-1.68	0.09	23.38	35.56	31.60	26.87	29.41	28.28	-6.77	2.07
EGY02600	-7.00	12	2	-1.38	-1.48	0.10	23.38	35.56	31.60	26.86	42.35	33.55	-6.77	2.69
EGY02600	-7.00	12	3	-1.34	-1.44	0.10	23.38	35.56	31.60	26.92	47.55	35.75	-6.77	2.83
EGY02600	-7.00	12	4	-1.33	-1.42	0.09	23.38	35.56	31.60	26.96	47.54	36.14	-6.77	2.87
EGY02600	-7.00	12	5	-1.00	-1.09	0.09	23.38	35.56	31.60	28.26	43.74	34.61	-6.77	4.08
EGY02600	-7.00	12	6	-1.24	-1.32	0.08	23.38	35.56	31.60	27.63	33.00	31.38	-6.77	3.16
EGY02600	-7.00	16	1	-1.55	-1.64	0.09	23.38	35.56	31.60	26.97	29.77	28.37	-6.77	2.19
EGY02600	-7.00	16	2	-1.35	-1.45	0.10	23.38	35.56	31.60	26.95	42.36	33.61	-6.77	2.79
EGY02600	-7.00	16	3	-1.31	-1.41	0.10	23.38	35.56	31.60	27.02	47.61	35.88	-6.77	2.93
EGY02600	-7.00	16	4	-1.30	-1.39	0.09	23.38	35.56	31.60	27.06	47.60	36.28	-6.77	2.97
EGY02600	-7.00	16	5	-0.97	-1.07	0.10	23.38	35.56	31.60	28.35	43.76	34.73	-6.77	4.18
EGY02600	-7.00	16	6	-1.21	-1.29	0.08	23.38	35.56	31.60	27.73	33.26	31.49	-6.77	3.27
EGY02600	-7.00	20	1	-1.50	-1.72	0.22	23.38	35.56	27.62	26.97	30.19	42.21	-6.91	2.63
EGY02600	-7.00	20	2	-1.41	-1.50	0.09	23.38	35.56	27.62	26.95	42.25	49.92	-6.91	2.93
EGY02600	-7.00	20	3	-1.39	-1.48	0.09	23.38	35.56	27.62	27.01	48.06	47.73	-6.91	3.00
EGY02600	-7.00	20	4	-1.39	-1.47	0.08	23.38	35.56	27.62	27.05	48.07	42.49	-6.91	3.03
EGY02600	-7.00	20	5	-1.37	-1.16	-0.21	23.38	35.56	27.62	28.35	43.91	25.11	-6.91	3.08
EGY02600	-7.00	20	6	-1.66	-1.43	-0.23	23.38	35.56	27.62	27.72	33.59	23.75	-6.91	2.15
F 09300	-19.00	1	1	2.64	0.00	2.64	47.06		21.77	35.33		25.87	-0.15	3.46 |*
F 09300	-19.00	1	2	1.40	0.00	1.40	47.06		21.77	33.52		24.37	-0.15	1.70 |*
F 09300	-19.00	1	3	0.78	0.00	0.78	47.06		21.77	32.44		25.08	-0.15	0.89 |*
F 09300	-19.00	1	4	1.87	0.00	1.87	47.06		21.77	33.72		28.13	-0.15	2.34 |*
F 09300	-19.00	1	5	0.98	0.00	0.98	47.06		21.77	32.38		28.74	-0.15	1.14 |*
F 09300	-19.00	1	6	3.67	0.00	3.67	47.06		21.77	36.56		30.58	-0.15	5.15 |*
F 09300	-19.00	5	1	1.23	0.00	1.23	47.06	21.70	21.77	35.33	28.32	25.78	-2.76	3.02 |*
F 09300	-19.00	5	2	0.16	0.00	0.16	47.06	21.70	21.77	33.51	25.72	24.27	-2.76	1.17 |*
F 09300	-19.00	5	3	-0.27	-0.23	-0.04	47.06	21.70	21.77	32.40	26.79	25.03	-2.76	0.51 |*
F 09300	-19.00	5	4	0.67	0.00	0.67	47.06	21.70	21.77	33.72	28.44	28.07	-2.76	2.01 |*
F 09300	-19.00	5	5	-0.03	-0.04	0.01	47.06	21.70	21.77	32.38	28.20	28.67	-2.76	0.87 |*
F 09300	-19.00	5	6	2.02	0.00	2.02	47.06	21.70	21.77	36.56	29.55	30.49	-2.76	4.67 |*
F 09300	-19.00	9	1	1.28	0.00	1.28	47.06	21.70	21.77	35.43	28.33	25.88	-2.76	3.11 |*
F 09300	-19.00	9	2	0.21	0.00	0.21	47.06	21.70	21.77	33.61	25.73	24.37	-2.76	1.26 |*
F 09300	-19.00	9	3	-0.21	-0.17	-0.04	47.06	21.70	21.77	32.50	26.83	25.08	-2.76	0.60 |*
F 09300	-19.00	9	4	0.72	0.00	0.72	47.06	21.70	21.77	33.81	28.48	28.14	-2.76	2.10 |*
F 09300	-19.00	9	5	0.03	0.00	0.03	47.06	21.70	21.77	32.48	28.24	28.75	-2.76	0.97 |*

F	09300	-19.00	9	6	2.06	0.00	2.06	47.06	21.70	21.77	36.66	29.57	30.58	-2.76	4.76 |*
F	09300	-19.00	13	1	1.31	0.00	1.31	47.06	21.70	21.77	35.52	28.39	25.81	-2.76	3.17 |*
F	09300	-19.00	13	2	0.27	0.00	0.27	47.06	21.70	21.77	33.70	25.89	24.36	-2.76	1.34 |*
F	09300	-19.00	13	3	-0.17	-0.13	-0.04	47.06	21.70	21.77	32.56	26.90	25.09	-2.76	0.65 |*
F	09300	-19.00	13	4	0.77	0.00	0.77	47.06	21.70	21.77	33.91	28.54	28.14	-2.76	2.19 |*
F	09300	-19.00	13	5	0.09	0.00	0.09	47.06	21.70	21.77	32.58	28.30	28.75	-2.76	1.06 |*
F	09300	-19.00	13	6	2.10	0.00	2.10	47.06	21.70	21.77	36.76	29.66	30.57	-2.76	4.85 |*
F	09300	-19.00	17	1	1.31	0.00	1.31	47.06	21.70	21.77	35.53	28.30	25.79	-2.76	3.17 |*
F	09300	-19.00	17	2	0.26	0.00	0.26	47.06	21.70	21.77	33.70	25.79	24.35	-2.76	1.33 |*
F	09300	-19.00	17	3	-0.20	-0.16	-0.04	47.06	21.70	21.77	32.53	26.80	25.07	-2.76	0.61 |*
F	09300	-19.00	17	4	0.77	0.00	0.77	47.06	21.70	21.77	33.91	28.46	28.12	-2.76	2.18 |*
F	09300	-19.00	17	5	0.09	0.00	0.09	47.06	21.70	21.77	32.58	28.22	28.72	-2.76	1.05 |*
F	09300	-19.00	17	6	2.09	0.00	2.09	47.06	21.70	21.77	36.76	29.56	30.53	-2.76	4.84 |*
FIN10300		5.00	2	1	11.19	0.00	11.19	43.50	35.07	34.51	40.60	32.13	35.30	8.23	12.37
FIN10300		5.00	2	2	9.52	0.00	9.52	43.50	35.07	34.51	38.22	29.60	32.71	8.23	9.88
FIN10300		5.00	2	3	9.87	0.00	9.87	43.50	35.07	34.51	38.45	30.13	33.60	8.23	10.37
FIN10300		5.00	2	4	12.96	0.00	12.96	43.50	35.07	34.51	42.57	37.18	39.55	8.23	15.86
FIN10300		5.00	2	5	13.05	0.00	13.05	43.50	35.07	34.51	42.42	38.15	39.83	8.23	16.09
FIN10300		5.00	2	6	13.30	0.00	13.30	43.50	35.07	34.51	43.37	38.32	40.24	8.23	16.74
FIN10300		5.00	6	1	11.22	0.00	11.22	43.50	35.07	34.51	40.69	32.15	35.33	8.23	12.42
FIN10300		5.00	6	2	9.56	0.00	9.56	43.50	35.07	34.51	38.31	29.62	32.75	8.23	9.93
FIN10300		5.00	6	3	9.90	0.00	9.90	43.50	35.07	34.51	38.53	30.14	33.63	8.23	10.41
FIN10300		5.00	6	4	12.99	0.00	12.99	43.50	35.07	34.51	42.66	37.22	39.60	8.23	15.93
FIN10300		5.00	6	5	13.08	0.00	13.08	43.50	35.07	34.51	42.51	38.19	39.89	8.23	16.16
FIN10300		5.00	6	6	13.32	0.00	13.32	43.50	35.07	34.51	43.46	38.36	40.29	8.23	16.81
FIN10300		5.00	10	1	11.28	0.00	11.28	43.50	35.07	34.51	40.81	32.25	35.43	8.23	12.52
FIN10300		5.00	10	2	9.63	0.00	9.63	43.50	35.07	34.51	38.42	29.72	32.84	8.23	10.03
FIN10300		5.00	10	3	9.98	0.00	9.98	43.50	35.07	34.51	38.64	30.24	33.73	8.23	10.51
FIN10300		5.00	10	4	13.03	0.00	13.03	43.50	35.07	34.51	42.77	37.32	39.69	8.23	16.03
FIN10300		5.00	10	5	13.12	0.00	13.12	43.50	35.07	34.51	42.62	38.29	39.99	8.23	16.26
FIN10300		5.00	10	6	13.36	0.00	13.36	43.50	35.07	34.51	43.58	38.46	40.39	8.23	16.92
FIN10400		5.00	22	1	7.40	0.00	7.40	52.83	35.68	28.41	37.51	34.62	25.94	5.58	7.97
FIN10400		5.00	22	2	9.05	0.00	9.05	52.83	35.68	28.41	41.39	36.58	28.20	5.58	10.59
FIN10400		5.00	22	3	9.41	0.00	9.41	52.83	35.68	28.41	42.27	34.10	29.53	5.58	11.26
FIN10400		5.00	22	4	8.05	0.00	8.05	52.83	35.68	28.41	39.87	30.95	27.57	5.58	8.94
FIN10400		5.00	22	5	8.28	0.00	8.28	52.83	35.68	28.41	39.07	35.55	27.22	5.58	9.29
FIN10400		5.00	22	6	7.14	0.00	7.14	52.83	35.68	28.41	41.15	26.83	27.43	5.58	7.60
FIN10400		5.00	26	1	7.28	0.00	7.28	52.46	35.68	28.41	37.29	34.41	25.81	5.57	7.80
FIN10400		5.00	26	2	8.85	0.00	8.85	52.46	35.68	28.41	40.43	36.38	28.04	5.57	10.25
FIN10400		5.00	26	3	9.22	0.00	9.22	52.46	35.68	28.41	41.21	33.88	29.39	5.57	10.91
FIN10400		5.00	26	4	7.93	0.00	7.93	52.46	35.68	28.41	39.65	30.69	27.42	5.57	8.75
FIN10400		5.00	26	5	8.14	0.00	8.14	52.46	35.68	28.41	38.68	35.35	27.08	5.57	9.08
FIN10400		5.00	26	6	6.97	0.00	6.97	52.46	35.68	28.41	40.79	26.54	27.30	5.57	7.37
FJI19300		152.00	1	1	17.19	0.00	17.19	68.38		58.13	42.28		36.41	34.10	16.21
FJI19300		152.00	1	2	16.02	0.00	16.02	68.38		58.13	40.73		35.93	34.10	15.03
FJI19300		152.00	1	3	18.81	0.00	18.81	68.38		58.13	46.05		35.91	34.10	17.84
FJI19300		152.00	1	4	16.81	0.00	16.81	68.38		58.13	48.42		32.47	34.10	15.83
FJI19300		152.00	1	5	16.45	0.00	16.45	68.38		58.13	47.59		32.19	34.10	15.46
FJI19300		152.00	1	6	17.47	0.00	17.47	68.38		58.13	42.89		36.21	34.10	16.49
FJI19300		152.00	5	1	14.24	0.00	14.24	68.38	36.88	58.13	42.17	34.29	36.41	14.82	14.07
FJI19300		152.00	5	2	13.34	0.00	13.34	68.38	36.88	58.13	40.62	33.40	35.93	14.82	13.00
FJI19300		152.00	5	3	14.92	0.00	14.92	68.38	36.88	58.13	45.93	34.07	35.91	14.82	14.92
FJI19300		152.00	5	4	13.96	0.00	13.96	68.38	36.88	58.13	48.29	33.93	32.47	14.82	13.73
FJI19300		152.00	5	5	13.68	0.00	13.68	68.38	36.88	58.13	47.47	33.65	32.19	14.82	13.40
FJI19300		152.00	5	6	14.23	0.00	14.23	68.38	36.88	58.13	42.78	33.82	36.21	14.82	14.06
FJI19300		152.00	9	1	14.32	0.00	14.32	68.38	36.88	58.13	42.27	34.39	36.51	14.82	14.17
FJI19300		152.00	9	2	13.42	0.00	13.42	68.38	36.88	58.13	40.72	33.50	36.03	14.82	13.10
FJI19300		152.00	9	3	15.00	0.00	15.00	68.38	36.88	58.13	46.03	34.17	36.00	14.82	15.01
FJI19300		152.00	9	4	14.01	0.00	14.01	68.38	36.88	58.13	48.38	34.03	32.51	14.82	13.80
FJI19300		152.00	9	5	13.73	0.00	13.73	68.38	36.88	58.13	47.56	33.75	32.23	14.82	13.46
FJI19300		152.00	9	6	14.31	0.00	14.31	68.38	36.88	58.13	42.88	33.92	36.30	14.82	14.16
G	02700	-33.50	4	1	5.84	0.00	5.84	47.36	32.76	45.95	37.68	25.22	24.57	9.73	5.21
G	02700	-33.50	4	2	6.16	0.00	6.16	47.36	32.76	45.95	38.13	25.61	24.85	9.73	5.55
G	02700	-33.50	4	3	6.52	0.00	6.52	47.36	32.76	45.95	37.96	26.03	25.41	9.73	5.95
G	02700	-33.50	4	4	7.46	0.00	7.46	47.36	32.76	45.95	39.32	27.10	26.35	9.73	7.01
G	02700	-33.50	4	5	10.67	0.00	10.67	47.36	32.76	45.95	40.50	31.51	31.11	9.73	10.90
G	02700	-33.50	4	6	10.21	0.00	10.21	47.36	32.76	45.95	37.21	32.14	32.76	9.73	10.31
G	02700	-33.50	8	1	5.92	0.00	5.92	47.36	32.76	45.95	37.77	25.31	24.65	9.73	5.29
G	02700	-33.50	8	2	6.23	0.00	6.23	47.36	32.76	45.95	38.23	25.70	24.93	9.73	5.64
G	02700	-33.50	8	3	6.59	0.00	6.59	47.36	32.76	45.95	38.05	26.12	25.49	9.73	6.04
G	02700	-33.50	8	4	7.53	0.00	7.53	47.36	32.76	45.95	39.40	27.19	26.42	9.73	7.09
G	02700	-33.50	8	5	10.72	0.00	10.72	47.36	32.76	45.95	40.59	31.58	31.18	9.73	10.97
G	02700	-33.50	8	6	10.28	0.00	10.28	47.36	32.76	45.95	37.31	32.21	32.84	9.73	10.39
G	02700	-33.50	12	1	5.90	0.00	5.90	47.36	32.76	45.95	37.67	25.31	24.63	9.73	5.27
G	02700	-33.50	12	2	6.22	0.00	6.22	47.36	32.76	45.95	38.20	25.70	24.91	9.73	5.62
G	02700	-33.50	12	3	6.55	0.00	6.55	47.36	32.76	45.95	37.83	26.12	25.46	9.73	5.99
G	02700	-33.50	12	4	7.52	0.00	7.52	47.36	32.76	45.95	39.38	27.19	26.40	9.73	7.07
G	02700	-33.50	12	5	10.71	0.00	10.71	47.36	32.76	45.95	40.58	31.58	31.13	9.73	10.95
G	02700	-33.50	12	6	10.18	0.00	10.18	47.36	32.76	45.95	37.07	32.21	32.81	9.73	10.26
G	02700	-33.50	16	1	5.98	0.00	5.98	47.36	32.76	45.95	37.75	25.40	24.73	9.73	5.36
G	02700	-33.50	16	2	6.31	0.00	6.31	47.36	32.76	45.95	38.28	25.79	25.01	9.73	5.72
G	02700	-33.50	16	3	6.63	0.00	6.63	47.36	32.76	45.95	37.90	26.21	25.56	9.73	6.08
G	02700	-33.50	16	4	7.60	0.00	7.60	47.36	32.76	45.95	39.45	27.28	26.50	9.73	7.16
G	02700	-33.50	16	5	10.77	0.00	10.77	47.36	32.76	45.95	40.67	31.67	31.23	9.73	11.05
G	02700	-33.50	16	6	10.25	0.00	10.25	47.36	32.76	45.95	37.16	32.28	32.92	9.73	10.35
G	02700	-33.50	20	1	7.95	0.00	7.95	47.36	47.29	31.31	37.74	25.69	33.64	8.59	7.77
G	02700	-33.50	20	2	8.28	0.00	8.28	47.36	47.29	31.31	38.27	26.08	33.82	8.59	8.18
G	02700	-33.50	20	3	8.46	0.00	8.46	47.36	47.29	31.31	37.90	26.54	34.08	8.59	8.39
G	02700	-33.50	20	4	9.45	0.00	9.45	47.36	47.29	31.31	39.44	27.77	34.79	8.59	9.65
G	02700	-33.50	20	5	10.30	0.00	10.30	47.36	47.29	31.31	40.67	32.89	29.91	8.59	10.83

G	02700	-33.50	20	6	9.25	0.00	9.25	47.36	47.29	31.31	37.15	33.53	29.12	8.59	9.40
G	UKDBS	-33.50	22	1	7.03	0.00	7.03	57.92	31.29	32.38	39.29	33.48	24.27	6.76	7.07
G	UKDBS	-33.50	22	2	7.87	0.00	7.87	57.92	31.29	32.38	42.30	33.66	25.17	6.76	8.16
G	UKDBS	-33.50	22	3	7.52	0.00	7.52	57.92	31.29	32.38	38.25	33.92	25.34	6.76	7.69
G	UKDBS	-33.50	22	4	8.98	0.00	8.98	57.92	31.29	32.38	43.27	34.63	26.92	6.76	9.73
G	UKDBS	-33.50	22	5	9.43	0.00	9.43	57.92	31.29	32.38	41.04	29.75	31.45	6.76	10.44
G	UKDBS	-33.50	22	6	8.13	0.00	8.13	57.92	31.29	32.38	35.60	28.96	32.77	6.76	8.51
G	UKDBS	-33.50	26	1	8.35	0.00	8.35	57.83	31.29	32.40	39.36	33.53	26.74	6.77	8.82
G	UKDBS	-33.50	26	2	8.41	0.00	8.41	57.83	31.29	32.40	42.32	33.67	26.14	6.77	8.90
G	UKDBS	-33.50	26	3	8.65	0.00	8.65	57.83	31.29	32.40	38.33	33.96	27.80	6.77	9.25
G	UKDBS	-33.50	26	4	8.99	0.00	8.99	57.83	31.29	32.40	43.26	34.61	26.95	6.77	9.74
G	UKDBS	-33.50	26	5	9.41	0.00	9.41	57.83	31.29	32.40	41.03	29.66	31.46	6.77	10.39
G	UKDBS	-33.50	26	6	8.13	0.00	8.13	57.83	31.29	32.40	35.63	28.87	32.92	6.77	8.52
G	UKDBS	-33.50	30	1	8.40	0.00	8.40	57.83	31.29	32.40	39.53	33.89	26.72	6.77	8.89
G	UKDBS	-33.50	30	2	8.42	0.00	8.42	57.83	31.29	32.40	42.39	33.75	26.13	6.77	8.91
G	UKDBS	-33.50	30	3	8.71	0.00	8.71	57.83	31.29	32.40	38.52	34.31	27.77	6.77	9.33
G	UKDBS	-33.50	30	4	8.98	0.00	8.98	57.83	31.29	32.40	43.31	34.55	26.94	6.77	9.74
G	UKDBS	-33.50	30	5	9.41	0.00	9.41	57.83	31.29	32.40	41.08	29.65	31.42	6.77	10.39
G	UKDBS	-33.50	30	6	8.17	0.00	8.17	57.83	31.29	32.40	35.75	28.87	32.87	6.77	8.57
G	UKDBS	-33.50	34	1	8.62	0.00	8.62	57.83	31.29	32.40	41.78	33.61	26.64	6.77	9.20
G	UKDBS	-33.50	34	2	8.43	0.00	8.43	57.83	31.29	32.40	43.43	33.59	26.04	6.77	8.93
G	UKDBS	-33.50	34	3	9.06	0.00	9.06	57.83	31.29	32.40	40.98	34.04	27.70	6.77	9.86
G	UKDBS	-33.50	34	4	8.97	0.00	8.97	57.83	31.29	32.40	43.94	34.45	26.85	6.77	9.72
G	UKDBS	-33.50	34	5	9.45	0.00	9.45	57.83	31.29	32.40	41.71	29.56	31.37	6.77	10.45
G	UKDBS	-33.50	34	6	8.59	0.00	8.59	57.83	31.29	32.40	37.17	28.78	32.86	6.77	9.16
G	UKDBS	-33.50	38	1	8.30	0.00	8.30	57.85	31.29	32.40	39.77	33.29	26.55	6.77	8.75
G	UKDBS	-33.50	38	2	8.20	0.00	8.20	57.85	31.29	32.40	41.39	33.47	25.94	6.77	8.61
G	UKDBS	-33.50	38	3	8.66	0.00	8.66	57.85	31.29	32.40	38.86	33.74	27.61	6.77	9.26
G	UKDBS	-33.50	38	4	8.79	0.00	8.79	57.85	31.29	32.40	42.21	34.44	26.75	6.77	9.45
G	UKDBS	-33.50	38	5	9.31	0.00	9.31	57.85	31.29	32.40	40.83	29.56	31.26	6.77	10.24
G	UKDBS	-33.50	38	6	7.90	0.00	7.90	57.85	31.29	32.40	35.11	28.78	32.78	6.77	8.21
GAB26000		-13.00	3	1	6.22	0.00	6.22	65.25	29.69	29.79	53.24	25.77	25.61	4.73	6.66
GAB26000		-13.00	3	2	7.35	0.00	7.35	65.25	29.69	29.79	55.06	26.85	27.94	4.73	8.33
GAB26000		-13.00	3	3	6.72	0.00	6.72	65.25	29.69	29.79	54.16	25.92	26.95	4.73	7.37
GAB26000		-13.00	3	4	7.68	0.00	7.68	65.25	29.69	29.79	56.26	27.16	28.75	4.73	8.85
GAB26000		-13.00	3	5	6.29	0.00	6.29	65.25	29.69	29.79	55.00	24.97	26.78	4.73	6.76
GAB26000		-13.00	3	6	5.87	0.00	5.87	65.25	29.69	29.79	53.43	23.91	27.07	4.73	6.18
GAB26000		-13.00	7	1	6.24	0.00	6.24	65.25	29.69	29.79	53.30	25.81	25.61	4.73	6.68
GAB26000		-13.00	7	2	7.37	0.00	7.37	65.25	29.69	29.79	55.12	26.90	27.95	4.73	8.36
GAB26000		-13.00	7	3	6.75	0.00	6.75	65.25	29.69	29.79	54.22	25.99	26.95	4.73	7.41
GAB26000		-13.00	7	4	7.69	0.00	7.69	65.25	29.69	29.79	56.32	27.20	28.75	4.73	8.87
GAB26000		-13.00	7	5	6.31	0.00	6.31	65.25	29.69	29.79	55.05	25.01	26.78	4.73	6.78
GAB26000		-13.00	7	6	5.89	0.00	5.89	65.25	29.69	29.79	53.49	23.94	27.07	4.73	6.20
GAB26000		-13.00	11	1	6.22	0.00	6.22	65.25	29.69	29.79	53.26	25.77	25.61	4.73	6.66
GAB26000		-13.00	11	2	7.35	0.00	7.35	65.25	29.69	29.79	55.09	26.85	27.94	4.73	8.33
GAB26000		-13.00	11	3	6.72	0.00	6.72	65.25	29.69	29.79	54.19	25.92	26.95	4.73	7.37
GAB26000		-13.00	11	4	7.68	0.00	7.68	65.25	29.69	29.79	56.28	27.16	28.75	4.73	8.85
GAB26000		-13.00	11	5	6.29	0.00	6.29	65.25	29.69	29.79	55.02	24.97	26.78	4.73	6.76
GAB26000		-13.00	11	6	5.87	0.00	5.87	65.25	29.69	29.79	53.46	23.91	27.07	4.73	6.18
GAB26000		-13.00	15	1	6.24	0.00	6.24	65.25	29.69	29.79	53.30	25.81	25.61	4.73	6.68
GAB26000		-13.00	15	2	7.37	0.00	7.37	65.25	29.69	29.79	55.29	26.90	27.94	4.73	8.36
GAB26000		-13.00	15	3	6.75	0.00	6.75	65.25	29.69	29.79	54.39	25.99	26.95	4.73	7.41
GAB26000		-13.00	15	4	7.69	0.00	7.69	65.25	29.69	29.79	56.44	27.20	28.75	4.73	8.87
GAB26000		-13.00	15	5	6.31	0.00	6.31	65.25	29.69	29.79	55.18	25.01	26.78	4.73	6.78
GAB26000		-13.00	15	6	5.89	0.00	5.89	65.25	29.69	29.79	53.65	23.94	27.07	4.73	6.20
GAB26000		-13.00	19	1	6.25	0.00	6.25	65.24	29.69	29.79	53.20	25.81	25.64	4.73	6.69
GAB26000		-13.00	19	2	7.39	0.00	7.39	65.24	29.69	29.79	55.08	26.90	28.01	4.73	8.39
GAB26000		-13.00	19	3	6.77	0.00	6.77	65.24	29.69	29.79	54.19	25.99	27.02	4.73	7.44
GAB26000		-13.00	19	4	7.71	0.00	7.71	65.24	29.69	29.79	56.26	27.20	28.82	4.73	8.90
GAB26000		-13.00	19	5	6.33	0.00	6.33	65.24	29.69	29.79	54.98	25.01	26.86	4.73	6.81
GAB26000		-13.00	19	6	5.90	0.00	5.90	65.24	29.69	29.79	53.49	23.94	27.14	4.73	6.22
GHA10800		-25.00	23	1	5.30	0.00	5.30	61.74	35.61	25.86	51.88	25.76	24.26	3.41	5.90
GHA10800		-25.00	23	2	6.58	0.00	6.58	61.74	35.61	25.86	52.89	26.90	26.98	3.41	7.89
GHA10800		-25.00	23	3	5.53	0.00	5.53	61.74	35.61	25.86	51.10	24.93	25.67	3.41	6.24
GHA10800		-25.00	23	4	4.46	0.00	4.46	61.74	35.61	25.86	51.67	24.62	23.05	3.41	4.73
GHA10800		-25.00	23	5	7.18	0.00	7.18	61.74	35.61	25.86	54.65	28.09	27.94	3.41	8.98
GHA10800		-25.00	23	6	6.38	0.00	6.38	61.74	35.61	25.86	52.04	26.51	26.73	3.41	7.57
GHA10800		-25.00	27	1	5.36	0.00	5.36	61.73	35.61	25.85	51.99	25.81	24.36	3.41	5.99
GHA10800		-25.00	27	2	6.63	0.00	6.63	61.73	35.61	25.85	53.01	26.97	27.08	3.41	7.98
GHA10800		-25.00	27	3	5.59	0.00	5.59	61.73	35.61	25.85	51.43	25.00	25.78	3.41	6.33
GHA10800		-25.00	27	4	4.52	0.00	4.52	61.73	35.61	25.85	52.07	24.68	23.15	3.41	4.81
GHA10800		-25.00	27	5	7.22	0.00	7.22	61.73	35.61	25.85	54.91	28.16	28.04	3.41	9.06
GHA10800		-25.00	27	6	6.43	0.00	6.43	61.73	35.61	25.85	52.18	26.58	26.83	3.41	7.65
GHA10800		-25.00	31	1	5.30	0.00	5.30	61.73	35.61	25.85	51.95	25.76	24.26	3.41	5.91
GHA10800		-25.00	31	2	6.58	0.00	6.58	61.73	35.61	25.85	52.97	26.90	26.98	3.41	7.90
GHA10800		-25.00	31	3	5.54	0.00	5.54	61.73	35.61	25.85	51.40	24.93	25.68	3.41	6.24
GHA10800		-25.00	31	4	4.46	0.00	4.46	61.73	35.61	25.85	52.02	24.62	23.05	3.41	4.73
GHA10800		-25.00	31	5	7.18	0.00	7.18	61.73	35.61	25.85	54.87	28.09	27.94	3.41	8.98
GHA10800		-25.00	31	6	6.38	0.00	6.38	61.73	35.61	25.85	52.13	26.51	26.73	3.41	7.57
GHA10800		-25.00	35	1	5.30	0.00	5.30	61.73	35.61	25.85	52.01	25.76	24.26	3.41	5.91
GHA10800		-25.00	35	2	6.58	0.00	6.58	61.73	35.61	25.85	53.03	26.90	26.98	3.41	7.90
GHA10800		-25.00	35	3	5.54	0.00	5.54	61.73	35.61	25.85	51.44	24.93	25.68	3.41	6.24
GHA10800		-25.00	35	4	4.46	0.00	4.46	61.73	35.61	25.85	52.08	24.62	23.05	3.41	4.73
GHA10800		-25.00	35	5	7.18	0.00	7.18	61.73	35.61	25.85	54.93	28.09	27.94	3.41	8.98
GHA10800		-25.00	35	6	6.38	0.00	6.38	61.73	35.61	25.85	52.19	26.51	26.73	3.41	7.57
GHA10800		-25.00	39	1	5.21	0.00	5.21	61.73	35.47	25.85	51.83	25.45	24.26	3.40	5.78
GHA10800		-25.00	39	2	6.27	0.00	6.27	61.73	35.47	25.85	52.84	25.96	26.98	3.40	7.40
GHA10800		-25.00	39	3	5.36	0.00	5.36	61.73	35.47	25.85	51.28	24.48	25.68	3.40	6.00
GHA10800		-25.00	39	4	4.49	0.00	4.49	61.73	35.47	25.85	51.90	24.75	23.05	3.40	4.78
GHA10800		-25.00	39	5	7.02	0.00	7.02	61.73	35.47	25.85	54.75	27.51	27.94	3.40	8.68
GHA10800		-25.00	39	6	5.98	0.00	5.98	61.73	35.47	25.85	52.00	25.34	26.73	3.40	6.94

GMB30200	-37.00	3	1	4.08	0.00	4.08	43.57	30.59	23.19	37.27	26.80	25.04	0.25	5.93
GMB30200	-37.00	3	2	4.51	0.00	4.51	43.57	30.59	23.19	40.26	26.47	26.23	0.25	6.81
GMB30200	-37.00	3	3	4.42	0.00	4.42	43.57	30.59	23.19	40.24	26.28	25.97	0.25	6.61
GMB30200	-37.00	3	4	4.30	0.00	4.30	43.57	30.59	23.19	38.15	27.18	25.34	0.25	6.36
GMB30200	-37.00	3	5	4.69	0.00	4.69	43.57	30.59	23.19	40.48	27.05	26.48	0.25	7.20
GMB30200	-37.00	3	6	4.78	0.00	4.78	43.57	30.59	23.19	40.39	27.49	26.57	0.25	7.41
GMB30200	-37.00	7	1	4.09	0.00	4.09	43.57	30.59	23.19	37.27	26.83	25.05	0.25	5.95
GMB30200	-37.00	7	2	4.52	0.00	4.52	43.57	30.59	23.19	40.28	26.51	26.23	0.25	6.83
GMB30200	-37.00	7	3	4.43	0.00	4.43	43.57	30.59	23.19	40.27	26.31	25.98	0.25	6.63
GMB30200	-37.00	7	4	4.31	0.00	4.31	43.57	30.59	23.19	38.16	27.22	25.35	0.25	6.38
GMB30200	-37.00	7	5	4.70	0.00	4.70	43.57	30.59	23.19	40.50	27.09	26.48	0.25	7.22
GMB30200	-37.00	7	6	4.79	0.00	4.79	43.57	30.59	23.19	40.41	27.53	26.58	0.25	7.43
GMB30200	-37.00	11	1	4.09	0.00	4.09	43.57	30.59	23.19	37.27	26.83	25.04	0.25	5.95
GMB30200	-37.00	11	2	4.52	0.00	4.52	43.57	30.59	23.19	40.28	26.51	26.23	0.25	6.83
GMB30200	-37.00	11	3	4.43	0.00	4.43	43.57	30.59	23.19	40.27	26.31	25.97	0.25	6.63
GMB30200	-37.00	11	4	4.30	0.00	4.30	43.57	30.59	23.19	38.16	27.22	25.34	0.25	6.38
GMB30200	-37.00	11	5	4.70	0.00	4.70	43.57	30.59	23.19	40.50	27.09	26.48	0.25	7.22
GMB30200	-37.00	11	6	4.79	0.00	4.79	43.57	30.59	23.19	40.41	27.53	26.57	0.25	7.43
GMB30200	-37.00	15	1	4.09	0.00	4.09	43.57	30.59	23.19	37.28	26.86	25.05	0.25	5.96
GMB30200	-37.00	15	2	4.53	0.00	4.53	43.57	30.59	23.19	40.31	26.54	26.23	0.25	6.85
GMB30200	-37.00	15	3	4.44	0.00	4.44	43.57	30.59	23.19	40.30	26.35	25.98	0.25	6.65
GMB30200	-37.00	15	4	4.31	0.00	4.31	43.57	30.59	23.19	38.17	27.25	25.35	0.25	6.39
GMB30200	-37.00	15	5	4.71	0.00	4.71	43.57	30.59	23.19	40.53	27.12	26.48	0.25	7.24
GMB30200	-37.00	15	6	4.80	0.00	4.80	43.57	30.59	23.19	40.43	27.56	26.58	0.25	7.44
GMB30200	-37.00	19	1	4.43	0.00	4.43	43.65	30.59	23.19	43.92	26.86	25.04	0.26	6.64
GMB30200	-37.00	19	2	4.66	0.00	4.66	43.65	30.59	23.19	43.72	26.54	26.23	0.26	7.12
GMB30200	-37.00	19	3	4.55	0.00	4.55	43.65	30.59	23.19	43.22	26.35	25.97	0.26	6.89
GMB30200	-37.00	19	4	4.59	0.00	4.59	43.65	30.59	23.19	44.23	27.25	25.34	0.26	6.97
GMB30200	-37.00	19	5	4.84	0.00	4.84	43.65	30.59	23.19	44.15	27.12	26.48	0.26	7.53
GMB30200	-37.00	19	6	4.95	0.00	4.95	43.65	30.59	23.19	44.57	27.56	26.57	0.26	7.79
GNB30400	-30.00	2	1	3.24	0.00	3.24	69.45	35.82	36.31	51.35	21.58	21.25	11.04	2.39
GNB30400	-30.00	2	2	4.79	0.00	4.79	69.45	35.82	36.31	51.43	23.16	22.91	11.04	4.00
GNB30400	-30.00	2	3	3.83	0.00	3.83	69.45	35.82	36.31	50.61	22.20	21.86	11.04	3.00
GNB30400	-30.00	2	4	4.31	0.00	4.31	69.45	35.82	36.31	50.72	22.60	22.45	11.04	3.49
GNB30400	-30.00	6	1	3.32	0.00	3.32	69.45	35.82	36.31	51.42	21.67	21.33	11.04	2.47
GNB30400	-30.00	6	2	4.86	0.00	4.86	69.45	35.82	36.31	51.51	23.24	22.98	11.04	4.08
GNB30400	-30.00	6	3	3.90	0.00	3.90	69.45	35.82	36.31	50.69	22.28	21.93	11.04	3.07
GNB30400	-30.00	6	4	4.38	0.00	4.38	69.45	35.82	36.31	50.79	22.67	22.52	11.04	3.57
GNB30400	-30.00	10	1	3.32	0.00	3.32	69.45	35.82	36.31	51.35	21.67	21.33	11.04	2.47
GNB30400	-30.00	10	2	4.86	0.00	4.86	69.45	35.82	36.31	51.44	23.24	22.98	11.04	4.08
GNB30400	-30.00	10	3	3.90	0.00	3.90	69.45	35.82	36.31	50.63	22.28	21.93	11.04	3.07
GNB30400	-30.00	10	4	4.38	0.00	4.38	69.45	35.82	36.31	50.72	22.67	22.52	11.04	3.57
GNB30400	-30.00	14	1	3.40	0.00	3.40	69.45	35.82	36.31	51.53	21.75	21.40	11.04	2.55
GNB30400	-30.00	14	2	4.93	0.00	4.93	69.45	35.82	36.31	51.61	23.31	23.05	11.04	4.15
GNB30400	-30.00	14	3	3.97	0.00	3.97	69.45	35.82	36.31	50.78	22.36	22.00	11.04	3.15
GNB30400	-30.00	14	4	4.45	0.00	4.45	69.45	35.82	36.31	50.90	22.75	22.60	11.04	3.64
GNB30400	-30.00	18	1	3.20	0.00	3.20	69.45	35.82	36.17	51.54	21.74	21.03	10.97	2.35
GNB30400	-30.00	18	2	4.61	0.00	4.61	69.45	35.82	36.17	51.61	23.29	22.44	10.97	3.82
GNB30400	-30.00	18	3	3.71	0.00	3.71	69.45	35.82	36.17	50.78	22.33	21.51	10.97	2.87
GNB30400	-30.00	18	4	4.12	0.00	4.12	69.45	35.82	36.17	50.90	22.73	21.97	10.97	3.30
GNE30300	-19.00	23	1	7.70	0.00	7.70	44.81	40.38	37.81	40.12	25.25	28.84	11.32	7.10
GNE30300	-19.00	23	2	6.48	0.00	6.48	44.81	40.38	37.81	38.81	24.02	27.33	11.32	5.78
GNE30300	-19.00	23	3	5.43	0.00	5.43	44.81	40.38	37.81	38.72	22.96	25.71	11.32	4.66
GNE30300	-19.00	23	4	6.20	0.00	6.20	44.81	40.38	37.81	39.60	23.61	26.84	11.32	5.48
GNE30300	-19.00	23	5	6.54	0.00	6.54	44.81	40.38	37.81	39.38	24.11	27.13	11.32	5.84
GNE30300	-19.00	27	1	7.68	0.00	7.68	44.81	40.38	37.81	40.04	25.26	28.79	11.32	7.07
GNE30300	-19.00	27	2	6.46	0.00	6.46	44.81	40.38	37.81	38.72	24.02	27.29	11.32	5.75
GNE30300	-19.00	27	3	5.41	0.00	5.41	44.81	40.38	37.81	38.64	22.96	25.67	11.32	4.64
GNE30300	-19.00	27	4	6.18	0.00	6.18	44.81	40.38	37.81	39.52	23.61	26.79	11.32	5.46
GNE30300	-19.00	27	5	6.52	0.00	6.52	44.81	40.38	37.81	39.30	24.11	27.09	11.32	5.82
GNE30300	-19.00	31	1	7.70	0.00	7.70	44.81	40.38	37.81	40.11	25.26	28.84	11.32	7.10
GNE30300	-19.00	31	2	6.48	0.00	6.48	44.81	40.38	37.81	38.80	24.02	27.33	11.32	5.78
GNE30300	-19.00	31	3	5.43	0.00	5.43	44.81	40.38	37.81	38.71	22.96	25.72	11.32	4.66
GNE30300	-19.00	31	4	6.20	0.00	6.20	44.81	40.38	37.81	39.59	23.61	26.84	11.32	5.48
GNE30300	-19.00	31	5	6.54	0.00	6.54	44.81	40.38	37.81	39.37	24.11	27.13	11.32	5.84
GNE30300	-19.00	35	1	7.64	0.00	7.64	44.81	40.38	37.81	40.04	25.19	28.78	11.32	7.03
GNE30300	-19.00	35	2	6.43	0.00	6.43	44.81	40.38	37.81	38.72	23.96	27.29	11.32	5.72
GNE30300	-19.00	35	3	5.37	0.00	5.37	44.81	40.38	37.81	38.64	22.89	25.67	11.32	4.60
GNE30300	-19.00	35	4	6.14	0.00	6.14	44.81	40.38	37.81	39.52	23.54	26.79	11.32	5.41
GNE30300	-19.00	35	5	6.49	0.00	6.49	44.81	40.38	37.81	39.30	24.05	27.08	11.32	5.78
GNE30300	-19.00	39	1	7.69	0.00	7.69	44.81	40.38	37.81	40.04	25.26	28.84	11.32	7.09
GNE30300	-19.00	39	2	6.47	0.00	6.47	44.81	40.38	37.81	38.72	24.02	27.33	11.32	5.77
GNE30300	-19.00	39	3	5.42	0.00	5.42	44.81	40.38	37.81	38.64	22.96	25.72	11.32	4.65
GNE30300	-19.00	39	4	6.20	0.00	6.20	44.81	40.38	37.81	39.52	23.61	26.84	11.32	5.47
GNE30300	-19.00	39	5	6.53	0.00	6.53	44.81	40.38	37.81	39.29	24.11	27.13	11.32	5.83
GRC10500	5.00	3	1	1.44	0.00	1.44	44.68	31.40	18.06	35.87	32.28	24.07	-4.19	6.12
GRC10500	5.00	3	2	2.00	0.00	2.00	44.68	31.40	18.06	41.25	35.14	25.80	-4.19	8.67
GRC10500	5.00	3	3	1.96	0.00	1.96	44.68	31.40	18.06	38.94	36.83	25.93	-4.19	8.48
GRC10500	5.00	3	4	0.99	0.00	0.99	44.68	31.40	18.06	33.71	32.84	22.66	-4.19	4.64
GRC10500	5.00	3	5	1.94	0.00	1.94	44.68	31.40	18.06	41.47	34.59	25.41	-4.19	8.35
GRC10500	5.00	3	6	0.74	0.00	0.74	44.68	31.40	18.06	32.82	34.71	21.89	-4.19	3.96
GRC10500	5.00	7	1	1.46	0.00	1.46	44.68	31.40	18.06	35.93	32.34	24.14	-4.19	6.18
GRC10500	5.00	7	2	2.01	0.00	2.01	44.68	31.40	18.06	41.32	35.16	25.89	-4.19	8.76
GRC10500	5.00	7	3	1.97	0.00	1.97	44.68	31.40	18.06	38.97	36.86	25.99	-4.19	8.53
GRC10500	5.00	7	4	1.00	0.00	1.00	44.68	31.40	18.06	33.73	32.90	22.70	-4.19	4.67
GRC10500	5.00	7	5	1.95	0.00	1.95	44.68	31.40	18.06	41.52	34.62	25.51	-4.19	8.43
GRC10500	5.00	7	6	0.75	0.00	0.75	44.68	31.40	18.06	32.85	34.74	21.93	-4.19	3.99
GRC10500	5.00	11	1	1.59	0.00	1.59	44.68	31.40	18.06	35.93	32.29	24.99	-4.19	6.70
GRC10500	5.00	11	2	2.16	0.00	2.16	44.68	31.40	18.06	41.31	35.08	27.26	-4.19	9.76
GRC10500	5.00	11	3	2.06	0.00	2.06	44.68	31.40	18.06	38.97	36.79	26.80	-4.19	9.09

GRC10500	5.00	11	4	1.09	0.00	1.09	44.68	31.40	18.06	33.73	32.86	23.14	-4.19	4.95
GRC10500	5.00	11	5	2.12	0.00	2.12	44.68	31.40	18.06	41.52	34.53	26.92	-4.19	9.48
GRC10500	5.00	11	6	0.86	0.00	0.86	44.68	31.40	18.06	32.84	34.68	22.38	-4.19	4.27
GRC10500	5.00	15	1	1.63	0.00	1.63	44.68	31.40	18.06	36.08	32.82	25.09	-4.19	6.86
GRC10500	5.00	15	2	2.19	0.00	2.19	44.68	31.40	18.06	41.37	36.00	27.36	-4.19	9.94
GRC10500	5.00	15	3	2.09	0.00	2.09	44.68	31.40	18.06	39.01	37.66	26.90	-4.19	9.22
GRC10500	5.00	15	4	1.12	0.00	1.12	44.68	31.40	18.06	33.78	33.36	23.24	-4.19	5.05
GRC10500	5.00	15	5	2.15	0.00	2.15	44.68	31.40	18.06	41.59	35.41	27.01	-4.19	9.66
GRC10500	5.00	15	6	0.89	0.00	0.89	44.68	31.40	18.06	32.87	35.54	22.48	-4.19	4.37
GRC10500	5.00	19	1	1.63	0.00	1.63	44.68	31.40	18.06	36.20	32.81	25.05	-4.19	6.87
GRC10500	5.00	19	2	2.19	0.00	2.19	44.68	31.40	18.06	41.36	35.98	27.35	-4.19	9.93
GRC10500	5.00	19	3	2.08	0.00	2.08	44.68	31.40	18.06	39.03	37.64	26.86	-4.19	9.19
GRC10500	5.00	19	4	1.11	0.00	1.11	44.68	31.40	18.06	33.81	33.36	23.17	-4.19	5.02
GRC10500	5.00	19	5	2.15	0.00	2.15	44.68	31.40	18.06	41.57	35.39	27.01	-4.19	9.65
GRC10500	5.00	19	6	0.88	0.00	0.88	44.68	31.40	18.06	32.88	35.53	22.41	-4.19	4.33
GUI19200	-37.00	1	1	10.71	0.00	10.71	41.12		28.90	47.24		31.02	5.51	14.41
GUI19200	-37.00	1	2	10.07	0.00	10.07	41.12		28.90	46.85		29.19	5.51	12.74
GUI19200	-37.00	1	3	8.08	0.00	8.08	41.12		28.90	45.94		25.25	5.51	9.02
GUI19200	-37.00	1	4	8.40	0.00	8.40	41.12		28.90	45.80		25.81	5.51	9.54
GUI19200	-37.00	1	5	10.67	0.00	10.67	41.12		28.90	48.59		30.71	5.51	14.29
GUI19200	-37.00	5	1	4.91	0.00	4.91	41.12	23.40	28.90	47.26	25.29	31.12	-0.03	8.14
GUI19200	-37.00	5	2	3.92	0.00	3.92	41.12	23.40	28.90	46.87	22.87	29.27	-0.03	5.88
GUI19200	-37.00	5	3	3.87	0.00	3.87	41.12	23.40	28.90	45.96	24.55	25.28	-0.03	5.78
GUI19200	-37.00	5	4	3.70	0.00	3.70	41.12	23.40	28.90	45.83	23.59	25.84	-0.03	5.46
GUI19200	-37.00	5	5	5.02	0.00	5.02	41.12	23.40	28.90	48.61	25.74	30.77	-0.03	8.45
GUI19200	-37.00	9	1	4.88	0.00	4.88	41.12	23.40	28.90	47.25	25.19	31.12	-0.03	8.07
GUI19200	-37.00	9	2	3.88	0.00	3.88	41.12	23.40	28.90	46.86	22.77	29.27	-0.03	5.81
GUI19200	-37.00	9	3	3.84	0.00	3.84	41.12	23.40	28.90	45.96	24.46	25.28	-0.03	5.73
GUI19200	-37.00	9	4	3.67	0.00	3.67	41.12	23.40	28.90	45.82	23.49	25.84	-0.03	5.40
GUI19200	-37.00	9	5	5.00	0.00	5.00	41.12	23.40	28.90	48.61	25.64	30.77	-0.03	8.37
GUI19200	-37.00	13	1	4.92	0.00	4.92	41.12	23.40	28.90	47.27	25.29	31.21	-0.03	8.16
GUI19200	-37.00	13	2	3.93	0.00	3.93	41.12	23.40	28.90	46.88	22.87	29.36	-0.03	5.90
GUI19200	-37.00	13	3	3.87	0.00	3.87	41.12	23.40	28.90	45.98	24.55	25.30	-0.03	5.80
GUI19200	-37.00	13	4	3.70	0.00	3.70	41.12	23.40	28.90	45.86	23.59	25.87	-0.03	5.47
GUI19200	-37.00	13	5	5.03	0.00	5.03	41.12	23.40	28.90	48.63	25.74	30.83	-0.03	8.46
GUI19200	-37.00	17	1	4.93	0.00	4.93	41.12	23.40	28.90	47.32	25.29	31.31	-0.03	8.19
GUI19200	-37.00	17	2	3.94	0.00	3.94	41.12	23.40	28.90	46.94	22.87	29.46	-0.03	5.92
GUI19200	-37.00	17	3	3.90	0.00	3.90	41.12	23.40	28.90	46.03	24.56	25.40	-0.03	5.84
GUI19200	-37.00	17	4	3.72	0.00	3.72	41.12	23.40	28.90	45.91	23.59	25.97	-0.03	5.51
GUI19200	-37.00	17	5	5.04	0.00	5.04	41.12	23.40	28.90	48.68	25.74	30.93	-0.03	8.49
GUM33100	122.00	2	1	9.82	0.00	9.82	65.58	61.06	63.40	52.19	42.93	24.94	33.25	8.82
GUM33100	122.00	6	1	9.92	0.00	9.92	71.49	64.31	76.65	52.28	42.58	25.04	38.76	8.92
GUM33100	122.00	10	1	9.82	0.00	9.82	73.06	76.30	76.65	52.26	42.53	24.94	42.47	8.82
GUM33100	122.00	14	1	9.96	0.00	9.96	74.72	76.30	83.75	58.51	42.60	25.04	44.19	8.96
GUM33100	122.00	18	1	9.97	0.00	9.97	74.98	76.30	83.75	59.12	58.93	24.98	44.41	8.97
GUM33101	122.00	2	1	9.82	0.00	9.82	85.33	87.59	88.00	52.19	42.93	24.94	54.61	8.82
GUM33101	122.00	6	1	9.92	0.00	9.92	87.12	92.32	99.34	52.28	42.58	25.04	56.87	8.92
GUM33101	122.00	10	1	9.82	0.00	9.82	89.90	98.39	99.34	52.26	42.53	24.94	59.72	8.82
GUM33101	122.00	14	1	9.96	0.00	9.96	90.04	98.39	101.06	58.51	42.60	25.04	59.89	8.96
GUM33101	122.00	18	1	9.97	0.00	9.97	90.31	98.39	101.06	59.12	58.93	24.98	60.14	8.97
HISPASA4	-30.00	23	1	-0.21	-0.21	0.00	48.80		39.27	31.05	22.31	23.97	8.34	-1.14 *
HISPASA4	-30.00	23	2	2.46	0.00	2.46	48.80		39.27	34.09	24.34	25.55	8.34	1.58 *
HISPASA4	-30.00	23	3	1.09	0.00	1.09	48.80		39.27	32.33	23.80	25.41	8.34	0.18 *
HISPASA4	-30.00	23	4	4.64	0.00	4.64	48.80		39.27	36.26	26.77	28.22	8.34	3.85 *
HISPASA4	-30.00	23	5	0.65	0.00	0.65	48.80		39.27	32.16	22.46	24.27	8.34	-0.27 *
HISPASA4	-30.00	23	6	-1.63	-1.65	0.02	48.80		39.27	28.91	23.59	27.51	8.34	-2.58 *
HISPASA4	-30.00	23	7	-1.98	-1.98	0.00	48.80		39.27	28.47	24.54	27.13	8.34	-2.93 *
HISPASA4	-30.00	23	8	1.77	0.00	1.77	48.80		39.27	32.55	25.66	30.01	8.34	0.87 *
HISPASA4	-30.00	23	9	1.44	0.00	1.44	48.80		39.27	32.13	25.99	29.85	8.34	0.54 *
HISPASA4	-30.00	23	10	3.33	0.00	3.33	48.80		39.27	34.39	25.68	31.83	8.34	2.49 *
HISPASA4	-30.00	27	1	-0.22	-0.22	0.00	48.80	47.51	39.27	31.05	22.30	23.97	8.27	-1.15 *
HISPASA4	-30.00	27	2	2.44	0.00	2.44	48.80	47.51	39.27	34.08	24.33	25.55	8.27	1.57 *
HISPASA4	-30.00	27	3	1.08	0.00	1.08	48.80	47.51	39.27	32.32	23.79	25.41	8.27	0.18 *
HISPASA4	-30.00	27	4	4.63	0.00	4.63	48.80	47.51	39.27	36.25	26.76	28.22	8.27	3.84 *
HISPASA4	-30.00	27	5	0.64	0.00	0.64	48.80	47.51	39.27	32.16	22.44	24.27	8.27	-0.27 *
HISPASA4	-30.00	27	6	1.69	0.00	1.69	48.80	47.51	39.27	32.95	23.58	27.44	8.27	0.79 *
HISPASA4	-30.00	27	7	-1.24	-1.24	0.00	48.80	47.51	39.27	29.30	24.52	27.06	8.27	-2.18 *
HISPASA4	-30.00	27	8	1.76	0.00	1.76	48.80	47.51	39.27	32.55	25.65	30.01	8.27	0.87 *
HISPASA4	-30.00	27	9	1.44	0.00	1.44	48.80	47.51	39.27	32.13	25.99	29.86	8.27	0.54 *
HISPASA4	-30.00	27	10	3.37	0.00	3.37	48.80	47.51	39.27	34.44	25.68	31.84	8.27	2.53 *
HISPASA4	-30.00	31	1	-0.24	-0.24	0.00	48.80	47.51	39.27	31.04	22.23	23.88	8.27	-1.17 *
HISPASA4	-30.00	31	2	2.42	0.00	2.42	48.80	47.51	39.27	34.08	24.25	25.46	8.27	1.54 *
HISPASA4	-30.00	31	3	1.06	0.00	1.06	48.80	47.51	39.27	32.32	23.72	25.32	8.27	0.16 *
HISPASA4	-30.00	31	4	4.60	0.00	4.60	48.80	47.51	39.27	36.25	26.69	28.13	8.27	3.82 *
HISPASA4	-30.00	31	5	0.62	0.00	0.62	48.80	47.51	39.27	32.15	22.37	24.18	8.27	-0.30 *
HISPASA4	-30.00	31	6	1.66	0.00	1.66	48.80	47.51	39.27	32.95	23.51	27.38	8.27	0.77 *
HISPASA4	-30.00	31	7	-1.30	-1.31	0.01	48.80	47.51	39.27	29.23	24.45	27.03	8.27	-2.25 *
HISPASA4	-30.00	31	8	1.75	0.00	1.75	48.80	47.51	39.27	32.54	25.58	29.95	8.27	0.86 *
HISPASA4	-30.00	31	9	1.43	0.00	1.43	48.80	47.51	39.27	32.13	25.92	29.80	8.27	0.53 *
HISPASA4	-30.00	31	10	3.35	0.00	3.35	48.80	47.51	39.27	34.44	25.63	31.75	8.27	2.51 *
HISPASA4	-30.00	35	1	-0.26	-0.26	0.00	48.80	47.51	39.27	31.04	22.14	23.81	8.27	-1.19 *
HISPASA4	-30.00	35	2	2.39	0.00	2.39	48.80	47.51	39.27	34.08	24.17	25.40	8.27	1.52 *
HISPASA4	-30.00	35	3	1.05	0.00	1.05	48.80	47.51	39.27	32.32	23.63	25.27	8.27	0.14 *
HISPASA4	-30.00	35	4	4.58	0.00	4.58	48.80	47.51	39.27	36.24	26.60	28.06	8.27	3.79 *
HISPASA4	-30.00	35	5	0.59	0.00	0.59	48.80	47.51	39.27	32.15	22.28	24.10	8.27	-0.32 *
HISPASA4	-30.00	35	6	1.63	0.00	1.63	48.80	47.51	39.27	32.92	23.43	27.34	8.27	0.74 *
HISPASA4	-30.00	35	7	-1.32	-1.32	0.00	48.80	47.51	39.27	29.23	24.36	26.96	8.27	-2.26 *
HISPASA4	-30.00	35	8	1.74	0.00	1.74	48.80	47.51	39.27	32.54	25.50	29.92	8.27	0.85 *
HISPASA4	-30.00	35	9	1.42	0.00	1.42	48.80	47.51	39.27	32.13	25.84	29.77	8.27	0.52 *
HISPASA4	-30.00	35	10	3.34	0.00	3.34	48.80	47.51	39.27	34.43	25.57	31.74	8.27	2.50 *

HISPASA4	-30.00	39	1	-0.31	-0.32	0.01	48.80	47.51	39.27	31.04	21.79	23.80	8.27	-1.25
HISPASA4	-30.00	39	2	2.29	0.00	2.29	48.80	47.51	39.27	34.07	23.59	25.37	8.27	1.41
HISPASA4	-30.00	39	3	0.94	0.00	0.94	48.80	47.51	39.27	32.32	22.94	25.24	8.27	0.03
HISPASA4	-30.00	39	4	4.50	0.00	4.50	48.80	47.51	39.27	36.24	26.12	28.04	8.27	3.71
HISPASA4	-30.00	39	5	0.54	0.00	0.54	48.80	47.51	39.27	32.15	21.97	24.09	8.27	-0.38
HISPASA4	-30.00	39	6	1.40	0.00	1.40	48.80	47.51	39.27	32.63	23.39	27.28	8.27	0.50
HISPASA4	-30.00	39	7	-1.44	-1.44	0.00	48.80	47.51	39.27	29.08	24.49	26.94	8.27	-2.38
HISPASA4	-30.00	39	8	1.56	0.00	1.56	48.80	47.51	39.27	32.53	24.14	29.89	8.27	0.67
HISPASA4	-30.00	39	9	1.33	0.00	1.33	48.80	47.51	39.27	32.13	24.95	29.74	8.27	0.43
HISPASA4	-30.00	39	10	3.26	0.00	3.26	48.80	47.51	39.27	34.38	25.35	31.68	8.27	2.42
HISPASA6	-30.00	23	1	-0.20	-0.19	-0.01	49.80		40.27	31.05	22.31	23.97	9.34	-1.14
HISPASA6	-30.00	23	2	2.48	0.00	2.48	49.80		40.27	34.09	24.34	25.55	9.34	1.58
HISPASA6	-30.00	23	3	1.11	0.00	1.11	49.80		40.27	32.33	23.80	25.41	9.34	0.18
HISPASA6	-30.00	23	4	4.68	0.00	4.68	49.80		40.27	36.26	26.77	28.22	9.34	3.85
HISPASA6	-30.00	23	5	0.67	0.00	0.67	49.80		40.27	32.16	22.46	24.27	9.34	-0.27
HISPASA6	-30.00	23	6	-1.62	-1.64	0.02	49.80		40.27	28.91	23.59	27.51	9.34	-2.58
HISPASA6	-30.00	23	7	-1.97	-1.97	0.00	49.80		40.27	28.47	24.54	27.13	9.34	-2.93
HISPASA6	-30.00	23	8	1.79	0.00	1.79	49.80		40.27	32.55	25.66	30.01	9.34	0.87
HISPASA6	-30.00	23	9	1.46	0.00	1.46	49.80		40.27	32.13	25.99	29.85	9.34	0.54
HISPASA6	-30.00	23	10	3.36	0.00	3.36	49.80		40.27	34.39	25.68	31.83	9.34	2.49
HISPASA6	-30.00	27	1	-0.20	-0.21	0.01	49.80	48.51	40.27	31.05	22.30	23.97	9.27	-1.15
HISPASA6	-30.00	27	2	2.47	0.00	2.47	49.80	48.51	40.27	34.08	24.33	25.55	9.27	1.57
HISPASA6	-30.00	27	3	1.10	0.00	1.10	49.80	48.51	40.27	32.32	23.79	25.41	9.27	0.18
HISPASA6	-30.00	27	4	4.67	0.00	4.67	49.80	48.51	40.27	36.25	26.76	28.22	9.27	3.84
HISPASA6	-30.00	27	5	0.66	0.00	0.66	49.80	48.51	40.27	32.16	22.44	24.27	9.27	-0.27
HISPASA6	-30.00	27	6	1.71	0.00	1.71	49.80	48.51	40.27	32.95	23.58	27.44	9.27	0.79
HISPASA6	-30.00	27	7	-1.23	-1.23	0.00	49.80	48.51	40.27	29.30	24.52	27.06	9.27	-2.18
HISPASA6	-30.00	27	8	1.79	0.00	1.79	49.80	48.51	40.27	32.55	25.65	30.01	9.27	0.87
HISPASA6	-30.00	27	9	1.46	0.00	1.46	49.80	48.51	40.27	32.13	25.99	29.86	9.27	0.54
HISPASA6	-30.00	27	10	3.40	0.00	3.40	49.80	48.51	40.27	34.44	25.68	31.84	9.27	2.53
HISPASA6	-30.00	31	1	-0.22	-0.23	0.01	49.80	48.51	40.27	31.04	22.23	23.88	9.27	-1.17
HISPASA6	-30.00	31	2	2.44	0.00	2.44	49.80	48.51	40.27	34.08	24.25	25.46	9.27	1.54
HISPASA6	-30.00	31	3	1.08	0.00	1.08	49.80	48.51	40.27	32.32	23.72	25.32	9.27	0.16
HISPASA6	-30.00	31	4	4.65	0.00	4.65	49.80	48.51	40.27	36.25	26.69	28.13	9.27	3.82
HISPASA6	-30.00	31	5	0.64	0.00	0.64	49.80	48.51	40.27	32.15	22.37	24.18	9.27	-0.30
HISPASA6	-30.00	31	6	1.68	0.00	1.68	49.80	48.51	40.27	32.95	23.51	27.38	9.27	0.77
HISPASA6	-30.00	31	7	-1.29	-1.30	0.01	49.80	48.51	40.27	29.23	24.45	27.03	9.27	-2.25
HISPASA6	-30.00	31	8	1.77	0.00	1.77	49.80	48.51	40.27	32.54	25.58	29.95	9.27	0.86
HISPASA6	-30.00	31	9	1.45	0.00	1.45	49.80	48.51	40.27	32.13	25.92	29.80	9.27	0.53
HISPASA6	-30.00	31	10	3.39	0.00	3.39	49.80	48.51	40.27	34.44	25.63	31.75	9.27	2.51
HISPASA6	-30.00	35	1	-0.24	-0.25	0.01	49.80	48.51	40.27	31.04	22.14	23.81	9.27	-1.19
HISPASA6	-30.00	35	2	2.42	0.00	2.42	49.80	48.51	40.27	34.08	24.17	25.40	9.27	1.52
HISPASA6	-30.00	35	3	1.06	0.00	1.06	49.80	48.51	40.27	32.32	23.63	25.27	9.27	0.14
HISPASA6	-30.00	35	4	4.62	0.00	4.62	49.80	48.51	40.27	36.24	26.60	28.06	9.27	3.79
HISPASA6	-30.00	35	5	0.61	0.00	0.61	49.80	48.51	40.27	32.15	22.28	24.10	9.27	-0.32
HISPASA6	-30.00	35	6	1.65	0.00	1.65	49.80	48.51	40.27	32.92	23.43	27.34	9.27	0.74
HISPASA6	-30.00	35	7	-1.31	-1.31	0.00	49.80	48.51	40.27	29.23	24.36	26.96	9.27	-2.26
HISPASA6	-30.00	35	8	1.76	0.00	1.76	49.80	48.51	40.27	32.54	25.50	29.92	9.27	0.85
HISPASA6	-30.00	35	9	1.44	0.00	1.44	49.80	48.51	40.27	32.13	25.84	29.77	9.27	0.52
HISPASA6	-30.00	35	10	3.37	0.00	3.37	49.80	48.51	40.27	34.43	25.57	31.74	9.27	2.50
HISPASA6	-30.00	39	1	-0.30	-0.31	0.01	49.80	48.51	40.27	31.04	21.79	23.80	9.27	-1.25
HISPASA6	-30.00	39	2	2.31	0.00	2.31	49.80	48.51	40.27	34.07	23.59	25.37	9.27	1.41
HISPASA6	-30.00	39	3	0.96	0.00	0.96	49.80	48.51	40.27	32.32	22.94	25.24	9.27	0.03
HISPASA6	-30.00	39	4	4.54	0.00	4.54	49.80	48.51	40.27	36.24	26.12	28.04	9.27	3.71
HISPASA6	-30.00	39	5	0.55	0.00	0.55	49.80	48.51	40.27	32.15	21.97	24.09	9.27	-0.38
HISPASA6	-30.00	39	6	1.42	0.00	1.42	49.80	48.51	40.27	32.63	23.39	27.28	9.27	0.50
HISPASA6	-30.00	39	7	-1.43	-1.43	0.00	49.80	48.51	40.27	29.08	24.49	26.94	9.27	-2.38
HISPASA6	-30.00	39	8	1.59	0.00	1.59	49.80	48.51	40.27	32.53	24.14	29.89	9.27	0.67
HISPASA6	-30.00	39	9	1.35	0.00	1.35	49.80	48.51	40.27	32.13	24.95	29.74	9.27	0.43
HISPASA6	-30.00	39	10	3.29	0.00	3.29	49.80	48.51	40.27	34.38	25.35	31.68	9.27	2.42
HNG10600	-1.00	22	1	4.84	0.00	4.84	49.42	27.64	27.33	36.02	29.93	23.84	2.38	5.72
HNG10600	-1.00	22	2	5.34	0.00	5.34	49.42	27.64	27.33	36.47	30.05	24.95	2.38	6.51
HNG10600	-1.00	22	3	4.69	0.00	4.69	49.42	27.64	27.33	35.08	27.15	24.93	2.38	5.49
HNG10600	-1.00	22	4	4.56	0.00	4.56	49.42	27.64	27.33	34.98	27.14	24.58	2.38	5.30
HNG10600	-1.00	22	5	4.79	0.00	4.79	49.42	27.64	27.33	35.65	29.97	23.83	2.38	5.64
HNG10600	-1.00	22	6	4.64	0.00	4.64	49.42	27.64	27.33	35.27	30.66	23.48	2.38	5.41
HNG10600	-1.00	26	1	4.80	0.00	4.80	49.05	27.64	27.33	35.81	29.84	23.84	2.38	5.66
HNG10600	-1.00	26	2	5.32	0.00	5.32	49.05	27.64	27.33	36.38	29.95	24.98	2.38	6.49
HNG10600	-1.00	26	3	4.69	0.00	4.69	49.05	27.64	27.33	35.10	27.05	24.99	2.38	5.49
HNG10600	-1.00	26	4	4.56	0.00	4.56	49.05	27.64	27.33	35.00	27.04	24.63	2.38	5.30
HNG10600	-1.00	26	5	4.76	0.00	4.76	49.05	27.64	27.33	35.63	29.88	23.81	2.38	5.60
HNG10600	-1.00	26	6	4.60	0.00	4.60	49.05	27.64	27.33	35.19	30.56	23.45	2.38	5.36
HNG10600	-1.00	30	1	4.86	0.00	4.86	49.05	27.64	27.33	35.88	29.94	23.94	2.38	5.75
HNG10600	-1.00	30	2	5.39	0.00	5.39	49.05	27.64	27.33	36.51	30.05	25.08	2.38	6.60
HNG10600	-1.00	30	3	4.77	0.00	4.77	49.05	27.64	27.33	35.26	27.15	25.09	2.38	5.61
HNG10600	-1.00	30	4	4.63	0.00	4.63	49.05	27.64	27.33	35.11	27.14	24.73	2.38	5.40
HNG10600	-1.00	30	5	4.82	0.00	4.82	49.05	27.64	27.33	35.68	29.98	23.90	2.38	5.69
HNG10600	-1.00	30	6	4.66	0.00	4.66	49.05	27.64	27.33	35.23	30.66	23.55	2.38	5.44
HNG10600	-1.00	34	1	4.90	0.00	4.90	49.05	27.64	27.32	36.22	29.84	23.94	2.38	5.82
HNG10600	-1.00	34	2	5.45	0.00	5.45	49.05	27.64	27.32	37.06	29.95	25.08	2.38	6.71
HNG10600	-1.00	34	3	4.77	0.00	4.77	49.05	27.64	27.32	35.40	27.05	25.09	2.38	5.62
HNG10600	-1.00	34	4	4.61	0.00	4.61	49.05	27.64	27.32	35.12	27.04	24.73	2.38	5.38
HNG10600	-1.00	34	5	4.82	0.00	4.82	49.05	27.64	27.32	35.74	29.88	23.90	2.38	5.69
HNG10600	-1.00	34	6	4.66	0.00	4.66	49.05	27.64	27.32	35.32	30.57	23.55	2.38	5.46
HNG10600	-1.00	38	1	4.95	0.00	4.95	49.08	27.64	27.32	36.21	29.94	24.04	2.38	5.89
HNG10600	-1.00	38	2	5.55	0.00	5.55	49.08	27.64	27.32	37.46	30.05	25.18	2.38	6.88
HNG10600	-1.00	38	3	4.98	0.00	4.98	49.08	27.64	27.32	36.44	27.15	25.19	2.38	5.95
HNG10600	-1.00	38	4	4.77	0.00	4.77	49.08	27.64	27.32	35.75	27.14	24.83	2.38	5.61
HNG10600	-1.00	38	5	4.87	0.00	4.87	49.08	27.64	27.32	35.77	29.98	24.00	2.38	5.77
HNG10600	-1.00	38	6	4.70	0.00	4.70	49.08	27.64	27.32	35.26	30.66	23.64	2.38	5.51
HOL21300	-19.00	23	1	5.78	0.00	5.78	43.75	29.20	30.42	37.58	25.13	27.42	4.24	6.23

HOL21300	-19.00	23	2	4.53	0.00	4.53	43.75	29.20	30.42	36.69	23.30	25.63	4.24	4.57
HOL21300	-19.00	23	3	5.57	0.00	5.57	43.75	29.20	30.42	37.58	24.98	26.74	4.24	5.94
HOL21300	-19.00	23	4	5.64	0.00	5.64	43.75	29.20	30.42	37.19	25.29	26.80	4.24	6.04
HOL21300	-19.00	23	5	5.64	0.00	5.64	43.75	29.20	30.42	36.98	25.32	26.88	4.24	6.04
HOL21300	-19.00	23	6	5.83	0.00	5.83	43.75	29.20	30.42	37.22	25.50	27.28	4.24	6.31
HOL21300	-19.00	27	1	5.91	0.00	5.91	43.75	29.20	30.42	38.29	25.24	27.45	4.24	6.42
HOL21300	-19.00	27	2	4.71	0.00	4.71	43.75	29.20	30.42	37.89	23.41	25.65	4.24	4.80
HOL21300	-19.00	27	3	5.72	0.00	5.72	43.75	29.20	30.42	38.47	25.08	26.79	4.24	6.15
HOL21300	-19.00	27	4	5.78	0.00	5.78	43.75	29.20	30.42	37.85	25.40	26.85	4.24	6.23
HOL21300	-19.00	27	5	5.77	0.00	5.77	43.75	29.20	30.42	37.53	25.44	26.94	4.24	6.22
HOL21300	-19.00	27	6	5.95	0.00	5.95	43.75	29.20	30.42	37.75	25.61	27.34	4.24	6.48
HOL21300	-19.00	31	1	5.88	0.00	5.88	43.75	29.20	30.42	38.38	25.26	27.25	4.24	6.38
HOL21300	-19.00	31	2	4.69	0.00	4.69	43.75	29.20	30.42	37.99	23.42	25.50	4.24	4.77
HOL21300	-19.00	31	3	5.66	0.00	5.66	43.75	29.20	30.42	38.56	25.11	26.48	4.24	6.07
HOL21300	-19.00	31	4	5.69	0.00	5.69	43.75	29.20	30.42	37.93	25.42	26.43	4.24	6.11
HOL21300	-19.00	31	5	5.67	0.00	5.67	43.75	29.20	30.42	37.61	25.47	26.48	4.24	6.09
HOL21300	-19.00	31	6	5.87	0.00	5.87	43.75	29.20	30.42	37.83	25.64	26.92	4.24	6.37
HOL21300	-19.00	35	1	5.91	0.00	5.91	43.75	29.20	30.42	38.34	25.24	27.41	4.24	6.42
HOL21300	-19.00	35	2	4.69	0.00	4.69	43.75	29.20	30.42	37.96	23.37	25.62	4.24	4.78
HOL21300	-19.00	35	3	5.71	0.00	5.71	43.75	29.20	30.42	38.54	25.08	26.73	4.24	6.14
HOL21300	-19.00	35	4	5.77	0.00	5.77	43.75	29.20	30.42	37.92	25.42	26.77	4.24	6.23
HOL21300	-19.00	35	5	5.78	0.00	5.78	43.75	29.20	30.42	37.60	25.49	26.86	4.24	6.23
HOL21300	-19.00	35	6	5.97	0.00	5.97	43.75	29.20	30.42	37.82	25.68	27.26	4.24	6.50
HOL21300	-19.00	39	1	5.83	0.00	5.83	43.75	29.20	30.42	38.17	25.27	27.12	4.24	6.31
HOL21300	-19.00	39	2	4.65	0.00	4.65	43.75	29.20	30.42	37.80	23.44	25.40	4.24	4.72
HOL21300	-19.00	39	3	5.62	0.00	5.62	43.75	29.20	30.42	38.47	25.15	26.32	4.24	6.02
HOL21300	-19.00	39	4	5.64	0.00	5.64	43.75	29.20	30.42	37.89	25.48	26.22	4.24	6.05
HOL21300	-19.00	39	5	5.63	0.00	5.63	43.75	29.20	30.42	37.58	25.52	26.25	4.24	6.02
HOL21300	-19.00	39	6	5.83	0.00	5.83	43.75	29.20	30.42	37.76	25.69	26.71	4.24	6.30
I 08200	-19.00	24	1	5.91	0.00	5.91	53.55	24.62	26.98	37.94	34.49	29.00	0.61	9.81
I 08200	-19.00	24	2	5.13	0.00	5.13	53.55	24.62	26.98	35.65	31.77	27.32	0.61	7.73
I 08200	-19.00	24	3	3.46	0.00	3.46	53.55	24.62	26.98	32.28	27.22	25.02	0.61	4.56
I 08200	-19.00	24	4	3.82	0.00	3.82	53.55	24.62	26.98	33.25	27.61	25.36	0.61	5.17
I 08200	-19.00	24	5	4.91	0.00	4.91	53.55	24.62	26.98	35.98	29.04	27.26	0.61	7.26
I 08200	-19.00	24	6	5.81	0.00	5.81	53.55	24.62	26.98	37.46	33.42	29.07	0.61	9.49
I 08200	-19.00	28	1	5.97	0.00	5.97	53.50	24.62	26.98	38.05	35.59	29.03	0.61	9.99
I 08200	-19.00	28	2	5.14	0.00	5.14	53.50	24.62	26.98	35.76	31.63	27.37	0.61	7.77
I 08200	-19.00	28	3	3.60	0.00	3.60	53.50	24.62	26.98	32.39	27.47	25.40	0.61	4.80
I 08200	-19.00	28	4	3.98	0.00	3.98	53.50	24.62	26.98	33.38	27.85	25.78	0.61	5.44
I 08200	-19.00	28	5	5.02	0.00	5.02	53.50	24.62	26.98	36.11	29.28	27.57	0.61	7.49
I 08200	-19.00	28	6	5.86	0.00	5.86	53.50	24.62	26.98	37.55	34.17	29.10	0.61	9.65
I 08200	-19.00	32	1	5.96	0.00	5.96	53.29	24.62	26.98	37.97	35.53	29.01	0.61	9.95
I 08200	-19.00	32	2	5.13	0.00	5.13	53.29	24.62	26.98	35.74	31.58	27.35	0.61	7.75
I 08200	-19.00	32	3	3.50	0.00	3.50	53.29	24.62	26.98	32.23	27.39	25.18	0.61	4.64
I 08200	-19.00	32	4	3.83	0.00	3.83	53.29	24.62	26.98	33.00	27.77	25.54	0.61	5.18
I 08200	-19.00	32	5	4.90	0.00	4.90	53.29	24.62	26.98	35.64	29.20	27.39	0.61	7.23
I 08200	-19.00	32	6	5.85	0.00	5.85	53.29	24.62	26.98	37.51	34.12	29.09	0.61	9.62
I 08200	-19.00	36	1	5.97	0.00	5.97	53.50	24.62	26.98	38.03	35.60	29.00	0.61	9.97
I 08200	-19.00	36	2	5.15	0.00	5.15	53.50	24.62	26.98	35.85	31.63	27.32	0.61	7.78
I 08200	-19.00	36	3	3.53	0.00	3.53	53.50	24.62	26.98	32.47	27.47	24.97	0.61	4.68
I 08200	-19.00	36	4	3.88	0.00	3.88	53.50	24.62	26.98	33.41	27.85	25.30	0.61	5.27
I 08200	-19.00	36	5	4.96	0.00	4.96	53.50	24.62	26.98	36.12	29.29	27.22	0.61	7.36
I 08200	-19.00	36	6	5.87	0.00	5.87	53.50	24.62	26.98	37.61	34.20	29.08	0.61	9.67
I 08200	-19.00	40	1	8.22	0.00	8.22	53.42	24.62	26.98	38.00	35.50		2.59	12.92
I 08200	-19.00	40	2	7.34	0.00	7.34	53.42	24.62	26.98	35.83	31.54		2.59	10.29
I 08200	-19.00	40	3	5.43	0.00	5.43	53.42	24.62	26.98	32.25	27.37		2.59	6.53
I 08200	-19.00	40	4	5.77	0.00	5.77	53.42	24.62	26.98	32.93	27.76		2.59	7.11
I 08200	-19.00	40	5	6.91	0.00	6.91	53.42	24.62	26.98	35.53	29.20		2.59	9.27
I 08200	-19.00	40	6	8.04	0.00	8.04	53.42	24.62	26.98	37.59	34.13		2.59	12.28
IFB02100	5.00	21	1	5.83	0.00	5.83	46.39	40.34	40.36	39.52	24.28	24.57	12.83	5.01
IFB02100	5.00	21	2	9.11	0.00	9.11	46.39	40.34	40.36	41.54	26.43	30.76	12.83	8.49
IFB02100	5.00	21	3	11.55	0.00	11.55	46.39	40.34	40.36	37.64	33.64	34.38	12.83	11.25
IFB02100	5.00	21	4	12.56	0.00	12.56	46.39	40.34	40.36	38.36	37.23	35.05	12.83	12.47
IFB02100	5.00	21	5	13.61	0.00	13.61	46.39	40.34	40.36	41.46	35.90	34.69	12.83	13.80
IFB02100	5.00	21	6	10.22	0.00	10.22	46.39	40.34	40.36	40.26	28.77	31.22	12.83	9.72
IFB02100	5.00	25	1	7.85	0.00	7.85	45.79	62.33	40.39	39.53	31.24	24.59	13.88	7.07
IFB02100	5.00	25	2	10.49	0.00	10.49	45.79	62.33	40.39	41.55	28.86	30.83	13.88	9.90
IFB02100	5.00	25	3	11.05	0.00	11.05	45.79	62.33	40.39	37.64	31.02	34.55	13.88	10.52
IFB02100	5.00	25	4	12.31	0.00	12.31	45.79	62.33	40.39	38.36	34.20	35.26	13.88	11.97
IFB02100	5.00	25	5	13.40	0.00	13.40	45.79	62.33	40.39	41.47	33.82	34.90	13.88	13.25
IFB02100	5.00	25	6	10.82	0.00	10.82	45.79	62.33	40.39	40.27	29.90	31.28	13.88	10.27
IFB02100	5.00	29	1	8.05	0.00	8.05	54.19		40.36	39.53	31.63	24.63	17.35	7.16
IFB02100	5.00	29	2	10.88	0.00	10.88	54.19		40.36	41.56	29.09	30.99	17.35	10.07
IFB02100	5.00	29	3	11.47	0.00	11.47	54.19		40.36	37.64	31.36	34.94	17.35	10.70
IFB02100	5.00	29	4	12.88	0.00	12.88	54.19		40.36	38.37	34.84	35.75	17.35	12.20
IFB02100	5.00	29	5	14.16	0.00	14.16	54.19		40.36	41.48	34.46	35.39	17.35	13.60
IFB02100	5.00	29	6	11.19	0.00	11.19	54.19		40.36	40.27	30.12	31.41	17.35	10.40
IFB02100	5.00	33	1	7.47	0.00	7.47	45.76	40.34	40.36	39.53	28.89	24.80	12.53	6.75
IFB02100	5.00	33	2	9.90	0.00	9.90	45.76	40.34	40.36	41.56	27.55	31.64	12.53	9.40
IFB02100	5.00	33	3	10.37	0.00	10.37	45.76	40.34	40.36	37.64	28.99	36.86	12.53	9.93
IFB02100	5.00	33	4	11.39	0.00	11.39	45.76	40.34	40.36	38.36	30.57	38.37	12.53	11.12
IFB02100	5.00	33	5	12.18	0.00	12.18	45.76	40.34	40.36	41.47	30.20	38.01	12.53	12.06
IFB02100	5.00	33	6	10.31	0.00	10.31	45.76	40.34	40.36	40.26	28.67	31.92	12.53	9.86
IFB02100	5.00	37	1	7.91	0.00	7.91	45.76	40.34	62.36	39.53	31.08	24.72	13.84	7.13
IFB02100	5.00	37	2	10.61	0.00	10.61	45.76	40.34	62.36	41.56	28.83	31.31	13.84	10.04
IFB02100	5.00	37	3	11.16	0.00	11.16	45.76	40.34	62.36	37.64	30.91	35.83	13.84	10.66
IFB02100	5.00	37	4	12.46	0.00	12.46	45.76	40.34	62.36	38.37	33.84	36.92	13.84	12.14
IFB02100	5.00	37	5	13.60	0.00	13.60	45.76	40.34	62.36	41.48	33.46	36.56	13.84	13.50
IFB02100	5.00	37	6	10.91	0.00	10.91	45.76	40.34	62.36	40.27	29.88	31.67	13.84	10.38
IND03700	68.00	2	1	6.71	0.00	6.71	57.93	57.42	62.31	43.76	25.46	24.41	27.01	5.72
IND03700	68.00	2	2	9.11	0.00	9.11	57.93	57.42	62.31	45.96	27.20	27.43	27.01	8.12

IND03700	68.00	2	3	7.59	0.00	7.59	57.93	57.42	62.31	41.83	24.91	27.32	27.01	6.60
IND03700	68.00	2	4	6.56	0.00	6.56	57.93	57.42	62.31	40.70	24.28	25.69	27.01	5.57
IND03700	68.00	2	5	5.04	0.00	5.04	57.93	57.42	62.31	39.83	23.89	22.88	27.01	4.05
IND03700	68.00	2	6	5.77	0.00	5.77	57.93	57.42	62.31	39.63	25.20	23.31	27.01	4.77
IND03700	68.00	10	1	6.69	0.00	6.69	56.78	53.99	62.31	43.76	25.41	24.41	25.49	5.70
IND03700	68.00	10	2	9.06	0.00	9.06	56.78	53.99	62.31	45.97	27.11	27.43	25.49	8.08
IND03700	68.00	10	3	7.44	0.00	7.44	56.78	53.99	62.31	41.83	24.66	27.32	25.49	6.45
IND03700	68.00	10	4	6.44	0.00	6.44	56.78	53.99	62.31	40.70	24.06	25.69	25.49	5.45
IND03700	68.00	10	5	5.01	0.00	5.01	56.78	53.99	62.31	39.64	23.86	22.88	25.49	4.02
IND03700	68.00	10	6	5.68	0.00	5.68	56.78	53.99	62.31	38.75	25.17	23.31	25.49	4.68
IND03701	68.00	6	1	4.39	0.00	4.39	62.36	26.16	26.18	43.83	25.49	24.47	1.16	5.76
IND03701	68.00	6	2	5.61	0.00	5.61	62.36	26.16	26.18	46.00	27.20	27.48	1.16	8.15
IND03701	68.00	6	3	4.82	0.00	4.82	62.36	26.16	26.18	41.84	24.76	27.38	1.16	6.53
IND03701	68.00	6	4	4.26	0.00	4.26	62.36	26.16	26.18	40.72	24.16	25.76	1.16	5.53
IND03701	68.00	6	5	3.37	0.00	3.37	62.36	26.16	26.18	39.87	23.96	22.96	1.16	4.12
IND03701	68.00	6	6	3.84	0.00	3.84	62.36	26.16	26.18	39.71	25.26	23.40	1.16	4.85
IND03701	68.00	14	1	7.85	0.00	7.85	75.00	77.48	26.18	48.48	25.49	26.44	44.63	6.85
IND03701	68.00	14	2	9.91	0.00	9.91	75.00	77.48	26.18	48.12	27.20	29.11	44.63	8.91
IND03701	68.00	14	3	8.06	0.00	8.06	75.00	77.48	26.18	42.99	24.76	28.92	44.63	7.06
IND03701	68.00	14	4	7.72	0.00	7.72	75.00	77.48	26.18	42.30	24.16	29.42	44.63	6.72
IND03701	68.00	14	5	7.69	0.00	7.69	75.00	77.48	26.18	42.61	23.96	29.93	44.63	6.69
IND03701	68.00	14	6	8.98	0.00	8.98	75.00	77.48	26.18	45.39	25.26	30.75	44.63	7.98
IND03800	56.00	19	1	9.48	0.00	9.48	51.16	32.80	46.31	37.53	30.21	30.47	10.24	9.28
IND03800	56.00	19	2	13.42	0.00	13.42	51.16	32.80	46.31	41.63	36.43	37.41	10.24	14.75
IND03800	56.00	19	3	11.07	0.00	11.07	51.16	32.80	46.31	37.83	33.38	34.28	10.24	11.27
IND03800	56.00	19	4	11.70	0.00	11.70	51.16	32.80	46.31	38.79	34.07	35.03	10.24	12.12
IND03800	56.00	19	5	13.02	0.00	13.02	51.16	32.80	46.31	44.01	33.03	36.31	10.24	14.08
IND03800	56.00	19	6	6.69	0.00	6.69	51.16	32.80	46.31	32.95	28.08	28.45	10.24	6.09
IND03800	56.00	21	1	10.52	0.00	10.52	51.54	46.30	46.06	38.43	30.54	30.33	18.34	9.66
IND03800	56.00	21	2	16.48	0.00	16.48	51.54	46.30	46.06	44.54	37.49	36.59	18.34	16.08
IND03800	56.00	21	3	14.96	0.00	14.96	51.54	46.30	46.06	49.11	34.35	33.26	18.34	14.38
IND03800	56.00	21	4	15.72	0.00	15.72	51.54	46.30	46.06	51.34	35.10	33.99	18.34	15.23
IND03800	56.00	21	5	17.02	0.00	17.02	51.54	46.30	46.06	50.04	36.38	36.15	18.34	16.72
IND03800	56.00	21	6	7.31	0.00	7.31	51.54	46.30	46.06	33.30	28.52	28.47	18.34	6.38
IND03801	56.00	17	1	3.13	0.00	3.13	72.70	28.01	23.60	33.16	23.16	28.11	0.26	4.26
IND03801	56.00	17	2	4.17	0.00	4.17	72.70	28.01	23.60	38.25	23.70	30.23	0.26	6.11
IND03801	56.00	17	3	5.82	0.00	5.82	72.70	28.01	23.60	42.35	27.62	36.46	0.26	10.34
IND03801	56.00	17	4	4.92	0.00	4.92	72.70	28.01	23.60	36.63	26.18	33.40	0.26	7.73
IND03801	56.00	17	5	5.24	0.00	5.24	72.70	28.01	23.60	37.46	27.01	34.09	0.26	8.54
IND03801	56.00	17	6	5.92	0.00	5.92	72.70	28.01	23.60	45.78	28.31	33.06	0.26	10.70
IND03801	56.00	23	1	5.98	0.00	5.98	61.81	32.81	28.02	33.21	28.44	28.43	4.77	6.30
IND03801	56.00	23	2	8.08	0.00	8.08	61.81	32.81	28.02	38.10	30.31	30.45	4.77	9.51
IND03801	56.00	23	3	10.29	0.00	10.29	61.81	32.81	28.02	41.59	36.57	37.14	4.77	14.70
IND03801	56.00	23	4	8.55	0.00	8.55	61.81	32.81	28.02	36.56	33.23	33.50	4.77	10.36
IND03801	56.00	23	5	9.25	0.00	9.25	61.81	32.81	28.02	38.65	33.97	34.11	4.77	11.82
IND03801	56.00	23	6	10.59	0.00	10.59	61.81	32.81	28.02	46.16	36.13	35.91	4.77	15.85
IND03900	56.00	1	1	12.59	0.00	12.59	70.81		67.02	50.03		27.75	39.41	11.59
IND03900	56.00	1	2	12.79	0.00	12.79	70.81		67.02	50.03		27.96	39.41	11.79
IND03900	56.00	1	3	13.63	0.00	13.63	70.81		67.02	50.45		28.82	39.41	12.64
IND03900	56.00	9	1	9.43	0.00	9.43	70.79	30.21	67.03	49.95	30.40	27.75	8.20	9.76
IND03900	56.00	9	2	9.36	0.00	9.36	70.79	30.21	67.03	49.92	29.81	27.96	8.20	9.67
IND03900	56.00	9	3	8.93	0.00	8.93	70.79	30.21	67.03	50.34	27.63	28.82	8.20	9.09
IND03901	56.00	5	1	7.71	0.00	7.71	79.69	30.21	27.66	49.92	30.40	27.65	3.74	9.70
IND03901	56.00	5	2	7.66	0.00	7.66	79.69	30.21	27.66	49.90	29.79	27.86	3.74	9.61
IND03901	56.00	5	3	7.36	0.00	7.36	79.69	30.21	27.66	50.30	27.60	28.72	3.74	9.03
IND03901	56.00	13	1	9.43	0.00	9.43	101.76	30.21	83.50	50.02	30.40	27.76	8.21	9.77
IND03901	56.00	13	2	9.37	0.00	9.37	101.76	30.21	83.50	49.99	29.82	27.96	8.21	9.68
IND03901	56.00	13	3	8.94	0.00	8.94	101.76	30.21	83.50	50.39	27.66	28.82	8.21	9.11
IND04000	56.00	8	1	11.52	0.00	11.52	54.93	51.25	29.22	42.97	36.14	33.55	7.12	13.98
IND04000	56.00	8	2	9.57	0.00	9.57	54.93	51.25	29.22	38.39	35.56	29.70	7.12	10.45
IND04000	56.00	8	3	9.96	0.00	9.96	54.93	51.25	29.22	41.92	35.23	28.99	7.12	11.06
IND04000	56.00	8	4	10.65	0.00	10.65	54.93	51.25	29.22	49.04	30.58	32.61	7.12	12.24
IND04000	56.00	8	5	11.63	0.00	11.63	54.93	51.25	29.22	48.62	35.53	32.35	7.12	14.23
IND04000	56.00	8	6	9.47	0.00	9.47	54.93	51.25	29.22	52.32	29.43	29.30	7.12	10.28
IND04000	56.00	16	1	9.84	0.00	9.84	65.91	52.63	48.00	49.47	36.21	25.30	24.40	8.87
IND04000	56.00	16	2	6.12	0.00	6.12	65.91	52.63	48.00	50.46	35.64	21.32	24.40	5.13
IND04000	56.00	16	3	8.13	0.00	8.13	65.91	52.63	48.00	42.79	35.31	23.75	24.40	7.15
IND04000	56.00	16	4	11.47	0.00	11.47	65.91	52.63	48.00	48.96	30.61	28.92	24.40	10.51
IND04000	56.00	16	5	11.92	0.00	11.92	65.91	52.63	48.00	49.09	35.61	27.81	24.40	10.97
IND04000	56.00	16	6	11.09	0.00	11.09	65.91	52.63	48.00	49.81	29.45	29.08	24.40	10.13
IND04001	56.00	4	1	7.97	0.00	7.97	53.01	25.51	29.25	42.87	36.11	33.53	1.95	13.94
IND04001	56.00	4	2	6.99	0.00	6.99	53.01	25.51	29.25	38.29	35.54	29.69	1.95	10.40
IND04001	56.00	4	3	7.21	0.00	7.21	53.01	25.51	29.25	41.80	35.22	28.99	1.95	11.04
IND04001	56.00	4	4	7.57	0.00	7.57	53.01	25.51	29.25	48.90	30.58	32.61	1.95	12.23
IND04001	56.00	4	5	8.02	0.00	8.02	53.01	25.51	29.25	48.51	35.51	32.34	1.95	14.21
IND04001	56.00	4	6	6.95	0.00	6.95	53.01	25.51	29.25	52.15	29.42	29.30	1.95	10.28
IND04001	56.00	12	1	10.86	0.00	10.86	57.20	69.81	29.25	39.45	36.16	33.61	7.21	12.56
IND04001	56.00	12	2	9.56	0.00	9.56	57.20	69.81	29.25	38.10	35.60	29.79	7.21	10.38
IND04001	56.00	12	3	10.19	0.00	10.19	57.20	69.81	29.25	43.32	35.23	29.09	7.21	11.38
IND04001	56.00	12	4	10.73	0.00	10.73	57.20	69.81	29.25	50.18	30.58	32.69	7.21	12.32
IND04001	56.00	12	5	11.35	0.00	11.35	57.20	69.81	29.25	43.85	35.54	32.36	7.21	13.51
IND04001	56.00	12	6	9.50	0.00	9.50	57.20	69.81	29.25	52.55	29.43	29.31	7.21	10.29
IND04100	56.00	18	1	11.27	0.00	11.27	60.21	50.66	30.20	39.42	34.76	34.74	8.13	12.56
IND04100	56.00	18	2	13.87	0.00	13.87	60.21	50.66	30.20	51.88	38.45	38.40	8.13	18.84
IND04100	56.00	18	3	13.79	0.00	13.79	60.21	50.66	30.20	50.35	38.36	38.32	8.13	18.55
IND04100	56.00	18	4	13.76	0.00	13.76	60.21	50.66	30.20	49.62	38.45	38.33	8.13	18.45

IND04100	56.00	18	5	11.12	0.00	11.12	60.21	50.66	30.20	40.34	33.55	33.49	8.13	12.32
IND04100	56.00	24	1	5.63	0.00	5.63	30.00	50.68	75.35	34.98	34.77	60.24	0.00	10.31
IND04100	56.00	24	2	6.29	0.00	6.29	30.00	50.68	75.35	38.13	38.42	61.61	0.00	13.53
IND04100	56.00	24	3	6.24	0.00	6.24	30.00	50.68	75.35	37.75	38.33	61.29	0.00	13.18
IND04100	56.00	24	4	6.10	0.00	6.10	30.00	50.68	75.35	36.83	38.34	61.26	0.00	12.37
IND04100	56.00	24	5	5.53	0.00	5.53	30.00	50.68	75.35	34.77	33.55	60.51	0.00	9.94
IND04101	56.00	20	1	6.68	0.00	6.68	61.56	26.11	25.31	39.45	34.71	34.71	0.68	12.56
IND04101	56.00	20	2	7.43	0.00	7.43	61.56	26.11	25.31	54.61	38.38	38.40	0.68	19.06
IND04101	56.00	20	3	7.43	0.00	7.43	61.56	26.11	25.31	54.33	38.29	38.32	0.68	18.97
IND04101	56.00	20	4	7.43	0.00	7.43	61.56	26.11	25.31	53.60	38.30	38.46	0.68	18.98
IND04101	56.00	20	5	6.63	0.00	6.63	61.56	26.11	25.31	40.36	33.46	33.50	0.68	12.30
IND04101	56.00	22	1	7.74	0.00	7.74	59.56	25.28	30.19	39.45	34.68	34.70	2.06	12.55
IND04101	56.00	22	2	8.73	0.00	8.73	59.56	25.28	30.19	55.20	38.38	38.34	2.06	19.08
IND04101	56.00	22	3	8.72	0.00	8.72	59.56	25.28	30.19	55.24	38.29	38.26	2.06	19.00
IND04101	56.00	22	4	8.71	0.00	8.71	59.56	25.28	30.19	52.94	38.44	38.27	2.06	18.89
IND04101	56.00	22	5	7.68	0.00	7.68	59.56	25.28	30.19	40.44	33.47	33.48	2.06	12.33
IND04200	68.00	20	1	8.98	0.00	8.98	40.74	56.06	56.12	37.44	29.35	29.33	10.70	8.60
IND04200	68.00	20	2	12.86	0.00	12.86	40.74	56.06	56.12	41.19	34.90	35.28	10.70	13.58
IND04200	68.00	20	3	11.41	0.00	11.41	40.74	56.06	56.12	40.94	32.05	32.10	10.70	11.57
IND04200	68.00	20	4	8.87	0.00	8.87	40.74	56.06	56.12	37.56	29.11	29.09	10.70	8.48
IND04200	68.00	20	5	6.59	0.00	6.59	40.74	56.06	56.12	34.87	26.65	26.60	10.70	5.94
IND04200	68.00	20	6	5.95	0.00	5.95	40.74	56.06	56.12	35.58	25.45	25.39	10.70	5.25
IND04200	68.00	22	1	8.30	0.00	8.30	40.74	56.10	31.77	37.45	29.31	29.33	7.21	8.59
IND04200	68.00	22	2	11.02	0.00	11.02	40.74	56.10	31.77	39.53	35.25	35.23	7.21	12.85
IND04200	68.00	22	3	10.25	0.00	10.25	40.74	56.10	31.77	40.63	32.07	32.09	7.21	11.48
IND04200	68.00	22	4	8.19	0.00	8.19	40.74	56.10	31.77	37.50	29.07	29.09	7.21	8.44
IND04200	68.00	22	5	6.15	0.00	6.15	40.74	56.10	31.77	34.82	26.58	26.60	7.21	5.89
IND04200	68.00	22	6	5.58	0.00	5.58	40.74	56.10	31.77	35.57	25.36	25.39	7.21	5.22
IND04201	68.00	18	1	6.88	0.00	6.88	52.34	30.42	26.78	37.41	29.40	29.38	3.17	8.62
IND04201	68.00	18	2	8.60	0.00	8.60	52.34	30.42	26.78	39.50	35.29	34.93	3.17	12.78
IND04201	68.00	18	3	8.08	0.00	8.08	52.34	30.42	26.78	39.87	32.13	32.08	3.17	11.25
IND04201	68.00	18	4	6.76	0.00	6.76	52.34	30.42	26.78	37.24	29.14	29.14	3.17	8.40
IND04201	68.00	18	5	5.24	0.00	5.24	52.34	30.42	26.78	34.77	26.65	26.67	3.17	5.93
IND04201	68.00	18	6	4.80	0.00	4.80	52.34	30.42	26.78	35.56	25.46	25.47	3.17	5.29
IND04201	68.00	24	1	7.05	0.00	7.05	57.41	25.20	30.46	37.39	29.40	57.15	2.06	10.38
IND04201	68.00	24	2	8.23	0.00	8.23	57.41	25.20	30.46	40.75	35.30	57.47	2.06	14.82
IND04201	68.00	24	3	7.93	0.00	7.93	57.41	25.20	30.46	40.61	32.16	57.75	2.06	13.36
IND04201	68.00	24	4	7.02	0.00	7.02	57.41	25.20	30.46	37.47	29.16	57.76	2.06	10.30
IND04201	68.00	24	5	5.86	0.00	5.86	57.41	25.20	30.46	34.76	26.67	57.20	2.06	7.70
IND04201	68.00	24	6	5.69	0.00	5.69	57.41	25.20	30.46	35.54	25.46	57.54	2.06	7.36
IND04300	56.00	3	1	9.54	0.00	9.54	68.26	45.60	60.06	51.09	25.46	32.28	23.31	8.58
IND04300	56.00	3	2	8.39	0.00	8.39	68.26	45.60	60.06	49.38	24.89	29.08	23.31	7.42
IND04300	56.00	3	3	8.63	0.00	8.63	68.26	45.60	60.06	49.86	24.94	29.84	23.31	7.66
IND04300	56.00	3	4	9.20	0.00	9.20	68.26	45.60	60.06	52.04	24.96	32.68	23.31	8.23
IND04300	56.00	3	5	8.44	0.00	8.44	68.26	45.60	60.06	51.56	23.94	33.83	23.31	7.47
IND04300	56.00	11	1	9.63	0.00	9.63	68.26	45.60	60.03	51.21	25.56	32.31	23.31	8.67
IND04300	56.00	11	2	8.46	0.00	8.46	68.26	45.60	60.03	49.49	24.99	29.09	23.31	7.49
IND04300	56.00	11	3	8.70	0.00	8.70	68.26	45.60	60.03	49.98	25.04	29.85	23.31	7.73
IND04300	56.00	11	4	9.29	0.00	9.29	68.26	45.60	60.03	52.16	25.06	32.68	23.31	8.32
IND04300	56.00	11	5	8.53	0.00	8.53	68.26	45.60	60.03	51.68	24.04	33.84	23.31	7.56
IND04301	56.00	7	1	5.04	0.00	5.04	62.41	25.09	25.11	52.10	25.03	32.68	0.08	8.29
IND04301	56.00	7	2	4.74	0.00	4.74	62.41	25.09	25.11	51.62	24.01	33.84	0.08	7.54
IND04301	56.00	7	3	5.16	0.00	5.16	62.41	25.09	25.11	51.15	25.52	32.30	0.08	8.63
IND04301	56.00	7	4	4.69	0.00	4.69	62.41	25.09	25.11	49.44	24.89	29.08	0.08	7.42
IND04301	56.00	7	5	4.80	0.00	4.80	62.41	25.09	25.11	49.92	24.96	29.85	0.08	7.68
IND04301	56.00	15	1	7.68	0.00	7.68	62.29		27.87	52.81	24.96	32.70	5.86	8.24
IND04301	56.00	15	2	7.13	0.00	7.13	62.29		27.87	52.38	23.94	33.86	5.86	7.48
IND04301	56.00	15	3	7.92	0.00	7.92	62.29		27.87	52.00	25.46	32.33	5.86	8.60
IND04301	56.00	15	4	7.09	0.00	7.09	62.29		27.87	50.00	24.89	29.09	5.86	7.43
IND04301	56.00	15	5	7.27	0.00	7.27	62.29		27.87	50.50	24.94	29.86	5.86	7.67
IND04400	68.00	5	1	7.86	0.00	7.86	57.92	24.09	51.20	46.83	32.39	32.60	2.07	13.01
IND04400	68.00	5	2	7.30	0.00	7.30	57.92	24.09	51.20	43.18	29.80	32.06	2.07	11.05
IND04400	68.00	5	3	5.88	0.00	5.88	57.92	24.09	51.20	37.82	28.35	27.55	2.07	7.70
IND04400	68.00	5	4	5.29	0.00	5.29	57.92	24.09	51.20	38.39	25.08	28.45	2.07	6.64
IND04400	68.00	5	5	3.88	0.00	3.88	57.92	24.09	51.20	39.69	22.24	26.23	2.07	4.44
IND04400	68.00	5	6	6.92	0.00	6.92	57.92	24.09	51.20	50.06	29.33	28.93	2.07	10.01
IND04400	68.00	13	1	7.89	0.00	7.89	51.92	24.09	47.94	46.86	32.38	33.28	2.02	13.29
IND04400	68.00	13	2	7.33	0.00	7.33	51.92	24.09	47.94	43.19	29.80	32.68	2.02	11.24
IND04400	68.00	13	3	5.91	0.00	5.91	51.92	24.09	47.94	37.83	28.40	27.79	2.02	7.82
IND04400	68.00	13	4	5.29	0.00	5.29	51.92	24.09	47.94	38.40	25.09	28.59	2.02	6.68
IND04400	68.00	13	5	3.87	0.00	3.87	51.92	24.09	47.94	39.70	22.24	26.27	2.02	4.46
IND04400	68.00	13	6	6.90	0.00	6.90	51.92	24.09	47.94	50.14	29.35	28.96	2.02	10.03
IND04401	68.00	1	1	10.03	0.00	10.03	61.33		26.11	46.83		32.60	4.10	15.67
IND04401	68.00	1	2	9.70	0.00	9.70	61.33		26.11	43.12		32.06	4.10	14.31
IND04401	68.00	1	3	7.78	0.00	7.78	61.33		26.11	37.74		27.55	4.10	9.50
IND04401	68.00	1	4	8.17	0.00	8.17	61.33		26.11	38.30		28.45	4.10	10.27
IND04401	68.00	1	5	7.58	0.00	7.58	61.33		26.11	39.61		26.23	4.10	9.13
IND04401	68.00	1	6	9.21	0.00	9.21	61.33		26.11	50.20		28.93	4.10	12.73
IND04401	68.00	9	1	6.64	0.00	6.64	58.47	26.08	25.02	46.75	32.46	32.70	0.50	13.07
IND04401	68.00	9	2	6.21	0.00	6.21	58.47	26.08	25.02	43.15	29.88	32.16	0.50	11.12
IND04401	68.00	9	3	5.08	0.00	5.08	58.47	26.08	25.02	37.81	28.44	27.65	0.50	7.77
IND04401	68.00	9	4	4.60	0.00	4.60	58.47	26.08	25.02	38.38	25.18	28.56	0.50	6.72
IND04401	68.00	9	5	3.40	0.00	3.40	58.47	26.08	25.02	39.67	22.34	26.34	0.50	4.53
IND04401	68.00	9	6	5.93	0.00	5.93	58.47	26.08	25.02	49.89	29.43	29.03	0.50	10.10
IND04500	56.00	6	1	8.07	0.00	8.07	57.30	53.56	61.55	46.57	26.33	26.11	25.73	7.08
IND04500	56.00	6	2	11.94	0.00	11.94	57.30	53.56	61.55	42.04	30.82	31.06	25.73	10.98

IND04500	56.00	6	3	13.14	0.00	13.14	57.30	53.56	61.55	43.85	34.52	30.44	25.73	12.19
IND04500	56.00	6	4	12.46	0.00	12.46	57.30	53.56	61.55	46.38	36.03	28.59	25.73	11.50
IND04500	56.00	6	5	11.76	0.00	11.76	57.30	53.56	61.55	43.20	30.36	30.60	25.73	10.79
IND04500	56.00	14	1	8.07	0.00	8.07	57.08	52.35	64.00	48.57	26.23	26.12	25.31	7.09
IND04500	56.00	14	2	12.62	0.00	12.62	57.08	52.35	64.00	48.51	30.74	31.08	25.31	11.66
IND04500	56.00	14	3	13.55	0.00	13.55	57.08	52.35	64.00	47.05	34.51	30.46	25.31	12.61
IND04500	56.00	14	4	12.60	0.00	12.60	57.08	52.35	64.00	48.45	36.00	28.60	25.31	11.64
IND04500	56.00	14	5	12.22	0.00	12.22	57.08	52.35	64.00	49.59	30.27	30.61	25.31	11.26
IND04501	56.00	2	1	6.09	0.00	6.09	58.92	27.57	29.78	46.55	26.23	26.11	3.51	7.04
IND04501	56.00	2	2	8.16	0.00	8.16	58.92	27.57	29.78	42.04	30.73	31.06	3.51	10.94
IND04501	56.00	2	3	8.63	0.00	8.63	58.92	27.57	29.78	43.85	34.47	30.44	3.51	12.18
IND04501	56.00	2	4	8.38	0.00	8.38	58.92	27.57	29.78	46.36	35.99	28.59	3.51	11.49
IND04501	56.00	2	5	8.07	0.00	8.07	58.92	27.57	29.78	43.20	30.27	30.59	3.51	10.75
IND04501	56.00	10	1	7.14	0.00	7.14	55.36	29.74	72.93	46.57	26.23	26.01	7.67	6.99
IND04501	56.00	10	2	10.06	0.00	10.06	55.36	29.74	72.93	42.05	30.72	30.96	7.67	10.90
IND04501	56.00	10	3	10.81	0.00	10.81	55.36	29.74	72.93	43.87	34.42	30.34	7.67	12.11
IND04501	56.00	10	4	10.38	0.00	10.38	55.36	29.74	72.93	46.40	35.93	28.49	7.67	11.41
IND04501	56.00	10	5	9.93	0.00	9.93	55.36	29.74	72.93	43.21	30.26	30.50	7.67	10.71
IND04600	68.00	17	1	6.19	0.00	6.19	52.41	62.44	25.68	52.21	27.58	25.13	3.62	7.14
IND04600	68.00	17	2	2.55	0.00	2.55	52.41	62.44	25.68	46.54	20.85	21.88	3.62	2.28
IND04600	68.00	17	3	3.44	0.00	3.44	52.41	62.44	25.68	42.06	22.11	23.00	3.62	3.37
IND04600	68.00	17	4	5.63	0.00	5.63	52.41	62.44	25.68	49.43	25.61	25.09	3.62	6.28
IND04600	68.00	17	5	4.75	0.00	4.75	52.41	62.44	25.68	51.32	24.70	23.55	3.62	5.05
IND04600	68.00	23	1	2.68	0.00	2.68	52.61	20.82	25.72	51.64	25.21	25.18	-2.41	6.15
IND04600	68.00	23	2	1.20	0.00	1.20	52.61	20.82	25.72	46.54	21.94	21.90	-2.41	2.87
IND04600	68.00	23	3	1.71	0.00	1.71	52.61	20.82	25.72	42.13	23.04	23.02	-2.41	3.86
IND04600	68.00	23	4	2.65	0.00	2.65	52.61	20.82	25.72	49.32	25.17	25.14	-2.41	6.09
IND04600	68.00	23	5	2.04	0.00	2.04	52.61	20.82	25.72	51.20	23.62	23.58	-2.41	4.57
IND04601	68.00	19	1	5.05	0.00	5.05	73.89	27.55	27.20	49.61	25.10	25.13	2.36	6.06
IND04601	68.00	19	2	2.73	0.00	2.73	73.89	27.55	27.20	45.39	21.85	21.88	2.36	2.79
IND04601	68.00	19	3	3.50	0.00	3.50	73.89	27.55	27.20	41.93	22.97	23.00	2.36	3.80
IND04601	68.00	19	4	5.01	0.00	5.01	73.89	27.55	27.20	48.32	25.06	25.09	2.36	6.00
IND04601	68.00	19	5	3.99	0.00	3.99	73.89	27.55	27.20	48.65	23.52	23.55	2.36	4.48
IND04601	68.00	21	1	4.82	0.00	4.82	65.42	27.18	26.07	53.20	25.21	25.24	1.57	6.19
IND04601	68.00	21	2	2.63	0.00	2.63	65.42	27.18	26.07	46.86	21.95	21.97	1.57	2.91
IND04601	68.00	21	3	3.35	0.00	3.35	65.42	27.18	26.07	42.29	23.07	23.07	1.57	3.90
IND04601	68.00	21	4	4.78	0.00	4.78	65.42	27.18	26.07	49.84	25.16	25.19	1.57	6.12
IND04601	68.00	21	5	3.83	0.00	3.83	65.42	27.18	26.07	52.04	23.62	23.65	1.57	4.61
IND04700	68.00	7	1	18.29	0.00	18.29	65.89	56.51	56.54	50.79	36.97	36.79	30.16	17.35
IND04700	68.00	7	2	13.22	0.00	13.22	65.89	56.51	56.54	48.74	32.81	30.50	30.16	12.24
IND04700	68.00	7	3	11.92	0.00	11.92	65.89	56.51	56.54	43.79	30.42	30.69	30.16	10.94
IND04700	68.00	7	4	12.45	0.00	12.45	65.89	56.51	56.54	45.81	30.75	31.04	30.16	11.46
IND04700	68.00	15	1	18.94	0.00	18.94	66.88	55.32	65.57	50.31	38.81	36.81	31.46	17.99
IND04700	68.00	15	2	12.33	0.00	12.33	66.88	55.32	65.57	49.83	33.02	28.93	31.46	11.34
IND04700	68.00	15	3	10.50	0.00	10.50	66.88	55.32	65.57	39.75	30.47	29.04	31.46	9.51
IND04700	68.00	15	4	11.64	0.00	11.64	66.88	55.32	65.57	45.16	30.81	29.42	31.46	10.65
IND04701	68.00	3	1	13.55	0.00	13.55	84.56	30.90	39.47	50.71	36.94	36.72	8.33	17.29
IND04701	68.00	3	2	11.11	0.00	11.11	84.56	30.90	39.47	48.66	32.80	30.40	8.33	12.17
IND04701	68.00	3	3	10.26	0.00	10.26	84.56	30.90	39.47	43.69	30.42	30.59	8.33	10.88
IND04701	68.00	3	4	10.62	0.00	10.62	84.56	30.90	39.47	45.71	30.75	30.94	8.33	11.41
IND04701	68.00	11	1	18.52	0.00	18.52	92.92	39.44	82.84	50.72	38.70	38.47	17.44	18.81
IND04701	68.00	11	2	12.99	0.00	12.99	92.92	39.44	82.84	48.65	32.99	30.52	17.44	12.31
IND04701	68.00	11	3	11.68	0.00	11.68	92.92	39.44	82.84	43.69	30.45	30.64	17.44	10.91
IND04701	68.00	11	4	12.20	0.00	12.20	92.92	39.44	82.84	45.72	30.80	31.01	17.44	11.46
IND04800	68.00	4	1	4.76	0.00	4.76	50.74	51.13	25.08	39.22	37.25	21.90	3.00	5.30
IND04800	68.00	4	2	5.40	0.00	5.40	50.74	51.13	25.08	38.39	36.96	23.15	3.00	6.25
IND04800	68.00	4	3	3.67	0.00	3.67	50.74	51.13	25.08	35.63	27.46	21.61	3.00	3.82
IND04800	68.00	4	4	2.81	0.00	2.81	50.74	51.13	25.08	36.09	23.86	21.12	3.00	2.73
IND04800	68.00	4	5	5.13	0.00	5.13	50.74	51.13	25.08	40.94	27.09	23.90	3.00	5.85
IND04800	68.00	4	6	5.82	0.00	5.82	50.74	51.13	25.08	44.71	27.86	24.85	3.00	6.91
IND04800	68.00	12	1	4.66	0.00	4.66	43.70	51.13	25.05	39.24	37.25	21.90	2.68	5.31
IND04800	68.00	12	2	5.30	0.00	5.30	43.70	51.13	25.05	38.50	36.96	23.15	2.68	6.26
IND04800	68.00	12	3	3.61	0.00	3.61	43.70	51.13	25.05	35.74	27.46	21.62	2.68	3.84
IND04800	68.00	12	4	2.77	0.00	2.77	43.70	51.13	25.05	36.28	23.86	21.13	2.68	2.76
IND04800	68.00	12	5	5.04	0.00	5.04	43.70	51.13	25.05	41.13	27.09	23.90	2.68	5.86
IND04800	68.00	12	6	5.70	0.00	5.70	43.70	51.13	25.05	45.08	27.86	24.85	2.68	6.92
IND04801	68.00	8	1	2.56	0.00	2.56	56.35	22.97	23.10	39.15	37.20	21.80	-1.98	5.21
IND04801	68.00	8	2	2.95	0.00	2.95	56.35	22.97	23.10	38.33	36.92	23.05	-1.98	6.16
IND04801	68.00	8	3	1.87	0.00	1.87	56.35	22.97	23.10	35.62	27.43	21.52	-1.98	3.75
IND04801	68.00	8	4	1.28	0.00	1.28	56.35	22.97	23.10	36.09	23.82	21.03	-1.98	2.67
IND04801	68.00	8	5	2.80	0.00	2.80	56.35	22.97	23.10	40.94	27.04	23.80	-1.98	5.77
IND04801	68.00	8	6	3.19	0.00	3.19	56.35	22.97	23.10	44.71	27.80	24.76	-1.98	6.83
IND04801	68.00	16	1	5.52	0.00	5.52	63.52	23.07	27.50	41.16	38.91	28.11	-0.27	10.66
IND04801	68.00	16	2	5.81	0.00	5.81	63.52	23.07	27.50	40.48	39.11	30.48	-0.27	12.00
IND04801	68.00	16	3	3.70	0.00	3.70	63.52	23.07	27.50	32.20	32.03	26.27	-0.27	5.68
IND04801	68.00	16	4	2.27	0.00	2.27	63.52	23.07	27.50	30.45	27.34	23.47	-0.27	3.20
IND04801	68.00	16	5	3.99	0.00	3.99	63.52	23.07	27.50	35.80	29.53	25.02	-0.27	6.27
IND04801	68.00	16	6	4.05	0.00	4.05	63.52	23.07	27.50	39.53	29.72	24.01	-0.27	6.41
INS02800	80.20	2	1	12.31	0.00	12.31	41.06	31.88	40.73	44.34	34.36	44.75	7.11	16.00
INS02800	80.20	2	2	11.23	0.00	11.23	41.06	31.88	40.73	51.66	29.92	40.40	7.11	13.38
INS02800	80.20	2	3	7.24	0.00	7.24	41.06	31.88	40.73	39.47	31.05	24.88	7.11	7.24
INS02800	80.20	2	4	11.28	0.00	11.28	41.06	31.88	40.73	38.48	36.86	45.96	7.11	13.48
INS02800	80.20	2	5	12.02	0.00	12.02	41.06	31.88	40.73	40.62	37.79	43.63	7.11	15.21
INS02800	80.20	2	6	10.77	0.00	10.77	41.06	31.88	40.73	47.48	34.22	30.32	7.11	12.48
INS02800	80.20	4	1	12.36	0.00	12.36	41.05	40.72	31.83	44.45	44.72	34.67	7.08	16.21
INS02800	80.20	4	2	11.24	0.00	11.24	41.05	40.72	31.83	52.67	40.37	29.94	7.08	13.43

INS02800	80.20	4	3	7.22	0.00	7.22	41.05	40.72	31.83	39.49	24.85	31.08	7.08	7.22
INS02800	80.20	4	4	11.29	0.00	11.29	41.05	40.72	31.83	38.49	45.93	37.12	7.08	13.54
INS02800	80.20	4	5	12.05	0.00	12.05	41.05	40.72	31.83	40.65	43.60	38.22	7.08	15.32
INS02800	80.20	4	6	10.76	0.00	10.76	41.05	40.72	31.83	47.54	30.30	34.26	7.08	12.48
INS02800	80.20	6	1	12.33	0.00	12.33	41.08	31.81	40.51	44.34	34.64	44.73	7.07	16.15
INS02800	80.20	6	2	11.20	0.00	11.20	41.08	31.81	40.51	51.62	29.91	40.32	7.07	13.36
INS02800	80.20	6	3	7.17	0.00	7.17	41.08	31.81	40.51	39.47	31.05	24.78	7.07	7.17
INS02800	80.20	6	4	11.28	0.00	11.28	41.08	31.81	40.51	38.48	37.09	45.92	7.07	13.52
INS02800	80.20	6	5	12.03	0.00	12.03	41.08	31.81	40.51	40.62	38.19	43.62	7.07	15.30
INS02800	80.20	6	6	10.72	0.00	10.72	41.08	31.81	40.51	47.48	34.23	30.23	7.07	12.42
INS02800	80.20	8	1	12.15	0.00	12.15	41.08	40.49	31.90	44.52	44.80	33.51	7.11	15.54
INS02800	80.20	8	2	11.17	0.00	11.17	41.08	40.49	31.90	52.94	40.39	29.72	7.11	13.24
INS02800	80.20	8	3	7.20	0.00	7.20	41.08	40.49	31.90	39.50	24.86	30.83	7.11	7.19
INS02800	80.20	8	4	11.22	0.00	11.22	41.08	40.49	31.90	38.50	45.99	36.12	7.11	13.35
INS02800	80.20	8	5	11.94	0.00	11.94	41.08	40.49	31.90	40.67	43.69	36.69	7.11	14.98
INS02800	80.20	8	6	10.73	0.00	10.73	41.08	40.49	31.90	47.58	30.30	33.95	7.11	12.40
INS03000	80.20	18	1	-0.83	-0.82	-0.01	31.56	19.00	18.86	36.71	25.46	23.90	-6.77	4.83
INS03000	80.20	18	2	-1.20	-1.20	0.00	31.56	19.00	18.86	36.57	23.44	22.41	-6.77	3.33
INS03000	80.20	18	3	-0.89	-0.89	0.00	31.56	19.00	18.86	36.40	25.21	23.61	-6.77	4.55
INS03000	80.20	18	4	-0.73	-0.73	0.00	31.56	19.00	18.86	36.50	26.33	24.30	-6.77	5.28
INS03000	80.20	18	5	-0.67	-0.67	0.00	31.56	19.00	18.86	37.46	26.29	24.65	-6.77	5.61
INS03000	80.20	20	1	-0.80	-0.80	0.00	31.55	18.84	19.04	36.65	23.88	25.86	-6.77	4.94
INS03000	80.20	20	2	-1.18	-1.18	0.00	31.55	18.84	19.04	36.51	22.38	23.66	-6.77	3.39
INS03000	80.20	20	3	-0.87	-0.87	0.00	31.55	18.84	19.04	36.27	23.58	25.47	-6.77	4.60
INS03000	80.20	20	4	-0.72	-0.72	0.00	31.55	18.84	19.04	36.30	24.28	26.66	-6.77	5.32
INS03000	80.20	20	5	-0.65	-0.65	0.00	31.55	18.84	19.04	37.38	24.63	26.60	-6.77	5.68
INS03000	80.20	22	1	-0.80	-0.80	0.00	31.55	19.02	18.86	36.64	25.83	23.86	-6.76	4.92
INS03000	80.20	22	2	-1.18	-1.18	0.00	31.55	19.02	18.86	36.51	23.63	22.38	-6.76	3.38
INS03000	80.20	22	3	-0.87	-0.87	0.00	31.55	19.02	18.86	36.34	25.45	23.58	-6.76	4.60
INS03000	80.20	22	4	-0.72	-0.72	0.00	31.55	19.02	18.86	36.43	26.63	24.26	-6.76	5.33
INS03000	80.20	22	5	-0.65	-0.65	0.00	31.55	19.02	18.86	37.38	26.57	24.61	-6.76	5.67
INS03000	80.20	24	1	1.58	0.00	1.58	31.54	18.84	55.52	41.29	23.94	62.89	-4.43	7.46
INS03000	80.20	24	2	1.26	0.00	1.26	31.54	18.84	55.52	41.09	22.45	62.41	-4.43	6.09
INS03000	80.20	24	3	1.51	0.00	1.51	31.54	18.84	55.52	40.55	23.65	62.52	-4.43	7.12
INS03000	80.20	24	4	1.63	0.00	1.63	31.54	18.84	55.52	40.63	24.33	62.94	-4.43	7.73
INS03000	80.20	24	5	1.72	0.00	1.72	31.54	18.84	55.52	42.21	24.69	63.91	-4.43	8.23
INS03200	80.20	17	1	1.72	0.00	1.72	31.84	42.16	18.85	40.64	34.58	25.02	-4.36	7.94
INS03200	80.20	17	2	2.07	0.00	2.07	31.84	42.16	18.85	42.30	42.32	27.10	-4.36	10.23
INS03200	80.20	17	3	1.95	0.00	1.95	31.84	42.16	18.85	39.80	42.10	26.54	-4.36	9.32
INS03200	80.20	17	4	1.74	0.00	1.74	31.84	42.16	18.85	41.45	46.19	24.60	-4.36	8.04
INS03200	80.20	17	5	1.51	0.00	1.51	31.84	42.16	18.85	41.90	48.82	23.29	-4.36	6.92
INS03200	80.20	17	6	1.85	0.00	1.85	31.84	42.16	18.85	41.07	40.28	25.46	-4.36	8.64
INS03200	80.20	19	1	-0.85	-0.82	-0.03	31.77	18.83	18.85	34.64	25.09	25.39	-6.82	4.89
INS03200	80.20	19	2	-0.50	-0.50	0.00	31.77	18.83	18.85	36.67	27.17	27.23	-6.82	6.86
INS03200	80.20	19	3	-0.62	-0.62	0.00	31.77	18.83	18.85	35.49	26.61	26.59	-6.82	6.11
INS03200	80.20	19	4	-0.88	-0.88	0.00	31.77	18.83	18.85	36.12	24.68	24.67	-6.82	4.77
INS03200	80.20	19	5	-1.15	-1.15	0.00	31.77	18.83	18.85	35.77	23.36	23.36	-6.82	3.63
INS03200	80.20	19	6	-0.79	-0.79	0.00	31.77	18.83	18.85	34.96	25.53	25.51	-6.82	5.18
INS03200	80.20	21	1	-0.62	-0.62	0.00	31.86	18.83	18.85	41.71	25.36	25.39	-6.81	6.06
INS03200	80.20	21	2	-0.36	-0.36	0.00	31.86	18.83	18.85	43.28	27.20	27.23	-6.81	7.88
INS03200	80.20	21	3	-0.47	-0.47	0.00	31.86	18.83	18.85	40.47	26.57	26.59	-6.81	7.04
INS03200	80.20	21	4	-0.74	-0.74	0.00	31.86	18.83	18.85	42.33	24.64	24.67	-6.81	5.41
INS03200	80.20	21	5	-1.00	-1.00	0.00	31.86	18.83	18.85	42.98	23.33	23.36	-6.81	4.19
INS03200	80.20	21	6	-0.59	-0.60	0.01	31.86	18.83	18.85	42.14	25.49	25.51	-6.81	6.20
INS03200	80.20	23	1	-0.75	-0.75	0.00	31.79	18.83	18.72	34.61	25.36	27.51	-6.87	5.63
INS03200	80.20	23	2	-0.45	-0.45	0.00	31.79	18.83	18.72	36.59	27.20	29.59	-6.87	7.58
INS03200	80.20	23	3	-0.56	-0.56	0.00	31.79	18.83	18.72	35.41	26.57	28.93	-6.87	6.76
INS03200	80.20	23	4	-0.82	-0.82	0.00	31.79	18.83	18.72	36.04	24.64	26.09	-6.87	5.27
INS03200	80.20	23	5	-1.08	-1.08	0.00	31.79	18.83	18.72	35.70	23.33	24.52	-6.87	4.06
INS03200	80.20	23	6	-0.70	-0.70	0.00	31.79	18.83	18.72	34.97	25.49	27.89	-6.87	5.90
INS03500	104.00	1	1	23.76	0.00	23.76	52.76		51.61	49.30		47.34	21.94	24.33
INS03500	104.00	1	2	23.63	0.00	23.63	52.76		51.61	48.69		49.39	21.94	24.14
INS03500	104.00	1	3	22.39	0.00	22.39	52.76		51.61	47.35		45.87	21.94	22.48
INS03500	104.00	1	4	14.96	0.00	14.96	52.76		51.61	38.27		45.62	21.94	14.14
INS03500	104.00	1	5	21.15	0.00	21.15	52.76		51.61	49.53		38.79	21.94	20.94
INS03500	104.00	1	6	18.20	0.00	18.20	52.76		51.61	42.74		39.91	21.94	17.58
INS03500	104.00	5	1	22.48	0.00	22.48	52.78	51.54	51.58	48.37	46.75	47.34	21.26	22.81
INS03500	104.00	5	2	22.64	0.00	22.64	52.78	51.54	51.58	47.76	51.08	49.38	21.26	23.03
INS03500	104.00	5	3	21.22	0.00	21.22	52.78	51.54	51.58	46.42	46.57	45.86	21.26	21.17
INS03500	104.00	5	4	13.95	0.00	13.95	52.78	51.54	51.58	37.28	47.50	45.61	21.26	13.12
INS03500	104.00	5	5	20.45	0.00	20.45	52.78	51.54	51.58	48.59	47.27	38.79	21.26	20.23
INS03500	104.00	5	6	17.17	0.00	17.17	52.78	51.54	51.58	41.75	44.35	39.91	21.26	16.52
INS03500	104.00	9	1	22.59	0.00	22.59	52.73	51.56	52.59	48.37	46.94	47.91	21.36	22.92
INS03500	104.00	9	2	22.77	0.00	22.77	52.73	51.56	52.59	47.77	51.42	50.81	21.36	23.17
INS03500	104.00	9	3	21.26	0.00	21.26	52.73	51.56	52.59	46.43	46.67	46.01	21.36	21.21
INS03500	104.00	9	4	13.96	0.00	13.96	52.73	51.56	52.59	37.28	47.59	45.69	21.36	13.12
INS03500	104.00	9	5	20.49	0.00	20.49	52.73	51.56	52.59	48.60	47.47	38.81	21.36	20.26
INS03500	104.00	9	6	17.19	0.00	17.19	52.73	51.56	52.59	41.76	44.50	39.94	21.36	16.53
INS03500	104.00	13	1	22.31	0.00	22.31	50.61	55.91	56.76	48.35	47.48	47.94	20.26	22.99
INS03500	104.00	13	2	21.66	0.00	21.66	50.61	55.91	56.76	46.36	55.10	51.37	20.26	22.06
INS03500	104.00	13	3	20.01	0.00	20.01	50.61	55.91	56.76	44.08	56.11	51.55	20.26	19.92
INS03500	104.00	13	4	13.93	0.00	13.93	50.61	55.91	56.76	37.20	55.55	48.81	20.26	13.14
INS03500	104.00	13	5	20.28	0.00	20.28	50.61	55.91	56.76	48.53	47.66	38.81	20.26	20.25
INS03500	104.00	13	6	17.11	0.00	17.11	50.61	55.91	56.76	41.76	44.69	39.95	20.26	16.55
INS03600	104.00	3	1	18.96	0.00	18.96	50.02	51.59	51.56	46.45	37.96	46.50	19.15	18.88
INS03600	104.00	3	2	10.91	0.00	10.91	50.02	51.59	51.56	47.49	26.39	41.10	19.15	10.04
INS03600	104.00	3	3	10.19	0.00	10.19	50.02	51.59	51.56	47.50	25.64	39.74	19.15	9.30
INS03600	104.00	3	4	16.63	0.00	16.63	50.02	51.59	51.56	43.09	36.25	42.00	19.15	16.14
INS03600	104.00	3	5	16.03	0.00	16.03	50.02	51.59	51.56	46.20	33.06	41.81	19.15	15.47
INS03600	104.00	3	6	15.61	0.00	15.61	50.02	51.59	51.56	49.94	31.56	45.19	19.15	15.01

INS03600	104.00	7	1	18.95	0.00	18.95	49.94	51.56	51.58	46.45	37.96	46.60	19.08	18.89
INS03600	104.00	7	2	10.91	0.00	10.91	49.94	51.56	51.58	47.49	26.39	41.13	19.08	10.04
INS03600	104.00	7	3	10.19	0.00	10.19	49.94	51.56	51.58	47.50	25.64	39.76	19.08	9.31
INS03600	104.00	7	4	16.63	0.00	16.63	49.94	51.56	51.58	43.08	36.25	42.05	19.08	16.15
INS03600	104.00	7	5	16.03	0.00	16.03	49.94	51.56	51.58	46.20	33.06	41.84	19.08	15.48
INS03600	104.00	7	6	15.61	0.00	15.61	49.94	51.56	51.58	49.94	31.56	45.23	19.08	15.01
INS03600	104.00	11	1	19.06	0.00	19.06	50.02	52.57	55.93	46.48	37.99	46.79	19.50	18.92
INS03600	104.00	11	2	10.93	0.00	10.93	50.02	52.57	55.93	47.51	26.39	41.15	19.50	10.05
INS03600	104.00	11	3	10.21	0.00	10.21	50.02	52.57	55.93	47.51	25.64	39.81	19.50	9.31
INS03600	104.00	11	4	16.72	0.00	16.72	50.02	52.57	55.93	43.14	36.28	42.21	19.50	16.20
INS03600	104.00	11	5	16.09	0.00	16.09	50.02	52.57	55.93	46.24	33.06	41.96	19.50	15.50
INS03600	104.00	11	6	15.65	0.00	15.65	50.02	52.57	55.93	49.95	31.57	45.31	19.50	15.02
INS03600	104.00	15	1	17.91	0.00	17.91	49.99	56.74	44.31	46.56	37.89	39.71	17.90	17.88
INS03600	104.00	15	2	10.90	0.00	10.90	49.99	56.74	44.31	47.60	26.29	51.23	17.90	10.08
INS03600	104.00	15	3	10.18	0.00	10.18	49.99	56.74	44.31	47.61	25.54	45.05	17.90	9.33
INS03600	104.00	15	4	16.09	0.00	16.09	49.99	56.74	44.31	43.19	36.19	38.80	17.90	15.71
INS03600	104.00	15	5	15.80	0.00	15.80	49.99	56.74	44.31	46.31	32.97	41.19	17.90	15.38
INS03600	104.00	15	6	15.47	0.00	15.47	49.99	56.74	44.31	50.05	31.47	46.97	17.90	14.99
INS03600	104.00	19	1	17.17	0.00	17.17	52.24	44.17	44.15	43.88	39.53	39.12	17.41	17.08
INS03600	104.00	19	2	22.53	0.00	22.53	52.24	44.17	44.15	51.39	51.04	50.70	17.41	26.06
INS03600	104.00	19	3	21.12	0.00	21.12	52.24	44.17	44.15	52.88	42.90	43.35	17.41	22.86
INS03600	104.00	19	4	15.36	0.00	15.36	52.24	44.17	44.15	41.74	37.63	36.76	17.41	14.94
INS03600	104.00	19	5	18.66	0.00	18.66	52.24	44.17	44.15	46.50	41.63	39.73	17.41	19.00
INS03600	104.00	19	6	22.08	0.00	22.08	52.24	44.17	44.15	51.76	47.93	46.35	17.41	24.89
IRL21100	-33.50	2	1	10.65	0.00	10.65	62.22	56.10	38.13	38.28	30.73	31.10	15.96	9.92
IRL21100	-33.50	2	2	9.95	0.00	9.95	62.22	56.10	38.13	38.98	29.09	29.96	15.96	9.17
IRL21100	-33.50	2	3	11.56	0.00	11.56	62.22	56.10	38.13	40.02	31.38	31.59	15.96	10.88
IRL21100	-33.50	2	4	10.24	0.00	10.24	62.22	56.10	38.13	41.70	28.99	29.43	15.96	9.48
IRL21100	-33.50	2	5	8.84	0.00	8.84	62.22	56.10	38.13	38.77	27.62	28.53	15.96	8.01
IRL21100	-33.50	2	6	9.80	0.00	9.80	62.22	56.10	38.13	38.22	29.29	29.89	15.96	9.01
IRL21100	-33.50	6	1	10.74	0.00	10.74	62.22	56.10	38.13	38.38	30.83	31.17	15.96	10.01
IRL21100	-33.50	6	2	10.03	0.00	10.03	62.22	56.10	38.13	39.07	29.19	30.04	15.96	9.26
IRL21100	-33.50	6	3	11.64	0.00	11.64	62.22	56.10	38.13	40.12	31.48	31.65	15.96	10.97
IRL21100	-33.50	6	4	10.33	0.00	10.33	62.22	56.10	38.13	41.79	29.09	29.51	15.96	9.57
IRL21100	-33.50	6	5	8.93	0.00	8.93	62.22	56.10	38.13	38.86	27.72	28.61	15.96	8.10
IRL21100	-33.50	6	6	9.88	0.00	9.88	62.22	56.10	38.13	38.31	29.39	29.97	15.96	9.10
IRL21100	-33.50	10	1	10.82	0.00	10.82	62.22	56.10	38.13	38.47	30.89	31.27	15.96	10.09
IRL21100	-33.50	10	2	10.11	0.00	10.11	62.22	56.10	38.13	39.17	29.25	30.14	15.96	9.35
IRL21100	-33.50	10	3	11.71	0.00	11.71	62.22	56.10	38.13	40.21	31.54	31.75	15.96	11.05
IRL21100	-33.50	10	4	10.41	0.00	10.41	62.22	56.10	38.13	41.89	29.15	29.61	15.96	9.66
IRL21100	-33.50	10	5	9.01	0.00	9.01	62.22	56.10	38.13	38.96	27.79	28.71	15.96	8.19
IRL21100	-33.50	10	6	9.97	0.00	9.97	62.22	56.10	38.13	38.41	29.45	30.07	15.96	9.19
IRL21100	-33.50	14	1	10.67	0.00	10.67	62.22	56.10	38.13	38.10	30.85	31.25	15.96	9.93
IRL21100	-33.50	14	2	10.03	0.00	10.03	62.22	56.10	38.13	38.90	29.22	30.12	15.96	9.25
IRL21100	-33.50	14	3	11.64	0.00	11.64	62.22	56.10	38.13	40.04	31.49	31.73	15.96	10.98
IRL21100	-33.50	14	4	10.39	0.00	10.39	62.22	56.10	38.13	41.87	29.12	29.60	15.96	9.64
IRL21100	-33.50	14	5	8.96	0.00	8.96	62.22	56.10	38.13	38.80	27.75	28.69	15.96	8.13
IRL21100	-33.50	14	6	9.83	0.00	9.83	62.22	56.10	38.13	37.85	29.42	30.24	15.96	9.05
IRL21100	-33.50	18	1	11.38	0.00	11.38	62.22	56.10	57.72	38.27	30.95	32.61	29.01	10.40
IRL21100	-33.50	18	2	10.62	0.00	10.62	62.22	56.10	57.72	39.11	29.32	31.04	29.01	9.63
IRL21100	-33.50	18	3	12.56	0.00	12.56	62.22	56.10	57.72	40.23	31.59	33.43	29.01	11.58
IRL21100	-33.50	18	4	11.11	0.00	11.11	62.22	56.10	57.72	41.73	29.22	30.86	29.01	10.12
IRL21100	-33.50	18	5	9.49	0.00	9.49	62.22	56.10	57.72	39.03	27.85	29.49	29.01	8.50
IRL21100	-33.50	18	6	10.42	0.00	10.42	62.22	56.10	57.72	38.03	29.52	31.24	29.01	9.43
IRN10900	34.00	3	1	10.18	0.00	10.18	41.68	29.88	30.01	46.15	35.94	37.67	4.10	16.37
IRN10900	34.00	3	2	8.38	0.00	8.38	41.68	29.88	30.01	45.20	27.30	40.97	4.10	10.71
IRN10900	34.00	3	3	8.36	0.00	8.36	41.68	29.88	30.01	42.38	27.93	37.24	4.10	10.65
IRN10900	34.00	3	4	5.77	0.00	5.77	41.68	29.88	30.01	31.26	29.78	38.55	4.10	6.28
IRN10900	34.00	3	5	9.43	0.00	9.43	41.68	29.88	30.01	42.37	33.93	34.15	4.10	13.38
IRN10900	34.00	3	6	4.70	0.00	4.70	41.68	29.88	30.01	30.82	28.46	27.95	4.10	4.83
IRN10900	34.00	7	1	10.17	0.00	10.17	41.69	29.88	30.01	46.14	35.86	37.61	4.10	16.32
IRN10900	34.00	7	2	8.34	0.00	8.34	41.69	29.88	30.01	45.16	27.20	40.94	4.10	10.62
IRN10900	34.00	7	3	8.32	0.00	8.32	41.69	29.88	30.01	42.34	27.83	37.23	4.10	10.57
IRN10900	34.00	7	4	5.76	0.00	5.76	41.69	29.88	30.01	31.26	29.68	38.55	4.10	6.26
IRN10900	34.00	7	5	9.42	0.00	9.42	41.69	29.88	30.01	42.37	33.90	34.12	4.10	13.35
IRN10900	34.00	7	6	4.70	0.00	4.70	41.69	29.88	30.01	30.82	28.45	27.95	4.10	4.83
IRN10900	34.00	11	1	10.18	0.00	10.18	41.68	29.88	30.00	46.22	35.90	37.77	4.10	16.40
IRN10900	34.00	11	2	8.40	0.00	8.40	41.68	29.88	30.00	45.25	27.30	41.86	4.10	10.74
IRN10900	34.00	11	3	8.50	0.00	8.50	41.68	29.88	30.00	42.44	27.93	43.40	4.10	10.96
IRN10900	34.00	11	4	5.87	0.00	5.87	41.68	29.88	30.00	31.36	29.78	41.96	4.10	6.42
IRN10900	34.00	11	5	9.45	0.00	9.45	41.68	29.88	30.00	42.46	33.97	34.25	4.10	13.45
IRN10900	34.00	11	6	4.78	0.00	4.78	41.68	29.88	30.00	30.92	28.55	28.06	4.10	4.93
IRN10900	34.00	15	1	10.35	0.00	10.35	41.69	29.96	30.16	46.34	36.79	37.88	4.20	16.85
IRN10900	34.00	15	2	10.60	0.00	10.60	41.69	29.96	30.16	45.35	39.64	42.43	4.20	18.56
IRN10900	34.00	15	3	10.46	0.00	10.46	41.69	29.96	30.16	42.51	43.06	44.18	4.20	17.55
IRN10900	34.00	15	4	6.53	0.00	6.53	41.69	29.96	30.16	31.46	41.85	42.32	4.20	7.34
IRN10900	34.00	15	5	9.56	0.00	9.56	41.69	29.96	30.16	42.57	34.22	34.35	4.20	13.61
IRN10900	34.00	15	6	4.88	0.00	4.88	41.69	29.96	30.16	31.02	28.68	28.16	4.20	5.04
IRN10900	34.00	19	1	10.22	0.00	10.22	41.80	29.75	29.95	46.72	36.68	37.78	4.04	16.87
IRN10900	34.00	19	2	8.42	0.00	8.42	41.80	29.75	29.95	45.91	27.42	40.58	4.04	10.86
IRN10900	34.00	19	3	8.85	0.00	8.85	41.80	29.75	29.95	44.16	29.15	37.66	4.04	11.88
IRN10900	34.00	19	4	6.39	0.00	6.39	41.80	29.75	29.95	31.55	35.45	41.38	4.04	7.21
IRN10900	34.00	19	5	9.46	0.00	9.46	41.80	29.75	29.95	42.73	34.19	34.31	4.04	13.63
IRN10900	34.00	19	6	4.85	0.00	4.85	41.80	29.75	29.95	31.03	28.67	28.15	4.04	5.04
IRN10901	34.00	3	1	16.72	0.00	16.72	64.94	42.59	44.36	46.15	35.94	37.67	18.28	16.37
IRN10901	34.00	3	2	11.52	0.00	11.52	64.94	42.59	44.36	45.20	27.30	40.97	18.28	10.71
IRN10901	34.00	3	3	11.46	0.00	11.46	64.94	42.59	44.36	42.38	27.93	37.24	18.28	10.65
IRN10901	34.00	3	4	7.21	0.00	7.21	64.94	42.59	44.36	31.26	29.78	38.55	18.28	6.28
IRN10901	34.00	3	5	14.04	0.00	14.04	64.94	42.59	44.36	42.37	33.93	34.15	18.28	13.38
IRN10901	34.00	3	6	5.78	0.00	5.78	64.94	42.59	44.36	30.82	28.46	27.95	18.28	4.83
IRN10901	34.00	7	1	16.69	0.00	16.69	68.42	42.59	44.60	46.14	35.86	37.61	18.43	16.32

IRN10901	34.00	7	2	11.44	0.00	11.44	68.42	42.59	44.60	45.16	27.20	40.94	18.43	10.62
IRN10901	34.00	7	3	11.39	0.00	11.39	68.42	42.59	44.60	42.34	27.83	37.23	18.43	10.57
IRN10901	34.00	7	4	7.20	0.00	7.20	68.42	42.59	44.60	31.26	29.68	38.55	18.43	6.26
IRN10901	34.00	7	5	14.03	0.00	14.03	68.42	42.59	44.60	42.37	33.90	34.12	18.43	13.35
IRN10901	34.00	7	6	5.78	0.00	5.78	68.42	42.59	44.60	30.82	28.45	27.95	18.43	4.83
IRN10901	34.00	11	1	17.13	0.00	17.13	72.03	65.55	44.37	46.22	35.90	37.77	22.30	16.40
IRN10901	34.00	11	2	11.67	0.00	11.67	72.03	65.55	44.37	45.25	27.30	41.86	22.30	10.74
IRN10901	34.00	11	3	11.88	0.00	11.88	72.03	65.55	44.37	42.44	27.93	43.40	22.30	10.96
IRN10901	34.00	11	4	7.39	0.00	7.39	72.03	65.55	44.37	31.36	29.78	41.96	22.30	6.42
IRN10901	34.00	11	5	14.31	0.00	14.31	72.03	65.55	44.37	42.46	33.97	34.25	22.30	13.45
IRN10901	34.00	11	6	5.91	0.00	5.91	72.03	65.55	44.37	30.92	28.55	28.06	22.30	4.93
IRQ25600	11.00	24	1	3.88	0.00	3.88	49.96	25.14	25.85	43.78	23.15	26.75	0.42	5.41
IRQ25600	11.00	24	2	3.12	0.00	3.12	49.96	25.14	25.85	43.76	21.45	26.43	0.42	4.13
IRQ25600	11.00	24	3	4.40	0.00	4.40	49.96	25.14	25.85	40.12	24.52	27.90	0.42	6.39
IRQ25600	11.00	24	4	2.80	0.00	2.80	49.96	25.14	25.85	31.26	24.39	26.03	0.42	3.64
IRQ25600	11.00	24	5	4.76	0.00	4.76	49.96	25.14	25.85	41.80	25.52	27.92	0.42	7.15
IRQ25600	11.00	24	6	4.47	0.00	4.47	49.96	25.14	25.85	45.36	24.30	27.75	0.42	6.53
IRQ25600	11.00	28	1	4.78	0.00	4.78	49.93	25.16	25.85	43.98	26.02	26.85	0.44	7.17
IRQ25600	11.00	28	2	3.29	0.00	3.29	49.93	25.16	25.85	43.45	21.80	26.52	0.44	4.40
IRQ25600	11.00	28	3	4.57	0.00	4.57	49.93	25.16	25.85	39.98	25.07	27.99	0.44	6.73
IRQ25600	11.00	28	4	2.91	0.00	2.91	49.93	25.16	25.85	31.29	24.75	26.13	0.44	3.80
IRQ25600	11.00	28	5	5.03	0.00	5.03	49.93	25.16	25.85	41.79	26.53	28.02	0.44	7.75
IRQ25600	11.00	28	6	5.03	0.00	5.03	49.93	25.16	25.85	45.46	26.20	27.85	0.44	7.75
IRQ25600	11.00	32	1	4.75	0.00	4.75	49.86	25.16	25.85	43.61	26.00	26.75	0.44	7.10
IRQ25600	11.00	32	2	3.24	0.00	3.24	49.86	25.16	25.85	43.10	21.73	26.43	0.44	4.32
IRQ25600	11.00	32	3	4.54	0.00	4.54	49.86	25.16	25.85	39.86	25.02	27.90	0.44	6.66
IRQ25600	11.00	32	4	2.88	0.00	2.88	49.86	25.16	25.85	31.26	24.71	26.03	0.44	3.75
IRQ25600	11.00	32	5	5.00	0.00	5.00	49.86	25.16	25.85	41.60	26.50	27.93	0.44	7.68
IRQ25600	11.00	32	6	5.00	0.00	5.00	49.86	25.16	25.85	45.05	26.16	27.75	0.44	7.67
IRQ25600	11.00	36	1	4.78	0.00	4.78	49.93	25.16	25.85	43.92	26.02	26.85	0.44	7.17
IRQ25600	11.00	36	2	3.29	0.00	3.29	49.93	25.16	25.85	43.44	21.80	26.52	0.44	4.40
IRQ25600	11.00	36	3	4.58	0.00	4.58	49.93	25.16	25.85	40.05	25.07	28.00	0.44	6.74
IRQ25600	11.00	36	4	2.94	0.00	2.94	49.93	25.16	25.85	31.39	24.75	26.13	0.44	3.84
IRQ25600	11.00	36	5	5.04	0.00	5.04	49.93	25.16	25.85	41.84	26.53	28.02	0.44	7.76
IRQ25600	11.00	36	6	5.03	0.00	5.03	49.93	25.16	25.85	45.40	26.20	27.85	0.44	7.74
IRQ25600	11.00	40	1	7.29	0.00	7.29	49.87	25.16	25.85	43.53	26.00		3.07	9.54
IRQ25600	11.00	40	2	4.95	0.00	4.95	49.87	25.16	25.85	43.13	21.73		3.07	5.54
IRQ25600	11.00	40	3	6.61	0.00	6.61	49.87	25.16	25.85	39.95	25.02		3.07	8.22
IRQ25600	11.00	40	4	4.55	0.00	4.55	49.87	25.16	25.85	31.37	24.71		3.07	4.98
IRQ25600	11.00	40	5	7.38	0.00	7.38	49.87	25.16	25.85	41.66	26.50		3.07	9.73
IRQ25600	11.00	40	6	7.42	0.00	7.42	49.87	25.16	25.85	44.97	26.16		3.07	9.82
ISL04900	-33.50	21	1	8.00	0.00	8.00	59.68	28.79	28.81	40.41	30.43	30.53	3.78	10.26
ISL04900	-33.50	21	2	8.53	0.00	8.53	59.68	28.79	28.81	41.70	31.60	31.70	3.78	11.46
ISL04900	-33.50	21	3	8.27	0.00	8.27	59.68	28.79	28.81	41.29	30.92	31.02	3.78	10.84
ISL04900	-33.50	21	4	8.12	0.00	8.12	59.68	28.79	28.81	40.61	30.72	30.82	3.78	10.53
ISL04900	-33.50	21	5	7.10	0.00	7.10	59.68	28.79	28.81	39.57	28.45	28.55	3.78	8.53
ISL04900	-33.50	21	6	8.46	0.00	8.46	59.68	28.79	28.81	41.71	31.37	31.48	3.78	11.29
ISL04900	-33.50	25	1	10.48	0.00	10.48	59.68	59.81	28.81	40.47	41.16	30.63	6.78	12.22
ISL04900	-33.50	25	2	11.09	0.00	11.09	59.68	59.81	28.81	41.77	42.40	31.80	6.78	13.44
ISL04900	-33.50	25	3	10.80	0.00	10.80	59.68	59.81	28.81	41.36	41.58	31.12	6.78	12.85
ISL04900	-33.50	25	4	10.61	0.00	10.61	59.68	59.81	28.81	40.67	41.30	30.91	6.78	12.46
ISL04900	-33.50	25	5	9.58	0.00	9.58	59.68	59.81	28.81	39.64	39.66	28.65	6.78	10.66
ISL04900	-33.50	25	6	11.02	0.00	11.02	59.68	59.81	28.81	41.79	42.20	31.58	6.78	13.31
ISL04900	-33.50	29	1	10.48	0.00	10.48	59.57	59.81	28.81	40.47	41.17	30.63	6.78	12.22
ISL04900	-33.50	29	2	11.09	0.00	11.09	59.57	59.81	28.81	41.76	42.41	31.80	6.78	13.44
ISL04900	-33.50	29	3	10.80	0.00	10.80	59.57	59.81	28.81	41.33	41.62	31.12	6.78	12.84
ISL04900	-33.50	29	4	10.61	0.00	10.61	59.57	59.81	28.81	40.66	41.32	30.91	6.78	12.46
ISL04900	-33.50	29	5	9.58	0.00	9.58	59.57	59.81	28.81	39.62	39.71	28.66	6.78	10.66
ISL04900	-33.50	29	6	11.02	0.00	11.02	59.57	59.81	28.81	41.78	42.21	31.58	6.78	13.30
ISL04900	-33.50	33	1	10.52	0.00	10.52	59.57	59.80	28.81	40.54	41.13	30.73	6.78	12.30
ISL04900	-33.50	33	2	11.13	0.00	11.13	59.57	59.80	28.81	41.84	42.37	31.91	6.78	13.52
ISL04900	-33.50	33	3	10.84	0.00	10.84	59.57	59.80	28.81	41.41	41.21	31.24	6.78	12.91
ISL04900	-33.50	33	4	10.65	0.00	10.65	59.57	59.80	28.81	40.73	41.22	31.02	6.78	12.54
ISL04900	-33.50	33	5	9.62	0.00	9.62	59.57	59.80	28.81	39.70	39.17	28.78	6.78	10.73
ISL04900	-33.50	33	6	11.06	0.00	11.06	59.57	59.80	28.81	41.85	42.06	31.69	6.78	13.38
ISL04900	-33.50	37	1	10.52	0.00	10.52	59.57	59.81	28.81	40.53	41.24	30.72	6.78	12.29
ISL04900	-33.50	37	2	11.12	0.00	11.12	59.57	59.81	28.81	41.82	42.48	31.90	6.78	13.52
ISL04900	-33.50	37	3	10.83	0.00	10.83	59.57	59.81	28.81	41.39	41.63	31.19	6.78	12.91
ISL04900	-33.50	37	4	10.65	0.00	10.65	59.57	59.81	28.81	40.72	41.38	31.00	6.78	12.54
ISL04900	-33.50	37	5	9.62	0.00	9.62	59.57	59.81	28.81	39.68	39.70	28.73	6.78	10.72
ISL04900	-33.50	37	6	11.06	0.00	11.06	59.57	59.81	28.81	41.84	42.26	31.67	6.78	13.38
ISL05000	5.00	23	1	7.43	0.00	7.43	50.31	28.43	27.92	42.80	29.37	29.50	3.08	9.83
ISL05000	5.00	23	2	6.55	0.00	6.55	50.31	28.43	27.92	40.36	27.84	27.79	3.08	8.10
ISL05000	5.00	23	3	4.59	0.00	4.59	50.31	28.43	27.92	36.03	25.46	24.60	3.08	5.03
ISL05000	5.00	23	4	7.16	0.00	7.16	50.31	28.43	27.92	42.10	28.84	28.94	3.08	9.27
ISL05000	5.00	23	5	7.76	0.00	7.76	50.31	28.43	27.92	43.12	30.24	30.30	3.08	10.60
ISL05000	5.00	23	6	5.11	0.00	5.11	50.31	28.43	27.92	36.84	26.14	25.36	3.08	5.77
ISL05000	5.00	31	1	5.99	0.00	5.99	50.30	28.43	26.49	42.91	30.05	25.37	2.27	7.75
ISL05000	5.00	31	2	5.03	0.00	5.03	50.30	28.43	26.49	40.47	28.51	23.76	2.27	6.08
ISL05000	5.00	31	3	3.09	0.00	3.09	50.30	28.43	26.49	36.13	26.12	21.08	2.27	3.29
ISL05000	5.00	31	4	5.69	0.00	5.69	50.30	28.43	26.49	42.21	29.51	24.82	2.27	7.20
ISL05000	5.00	31	5	6.41	0.00	6.41	50.30	28.43	26.49	43.24	30.91	26.23	2.27	8.57
ISL05000	5.00	31	6	3.63	0.00	3.63	50.30	28.43	26.49	36.94	26.80	21.81	2.27	4.02
ISL05000	5.00	39	1	5.55	0.00	5.55	50.30	28.43	26.49	43.01	30.20	24.20	2.27	6.95
ISL05000	5.00	39	2	4.46	0.00	4.46	50.30	28.43	26.49	40.57	28.12	22.60	2.27	5.20
ISL05000	5.00	39	3	2.36	0.00	2.36	50.30	28.43	26.49	36.23	25.01	20.01	2.27	2.35
ISL05000	5.00	39	4	5.21	0.00	5.21	50.30	28.43	26.49	42.31	29.58	23.65	2.27	6.38
ISL05000	5.00	39	5	5.99	0.00	5.99	50.30	28.43	26.49	43.34	30.92	25.06	2.27	7.75
ISL05000	5.00	39	6	2.95	0.00	2.95	50.30	28.43	26.49	37.04	25.82	20.74	2.27	3.10
ISR11000	-13.00	25	1	9.37	0.00	9.37	74.00	78.34	43.00	49.84	27.17	27.90	20.97	8.43

ISR11000	-13.00	25	2	10.52	0.00	10.52	74.00	78.34	43.00	46.31	28.56	29.17	20.97	9.60	
ISR11000	-13.00	25	3	8.96	0.00	8.96	74.00	78.34	43.00	40.51	27.46	27.94	20.97	8.02	
ISR11000	-13.00	25	4	10.18	0.00	10.18	74.00	78.34	43.00	44.03	28.39	28.90	20.97	9.25	
ISR11000	-13.00	25	5	10.77	0.00	10.77	74.00	78.34	43.00	47.52	28.77	29.36	20.97	9.85	
ISR11000	-13.00	29	1	9.42	0.00	9.42	64.63		43.00	49.84	27.27	27.90	20.81	8.48	
ISR11000	-13.00	29	2	10.57	0.00	10.57	64.63		43.00	46.29	28.66	29.17	20.81	9.66	
ISR11000	-13.00	29	3	9.01	0.00	9.01	64.63		43.00	40.50	27.56	27.94	20.81	8.06	
ISR11000	-13.00	29	4	10.23	0.00	10.23	64.63		43.00	44.01	28.50	28.91	20.81	9.30	
ISR11000	-13.00	29	5	10.82	0.00	10.82	64.63		43.00	47.50	28.87	29.36	20.81	9.91	
ISR11000	-13.00	33	1	9.31	0.00	9.31	80.53	42.94	42.99	49.83	27.17	27.90	17.96	8.43	
ISR11000	-13.00	33	2	10.45	0.00	10.45	80.53	42.94	42.99	46.29	28.56	29.17	17.96	9.60	
ISR11000	-13.00	33	3	8.91	0.00	8.91	80.53	42.94	42.99	40.50	27.46	27.94	17.96	8.02	
ISR11000	-13.00	33	4	10.11	0.00	10.11	80.53	42.94	42.99	44.00	28.40	28.91	17.96	9.25	
ISR11000	-13.00	33	5	10.69	0.00	10.69	80.53	42.94	42.99	47.49	28.78	29.36	17.96	9.85	
ISR11000	-13.00	37	1	9.35	0.00	9.35	80.53	42.97	78.36	49.86	27.26	27.75	20.97	8.41	
ISR11000	-13.00	37	2	10.52	0.00	10.52	80.53	42.97	78.36	46.31	28.66	29.04	20.97	9.60	
ISR11000	-13.00	37	3	8.98	0.00	8.98	80.53	42.97	78.36	40.52	27.55	27.88	20.97	8.04	
ISR11000	-13.00	37	4	10.19	0.00	10.19	80.53	42.97	78.36	44.03	28.49	28.82	20.97	9.27	
ISR11000	-13.00	37	5	10.77	0.00	10.77	80.53	42.97	78.36	47.53	28.87	29.24	20.97	9.85	
J 11100	110.00	1	1	5.84	0.00	5.84	56.71		20.57	48.73		30.08	-0.52	13.19	*
J 11100	110.00	1	2	1.73	0.00	1.73	56.71		20.57	33.63		32.09	-0.52	2.48	*
J 11100	110.00	1	3	2.62	0.00	2.62	56.71		20.57	35.38		28.64	-0.52	3.90	*
J 11100	110.00	1	4	5.69	0.00	5.69	56.71		20.57	45.67		31.01	-0.52	12.28	*
J 11100	110.00	1	5	5.88	0.00	5.88	56.71		20.57	48.95		30.41	-0.52	13.49	*
J 11100	110.00	1	6	5.88	0.00	5.88	56.71		20.57	49.01		30.32	-0.52	13.45	*
J 11100	110.00	3	1	2.30	0.00	2.30	55.51	20.55	20.57	39.35	31.05	35.12	-3.51	7.43	*
J 11100	110.00	3	2	-0.59	-0.59	0.00	55.51	20.55	20.57	31.64	33.06	40.60	-3.51	0.55	*
J 11100	110.00	3	3	2.79	0.00	2.79	55.51	20.55	20.57	43.58	29.61	33.73	-3.51	9.87	*
J 11100	110.00	3	4	3.29	0.00	3.29	55.51	20.55	20.57	51.62	31.98	44.53	-3.51	15.25	*
J 11100	110.00	3	5	2.81	0.00	2.81	55.51	20.55	20.57	42.65	31.38	35.93	-3.51	10.02	*
J 11100	110.00	3	6	2.70	0.00	2.70	55.51	20.55	20.57	41.73	31.29	35.71	-3.51	9.34	*
J 11100	110.00	5	1	3.17	0.00	3.17	56.80	20.55	20.57	49.95	35.10	31.07	-3.49	13.26	*
J 11100	110.00	5	2	-0.44	-0.44	0.00	56.80	20.55	20.57	31.89	40.57	33.08	-3.49	0.79	*
J 11100	110.00	5	3	1.45	0.00	1.45	56.80	20.55	20.57	36.29	33.70	29.63	-3.49	4.64	*
J 11100	110.00	5	4	3.17	0.00	3.17	56.80	20.55	20.57	46.61	44.50	32.01	-3.49	13.14	*
J 11100	110.00	5	5	3.20	0.00	3.20	56.80	20.55	20.57	49.92	35.90	31.41	-3.49	13.59	*
J 11100	110.00	5	6	3.19	0.00	3.19	56.80	20.55	20.57	50.00	35.69	31.32	-3.49	13.52	*
J 11100	110.00	7	1	2.30	0.00	2.30	55.51	20.55	20.57	39.35	31.05	35.21	-3.51	7.43	*
J 11100	110.00	7	2	-0.61	-0.61	0.00	55.51	20.55	20.57	31.60	33.05	47.77	-3.51	0.52	*
J 11100	110.00	7	3	2.81	0.00	2.81	55.51	20.55	20.57	43.58	29.60	35.22	-3.51	10.03	*
J 11100	110.00	7	4	3.29	0.00	3.29	55.51	20.55	20.57	51.62	31.98	44.53	-3.51	15.25	*
J 11100	110.00	7	5	2.81	0.00	2.81	55.51	20.55	20.57	42.65	31.38	35.92	-3.51	10.02	*
J 11100	110.00	7	6	2.70	0.00	2.70	55.51	20.55	20.57	41.73	31.29	35.72	-3.51	9.34	*
J 11100	110.00	9	1	3.12	0.00	3.12	56.78	20.55	20.57	47.84	35.29	31.15	-3.49	12.65	*
J 11100	110.00	9	2	-0.42	-0.42	0.00	56.78	20.55	20.57	31.90	47.84	33.76	-3.49	0.82	*
J 11100	110.00	9	3	1.52	0.00	1.52	56.78	20.55	20.57	36.38	35.30	30.21	-3.49	4.83	*
J 11100	110.00	9	4	3.17	0.00	3.17	56.78	20.55	20.57	46.67	44.61	32.01	-3.49	13.18	*
J 11100	110.00	9	5	3.20	0.00	3.20	56.78	20.55	20.57	49.68	35.99	31.44	-3.49	13.55	*
J 11100	110.00	9	6	3.18	0.00	3.18	56.78	20.55	20.57	49.40	35.79	31.36	-3.49	13.38	*
J 11100	110.00	11	1	2.31	0.00	2.31	55.51	20.55	20.57	39.35	31.12	35.32	-3.51	7.45	*
J 11100	110.00	11	2	-0.58	-0.57	-0.01	55.51	20.55	20.57	31.64	33.74	44.89	-3.51	0.57	*
J 11100	110.00	11	3	2.84	0.00	2.84	55.51	20.55	20.57	43.59	30.18	35.38	-3.51	10.24	*
J 11100	110.00	11	4	3.29	0.00	3.29	55.51	20.55	20.57	51.64	31.98	44.66	-3.51	15.27	*
J 11100	110.00	11	5	2.81	0.00	2.81	55.51	20.55	20.57	42.65	31.42	36.03	-3.51	10.04	*
J 11100	110.00	11	6	2.70	0.00	2.70	55.51	20.55	20.57	41.73	31.33	35.82	-3.51	9.35	*
J 11100	110.00	13	1	4.21	0.00	4.21	57.24	20.55	23.36	49.63	35.29	30.57	-2.33	12.94	*
J 11100	110.00	13	2	1.55	0.00	1.55	57.24	20.55	23.36	34.80	44.86	29.45	-2.33	3.43	*
J 11100	110.00	13	3	2.94	0.00	2.94	57.24	20.55	23.36	38.67	35.35	29.92	-2.33	6.73	*
J 11100	110.00	13	4	4.36	0.00	4.36	57.24	20.55	23.36	50.00	44.64	31.94	-2.33	14.70	*
J 11100	110.00	13	5	4.26	0.00	4.26	57.24	20.55	23.36	49.90	36.00	31.26	-2.33	13.52	*
J 11100	110.00	13	6	4.25	0.00	4.25	57.24	20.55	23.36	49.82	35.80	31.13	-2.33	13.39	*
J 11100	110.00	15	1	5.11	0.00	5.11	55.03	23.34	23.36	43.83	30.64	34.14	-0.78	10.38	*
J 11100	110.00	15	2	5.01	0.00	5.01	55.03	23.34	23.36	44.70	29.52	31.43	-0.78	9.97	*
J 11100	110.00	15	3	4.81	0.00	4.81	55.03	23.34	23.36	42.45	29.99	33.03	-0.78	9.24	*
J 11100	110.00	15	4	5.87	0.00	5.87	55.03	23.34	23.36	51.69	32.01	44.98	-0.78	15.31	*
J 11100	110.00	15	5	5.49	0.00	5.49	55.03	23.34	23.36	46.63	31.33	35.77	-0.78	12.29	*
J 11100	110.00	15	6	5.41	0.00	5.41	55.03	23.34	23.36	45.83	31.21	35.47	-0.78	11.82	*
JOR22400	11.00	23	1	3.59	0.00	3.59	45.16	24.23	25.58	34.18	25.52	27.21	-0.28	5.48	
JOR22400	11.00	23	2	3.16	0.00	3.16	45.16	24.23	25.58	33.70	25.13	25.53	-0.28	4.68	
JOR22400	11.00	23	3	1.87	0.00	1.87	45.16	24.23	25.58	32.81	23.19	22.42	-0.28	2.59	
JOR22400	11.00	23	4	1.15	0.00	1.15	45.16	24.23	25.58	32.90	21.06	21.91	-0.28	1.57	
JOR22400	11.00	23	5	2.27	0.00	2.27	45.16	24.23	25.58	34.25	22.12	24.53	-0.28	3.20	
JOR22400	11.00	23	6	4.10	0.00	4.10	45.16	24.23	25.58	36.64	25.74	28.10	-0.28	6.53	
JOR22400	11.00	27	1	3.60	0.00	3.60	60.71	24.23	25.58	34.11	25.43	27.12	-0.16	5.40	
JOR22400	11.00	27	2	3.17	0.00	3.17	60.71	24.23	25.58	33.69	25.05	25.44	-0.16	4.61	
JOR22400	11.00	27	3	1.92	0.00	1.92	60.71	24.23	25.58	33.18	23.10	22.32	-0.16	2.60	
JOR22400	11.00	27	4	1.20	0.00	1.20	60.71	24.23	25.58	33.44	20.96	21.82	-0.16	1.58	
JOR22400	11.00	27	5	2.28	0.00	2.28	60.71	24.23	25.58	34.40	22.03	24.44	-0.16	3.15	
JOR22400	11.00	27	6	4.13	0.00	4.13	60.71	24.23	25.58	36.64	25.65	28.00	-0.16	6.46	
JOR22400	11.00	31	1	3.65	0.00	3.65	60.71	24.23	25.58	34.21	25.52	27.19	-0.16	5.48	
JOR22400	11.00	31	2	3.22	0.00	3.22	60.71	24.23	25.58	33.79	25.14	25.51	-0.16	4.70	
JOR22400	11.00	31	3	1.98	0.00	1.98	60.71	24.23	25.58	33.27	23.20	22.41	-0.16	2.70	
JOR22400	11.00	31	4	1.27	0.00	1.27	60.71	24.23	25.58	33.54	21.06	21.90	-0.16	1.68	
JOR22400	11.00	31	5	2.34	0.00	2.34	60.71	24.23	25.58	34.50	22.12	24.51	-0.16	3.24	
JOR22400	11.00	31	6	4.17	0.00	4.17	60.71	24.23	25.58	36.74	25.74	28.08	-0.16	6.55	
JOR22400	11.00	35	1	3.60	0.00	3.60	60.71	24.23	25.58	34.11	25.44	27.12	-0.16	5.40	
JOR22400	11.00	35	2	3.17	0.00	3.17	60.71	24.23	25.58	33.69	25.05	25.43	-0.16	4.61	
JOR22400	11.00	35	3	1.92	0.00	1.92	60.71	24.23	25.58	33.18	23.11	22.32	-0.16	2.61	
JOR22400	11.00	35	4	1.20	0.00	1.20	60.71	24.23	25.58	33.45	20.97	21.82	-0.16	1.58	
JOR22400	11.00	35	5	2.28	0.00	2.28	60.71	24.23	25.58	34.41	22.03	24.43	-0.16	3.15	
JOR22400	11.00	35	6	4.13	0.00	4.13	60.71	24.23	25.58	36.64	25.65	28.00	-0.16	6.46	
JOR22400	11.00	39	1	2.89	0.00	2.89	60.71	24.09	25.58	34.21	22.77	27.18	-0.24	4.18	

JOR22400	11.00	39	2	2.53	0.00	2.53	60.71	24.09	25.58	33.78	22.58	25.51	-0.24	3.60
JOR22400	11.00	39	3	1.59	0.00	1.59	60.71	24.09	25.58	33.27	21.84	22.40	-0.24	2.16
JOR22400	11.00	39	4	1.22	0.00	1.22	60.71	24.09	25.58	33.54	21.00	21.90	-0.24	1.65
JOR22400	11.00	39	5	2.27	0.00	2.27	60.71	24.09	25.58	34.50	22.00	24.51	-0.24	3.17
JOR22400	11.00	39	6	3.78	0.00	3.78	60.71	24.09	25.58	36.73	24.35	28.07	-0.24	5.82
KEN24900	11.00	21	1	5.97	0.00	5.97	60.01	28.53	22.33	52.53	40.46	32.05	-0.60	15.26
KEN24900	11.00	21	2	6.14	0.00	6.14	60.01	28.53	22.33	53.97	40.28	34.88	-0.60	17.53
KEN24900	11.00	21	3	6.07	0.00	6.07	60.01	28.53	22.33	53.01	36.96	34.81	-0.60	16.49
KEN24900	11.00	21	4	4.43	0.00	4.43	60.01	28.53	22.33	53.62	25.99	27.97	-0.60	7.83
KEN24900	11.00	21	5	5.46	0.00	5.46	60.01	28.53	22.33	52.87	31.04	30.38	-0.60	11.60
KEN24900	11.00	21	6	5.99	0.00	5.99	60.01	28.53	22.33	54.20	38.21	32.76	-0.60	15.52
KEN24900	11.00	25	1	3.57	0.00	3.57	59.99	22.09	22.33	52.72	29.19	32.09	-2.80	11.32
KEN24900	11.00	25	2	3.85	0.00	3.85	59.99	22.09	22.33	54.20	31.93	34.92	-2.80	14.06
KEN24900	11.00	25	3	3.89	0.00	3.89	59.99	22.09	22.33	53.22	32.77	34.86	-2.80	14.53
KEN24900	11.00	25	4	3.47	0.00	3.47	59.99	22.09	22.33	53.80	32.26	28.06	-2.80	10.60
KEN24900	11.00	25	5	3.56	0.00	3.56	59.99	22.09	22.33	53.02	30.12	30.43	-2.80	11.19
KEN24900	11.00	25	6	3.74	0.00	3.74	59.99	22.09	22.33	54.36	31.13	32.80	-2.80	12.80
KEN24900	11.00	29	1	3.56	0.00	3.56	59.99	22.09	22.33	52.75	29.10	32.08	-2.80	11.25
KEN24900	11.00	29	2	3.85	0.00	3.85	59.99	22.09	22.33	54.27	31.84	34.91	-2.80	14.00
KEN24900	11.00	29	3	3.88	0.00	3.88	59.99	22.09	22.33	53.27	32.68	34.83	-2.80	14.47
KEN24900	11.00	29	4	3.46	0.00	3.46	59.99	22.09	22.33	53.86	32.17	27.98	-2.80	10.52
KEN24900	11.00	29	5	3.55	0.00	3.55	59.99	22.09	22.33	53.06	30.03	30.39	-2.80	11.13
KEN24900	11.00	29	6	3.74	0.00	3.74	59.99	22.09	22.33	54.39	31.04	32.78	-2.80	12.74
KEN24900	11.00	33	1	3.57	0.00	3.57	59.99	22.09	22.33	52.84	29.19	32.12	-2.80	11.33
KEN24900	11.00	33	2	3.85	0.00	3.85	59.99	22.09	22.33	54.36	31.93	34.94	-2.80	14.07
KEN24900	11.00	33	3	3.89	0.00	3.89	59.99	22.09	22.33	53.36	32.77	34.86	-2.80	14.54
KEN24900	11.00	33	4	3.47	0.00	3.47	59.99	22.09	22.33	53.95	32.26	28.06	-2.80	10.61
KEN24900	11.00	33	5	3.56	0.00	3.56	59.99	22.09	22.33	53.14	30.12	30.44	-2.80	11.19
KEN24900	11.00	33	6	3.74	0.00	3.74	59.99	22.09	22.33	54.48	31.13	32.82	-2.80	12.81
KEN24900	11.00	37	1	3.29	0.00	3.29	59.99	22.09	21.93	52.76	29.10	30.14	-3.00	10.51
KEN24900	11.00	37	2	3.59	0.00	3.59	59.99	22.09	21.93	54.27	31.84	32.57	-3.00	13.09
KEN24900	11.00	37	3	3.62	0.00	3.62	59.99	22.09	21.93	53.28	32.68	32.35	-3.00	13.39
KEN24900	11.00	37	4	3.17	0.00	3.17	59.99	22.09	21.93	53.87	32.17	26.96	-3.00	9.77
KEN24900	11.00	37	5	3.18	0.00	3.18	59.99	22.09	21.93	53.06	30.03	28.01	-3.00	9.84
KEN24900	11.00	37	6	3.43	0.00	3.43	59.99	22.09	21.93	54.39	31.04	30.26	-3.00	11.56
KWT11300	17.00	22	1	5.07	0.00	5.07	65.86	30.88	25.57	48.16	29.41	23.00	2.45	6.04
KWT11300	17.00	22	2	5.05	0.00	5.05	65.86	30.88	25.57	46.42	29.98	22.88	2.45	6.01
KWT11300	17.00	22	3	5.68	0.00	5.68	65.86	30.88	25.57	47.99	31.01	23.90	2.45	7.04
KWT11300	17.00	22	4	5.85	0.00	5.85	65.86	30.88	25.57	49.13	31.14	24.21	2.45	7.34
KWT11300	17.00	22	5	6.06	0.00	6.06	65.86	30.88	25.57	49.37	31.74	24.57	2.45	7.73
KWT11300	17.00	26	1	7.99	0.00	7.99	65.89	30.88	28.72	48.44	29.41	27.87	4.66	9.43
KWT11300	17.00	26	2	8.55	0.00	8.55	65.89	30.88	28.72	46.55	29.98	29.55	4.66	10.47
KWT11300	17.00	26	3	9.08	0.00	9.08	65.89	30.88	28.72	48.07	31.01	30.65	4.66	11.57
KWT11300	17.00	26	4	9.11	0.00	9.11	65.89	30.88	28.72	49.32	31.14	30.58	4.66	11.65
KWT11300	17.00	26	5	9.35	0.00	9.35	65.89	30.88	28.72	49.55	31.74	31.12	4.66	12.20
KWT11300	17.00	30	1	8.00	0.00	8.00	65.89	30.88	28.72	48.53	29.41	27.89	4.66	9.44
KWT11300	17.00	30	2	8.56	0.00	8.56	65.89	30.88	28.72	46.65	29.99	29.58	4.66	10.50
KWT11300	17.00	30	3	9.09	0.00	9.09	65.89	30.88	28.72	48.17	31.02	30.69	4.66	11.59
KWT11300	17.00	30	4	9.12	0.00	9.12	65.89	30.88	28.72	49.42	31.14	30.61	4.66	11.67
KWT11300	17.00	30	5	9.36	0.00	9.36	65.89	30.88	28.72	49.64	31.75	31.15	4.66	12.23
KWT11300	17.00	34	1	7.97	0.00	7.97	65.89	30.88	28.72	48.58	29.41	27.82	4.66	9.40
KWT11300	17.00	34	2	8.55	0.00	8.55	65.89	30.88	28.72	46.68	29.98	29.52	4.66	10.47
KWT11300	17.00	34	3	9.08	0.00	9.08	65.89	30.88	28.72	48.21	31.02	30.63	4.66	11.57
KWT11300	17.00	34	4	9.11	0.00	9.11	65.89	30.88	28.72	49.48	31.14	30.55	4.66	11.64
KWT11300	17.00	34	5	9.35	0.00	9.35	65.89	30.88	28.72	49.69	31.75	31.09	4.66	12.20
KWT11300	17.00	38	1	7.99	0.00	7.99	66.93	30.88	28.72	47.82	29.41	27.91	4.66	9.43
KWT11300	17.00	38	2	8.55	0.00	8.55	66.93	30.88	28.72	46.01	29.99	29.62	4.66	10.47
KWT11300	17.00	38	3	9.08	0.00	9.08	66.93	30.88	28.72	47.42	31.02	30.73	4.66	11.57
KWT11300	17.00	38	4	9.11	0.00	9.11	66.93	30.88	28.72	48.32	31.14	30.65	4.66	11.64
KWT11300	17.00	38	5	9.35	0.00	9.35	66.93	30.88	28.72	48.73	31.75	31.19	4.66	12.20
LAO28400	74.00	2	1	5.89	0.00	5.89	52.84	24.78	30.13	50.33	24.54	36.09	1.64	8.18
LAO28400	74.00	2	2	4.68	0.00	4.68	52.84	24.78	30.13	50.19	22.11	36.38	1.64	5.91
LAO28400	74.00	2	3	5.54	0.00	5.54	52.84	24.78	30.13	46.15	23.84	36.51	1.64	7.46
LAO28400	74.00	2	4	5.52	0.00	5.52	52.84	24.78	30.13	44.36	23.99	34.85	1.64	7.42
LAO28400	74.00	2	5	5.12	0.00	5.12	52.84	24.78	30.13	51.45	22.89	36.57	1.64	6.67
LAO28400	74.00	2	6	6.03	0.00	6.03	52.84	24.78	30.13	51.81	24.79	36.82	1.64	8.47
LAO28400	74.00	4	1	5.87	0.00	5.87	60.40	30.11	24.80	49.29	36.07	24.47	1.68	8.09
LAO28400	74.00	4	2	4.66	0.00	4.66	60.40	30.11	24.80	50.86	36.35	22.04	1.68	5.85
LAO28400	74.00	4	3	5.56	0.00	5.56	60.40	30.11	24.80	48.66	36.48	23.77	1.68	7.46
LAO28400	74.00	4	4	5.50	0.00	5.50	60.40	30.11	24.80	44.50	34.82	23.91	1.68	7.36
LAO28400	74.00	4	5	5.09	0.00	5.09	60.40	30.11	24.80	51.71	36.54	22.81	1.68	6.60
LAO28400	74.00	4	6	6.02	0.00	6.02	60.40	30.11	24.80	52.06	36.79	24.71	1.68	8.41
LAO28400	74.00	6	1	5.86	0.00	5.86	63.19	24.78	30.13	50.26	24.44	36.08	1.67	8.09
LAO28400	74.00	6	2	4.63	0.00	4.63	63.19	24.78	30.13	50.14	22.01	36.37	1.67	5.81
LAO28400	74.00	6	3	5.51	0.00	5.51	63.19	24.78	30.13	46.06	23.74	36.50	1.67	7.37
LAO28400	74.00	6	4	5.48	0.00	5.48	63.19	24.78	30.13	44.27	23.89	34.84	1.67	7.32
LAO28400	74.00	6	5	5.07	0.00	5.07	63.19	24.78	30.13	51.41	22.78	36.56	1.67	6.57
LAO28400	74.00	6	6	6.00	0.00	6.00	63.19	24.78	30.13	51.76	24.69	36.81	1.67	8.38
LAO28400	74.00	8	1	5.88	0.00	5.88	63.26	30.11	24.80	50.41	36.06	24.47	1.68	8.11
LAO28400	74.00	8	2	4.66	0.00	4.66	63.26	30.11	24.80	50.88	36.34	22.04	1.68	5.85
LAO28400	74.00	8	3	5.56	0.00	5.56	63.26	30.11	24.80	48.68	36.47	23.77	1.68	7.46
LAO28400	74.00	8	4	5.51	0.00	5.51	63.26	30.11	24.80	44.70	34.81	23.91	1.68	7.37
LAO28400	74.00	8	5	5.10	0.00	5.10	63.26	30.11	24.80	51.86	36.53	22.81	1.68	6.60
LAO28400	74.00	8	6	6.02	0.00	6.02	63.26	30.11	24.80	53.00	36.78	24.72	1.68	8.42
LAO28400	74.00	10	1	5.74	0.00	5.74	50.01	24.78	30.13	42.90	24.54	36.13	1.61	7.89
LAO28400	74.00	10	2	4.66	0.00	4.66	50.01	24.78	30.13	49.24	22.11	36.42	1.61	5.90
LAO28400	74.00	10	3	5.44	0.00	5.44	50.01	24.78	30.13	42.92	23.84	36.54	1.61	7.31
LAO28400	74.00	10	4	4.90	0.00	4.90	50.01	24.78	30.13	36.10	23.99	34.87	1.61	6.32
LAO28400	74.00	10	5	5.11	0.00	5.11	50.01	24.78	30.13	52.41	22.88	36.63	1.61	6.68
LAO28400	74.00	10	6	6.02	0.00	6.02	50.01	24.78	30.13	52.76	24.79	36.88	1.61	8.49

LBN27900	11.00	3	1	7.48	0.00	7.48	60.07	45.15	38.70	35.84	28.92	25.95	15.66	6.62
LBN27900	11.00	3	2	8.00	0.00	8.00	60.07	45.15	38.70	36.33	28.95	26.79	15.66	7.15
LBN27900	11.00	3	3	7.29	0.00	7.29	60.07	45.15	38.70	35.32	28.00	26.40	15.66	6.42
LBN27900	11.00	3	4	8.29	0.00	8.29	60.07	45.15	38.70	36.29	29.67	27.08	15.66	7.45
LBN27900	11.00	7	1	7.49	0.00	7.49	60.07	45.15	38.70	35.86	28.93	25.95	15.66	6.63
LBN27900	11.00	7	2	8.01	0.00	8.01	60.07	45.15	38.70	36.36	28.95	26.79	15.66	7.16
LBN27900	11.00	7	3	7.31	0.00	7.31	60.07	45.15	38.70	35.35	28.01	26.41	15.66	6.43
LBN27900	11.00	7	4	8.30	0.00	8.30	60.07	45.15	38.70	36.31	29.68	27.08	15.66	7.46
LBN27900	11.00	11	1	7.47	0.00	7.47	60.07	45.15	38.70	35.85	28.83	25.95	15.66	6.60
LBN27900	11.00	11	2	7.99	0.00	7.99	60.07	45.15	38.70	36.34	28.86	26.80	15.66	7.14
LBN27900	11.00	11	3	7.28	0.00	7.28	60.07	45.15	38.70	35.34	27.92	26.41	15.66	6.41
LBN27900	11.00	11	4	8.28	0.00	8.28	60.07	45.15	38.70	36.30	29.59	27.09	15.66	7.44
LBN27900	11.00	15	1	7.52	0.00	7.52	60.07	45.15	38.70	35.85	28.86	26.04	15.66	6.65
LBN27900	11.00	15	2	8.03	0.00	8.03	60.07	45.15	38.70	36.36	28.88	26.88	15.66	7.18
LBN27900	11.00	15	3	7.32	0.00	7.32	60.07	45.15	38.70	35.35	27.94	26.50	15.66	6.45
LBN27900	11.00	15	4	8.32	0.00	8.32	60.07	45.15	38.70	36.31	29.61	27.17	15.66	7.48
LBN27900	11.00	19	1	7.49	0.00	7.49	60.07	45.15	38.70	35.89	28.85	25.95	15.66	6.62
LBN27900	11.00	19	2	8.01	0.00	8.01	60.07	45.15	38.70	36.40	28.88	26.80	15.66	7.16
LBN27900	11.00	19	3	7.30	0.00	7.30	60.07	45.15	38.70	35.39	27.94	26.41	15.66	6.43
LBN27900	11.00	19	4	8.30	0.00	8.30	60.07	45.15	38.70	36.35	29.61	27.09	15.66	7.46
LBR24400	-33.50	3	1	6.44	0.00	6.44	55.44	34.12	33.93	46.06	34.03	22.36	8.91	5.96
LBR24400	-33.50	3	2	7.51	0.00	7.51	55.44	34.12	33.93	47.07	35.30	23.58	8.91	7.19
LBR24400	-33.50	3	3	10.56	0.00	10.56	55.44	34.12	33.93	47.42	37.06	27.81	8.91	11.06
LBR24400	-33.50	3	4	11.61	0.00	11.61	55.44	34.12	33.93	46.62	37.63	29.73	8.91	12.62
LBR24400	-33.50	3	5	11.29	0.00	11.29	55.44	34.12	33.93	46.77	38.22	29.00	8.91	12.12
LBR24400	-33.50	3	6	8.95	0.00	8.95	55.44	34.12	33.93	46.19	36.86	25.44	8.91	8.92
LBR24400	-33.50	7	1	6.44	0.00	6.44	55.44	34.12	33.93	46.10	34.06	22.36	8.91	5.96
LBR24400	-33.50	7	2	7.51	0.00	7.51	55.44	34.12	33.93	47.13	35.35	23.58	8.91	7.19
LBR24400	-33.50	7	3	10.57	0.00	10.57	55.44	34.12	33.93	47.48	37.10	27.81	8.91	11.07
LBR24400	-33.50	7	4	11.61	0.00	11.61	55.44	34.12	33.93	46.68	37.66	29.73	8.91	12.63
LBR24400	-33.50	7	5	11.29	0.00	11.29	55.44	34.12	33.93	46.83	38.24	29.00	8.91	12.13
LBR24400	-33.50	7	6	8.95	0.00	8.95	55.44	34.12	33.93	46.24	36.87	25.44	8.91	8.93
LBR24400	-33.50	11	1	6.44	0.00	6.44	55.44	34.12	33.93	46.10	34.02	22.36	8.91	5.96
LBR24400	-33.50	11	2	7.51	0.00	7.51	55.44	34.12	33.93	47.13	35.31	23.58	8.91	7.19
LBR24400	-33.50	11	3	10.56	0.00	10.56	55.44	34.12	33.93	47.47	37.05	27.81	8.91	11.06
LBR24400	-33.50	11	4	11.61	0.00	11.61	55.44	34.12	33.93	46.68	37.59	29.73	8.91	12.62
LBR24400	-33.50	11	5	11.28	0.00	11.28	55.44	34.12	33.93	46.82	38.16	29.00	8.91	12.12
LBR24400	-33.50	11	6	8.95	0.00	8.95	55.44	34.12	33.93	46.24	36.80	25.44	8.91	8.92
LBR24400	-33.50	15	1	6.45	0.00	6.45	55.44	34.12	33.93	46.17	34.09	22.36	8.91	5.97
LBR24400	-33.50	15	2	7.52	0.00	7.52	55.44	34.12	33.93	47.22	35.41	23.58	8.91	7.20
LBR24400	-33.50	15	3	10.57	0.00	10.57	55.44	34.12	33.93	47.57	37.15	27.81	8.91	11.08
LBR24400	-33.50	15	4	11.62	0.00	11.62	55.44	34.12	33.93	46.77	37.69	29.73	8.91	12.64
LBR24400	-33.50	15	5	11.30	0.00	11.30	55.44	34.12	33.93	46.92	38.26	29.00	8.91	12.14
LBR24400	-33.50	15	6	8.96	0.00	8.96	55.44	34.12	33.93	46.33	36.88	25.44	8.91	8.93
LBY28000	-25.00	1	1	7.63	0.00	7.63	45.12		26.04	46.40		25.79	3.71	9.56
LBY28000	-25.00	1	2	8.27	0.00	8.27	45.12		26.04	45.94		27.30	3.71	10.94
LBY28000	-25.00	1	3	8.32	0.00	8.32	45.12		26.04	46.34		27.38	3.71	11.05
LBY28000	-25.00	1	4	7.40	0.00	7.40	45.12		26.04	42.30		25.69	3.71	9.13
LBY28000	-25.00	1	5	6.83	0.00	6.83	45.12		26.04	41.29		24.67	3.71	8.11
LBY28000	-25.00	1	6	6.64	0.00	6.64	45.12		26.04	42.06		24.24	3.71	7.81
LBY28000	-25.00	5	1	4.73	0.00	4.73	45.12	26.01	26.04	46.35	25.72	25.79	0.85	6.63
LBY28000	-25.00	5	2	5.41	0.00	5.41	45.12	26.01	26.04	45.89	27.25	27.30	0.85	8.08
LBY28000	-25.00	5	3	5.45	0.00	5.45	45.12	26.01	26.04	46.29	27.30	27.38	0.85	8.16
LBY28000	-25.00	5	4	4.96	0.00	4.96	45.12	26.01	26.04	42.25	27.40	25.69	0.85	7.10
LBY28000	-25.00	5	5	4.61	0.00	4.61	45.12	26.01	26.04	41.26	27.30	24.67	0.85	6.41
LBY28000	-25.00	5	6	4.44	0.00	4.44	45.12	26.01	26.04	42.04	26.93	24.24	0.85	6.08
LBY28000	-25.00	9	1	4.75	0.00	4.75	45.12	26.01	26.04	46.42	25.82	25.79	0.85	6.68
LBY28000	-25.00	9	2	5.43	0.00	5.43	45.12	26.01	26.04	45.96	27.35	27.30	0.85	8.13
LBY28000	-25.00	9	3	5.47	0.00	5.47	45.12	26.01	26.04	46.36	27.39	27.38	0.85	8.21
LBY28000	-25.00	9	4	4.98	0.00	4.98	45.12	26.01	26.04	42.32	27.49	25.69	0.85	7.14
LBY28000	-25.00	9	5	4.63	0.00	4.63	45.12	26.01	26.04	41.32	27.40	24.67	0.85	6.44
LBY28000	-25.00	9	6	4.46	0.00	4.46	45.12	26.01	26.04	42.10	27.03	24.24	0.85	6.12
LBY28000	-25.00	13	1	4.72	0.00	4.72	45.12	26.01	26.04	46.39	25.72	25.76	0.85	6.62
LBY28000	-25.00	13	2	5.41	0.00	5.41	45.12	26.01	26.04	45.94	27.26	27.27	0.85	8.07
LBY28000	-25.00	13	3	5.44	0.00	5.44	45.12	26.01	26.04	46.34	27.30	27.35	0.85	8.15
LBY28000	-25.00	13	4	4.95	0.00	4.95	45.12	26.01	26.04	42.27	27.41	25.62	0.85	7.07
LBY28000	-25.00	13	5	4.59	0.00	4.59	45.12	26.01	26.04	41.28	27.30	24.60	0.85	6.37
LBY28000	-25.00	13	6	4.42	0.00	4.42	45.12	26.01	26.04	42.06	26.94	24.17	0.85	6.04
LBY28000	-25.00	17	1	4.73	0.00	4.73	45.12	26.01	26.04	46.55	25.72	25.79	0.85	6.64
LBY28000	-25.00	17	2	5.42	0.00	5.42	45.12	26.01	26.04	46.14	27.26	27.30	0.85	8.09
LBY28000	-25.00	17	3	5.45	0.00	5.45	45.12	26.01	26.04	46.57	27.30	27.38	0.85	8.17
LBY28000	-25.00	17	4	4.97	0.00	4.97	45.12	26.01	26.04	42.44	27.41	25.69	0.85	7.12
LBY28000	-25.00	17	5	4.62	0.00	4.62	45.12	26.01	26.04	41.41	27.31	24.67	0.85	6.42
LBY28000	-25.00	17	6	4.45	0.00	4.45	45.12	26.01	26.04	42.20	26.94	24.24	0.85	6.09
LBY32100	-25.00	3	1	4.26	0.00	4.26	52.61	26.02	26.03	47.35	24.74	24.73	0.99	5.65
LBY32100	-25.00	3	2	4.30	0.00	4.30	52.61	26.02	26.03	48.48	24.97	24.62	0.99	5.72
LBY32100	-25.00	3	3	3.66	0.00	3.66	52.61	26.02	26.03	48.02	24.38	23.16	0.99	4.67
LBY32100	-25.00	3	4	3.60	0.00	3.60	52.61	26.02	26.03	44.95	23.87	23.51	0.99	4.57
LBY32100	-25.00	3	5	3.02	0.00	3.02	52.61	26.02	26.03	38.73	22.17	24.17	0.99	3.69
LBY32100	-25.00	3	6	2.06	0.00	2.06	52.61	26.02	26.03	34.16	20.64	24.46	0.99	2.35
LBY32100	-25.00	7	1	4.31	0.00	4.31	52.61	26.02	26.03	47.44	24.84	24.83	0.99	5.75
LBY32100	-25.00	7	2	4.36	0.00	4.36	52.61	26.02	26.03	48.57	25.07	24.72	0.99	5.82
LBY32100	-25.00	7	3	3.73	0.00	3.73	52.61	26.02	26.03	48.11	24.48	23.26	0.99	4.77
LBY32100	-25.00	7	4	3.67	0.00	3.67	52.61	26.02	26.03	45.05	23.97	23.61	0.99	4.67
LBY32100	-25.00	7	5	3.09	0.00	3.09	52.61	26.02	26.03	38.83	22.27	24.27	0.99	3.79
LBY32100	-25.00	7	6	2.14	0.00	2.14	52.61	26.02	26.03	34.26	20.74	24.56	0.99	2.45
LBY32100	-25.00	11	1	4.26	0.00	4.26	52.61	26.02	26.03	47.41	24.75	24.73	0.99	5.65
LBY32100	-25.00	11	2	4.30	0.00	4.30	52.61	26.02	26.03	48.54	24.97	24.63	0.99	5.73
LBY32100	-25.00	11	3	3.67	0.00	3.67	52.61	26.02	26.03	48.08	24.39	23.16	0.99	4.67
LBY32100	-25.00	11	4	3.61	0.00	3.61	52.61	26.02	26.03	45.03	23.87	23.51	0.99	4.58
LBY32100	-25.00	11	5	3.03	0.00	3.03	52.61	26.02	26.03	38.83	22.17	24.17	0.99	3.70

LBY32100	-25.00	11	6	2.08	0.00	2.08	52.61	26.02	26.03	34.26	20.64	24.46	0.99	2.36
LBY32100	-25.00	15	1	4.28	0.00	4.28	52.61	26.02	26.03	47.54	24.81	24.73	0.99	5.69
LBY32100	-25.00	15	2	4.32	0.00	4.32	52.61	26.02	26.03	48.66	25.04	24.63	0.99	5.76
LBY32100	-25.00	15	3	3.68	0.00	3.68	52.61	26.02	26.03	48.16	24.45	23.16	0.99	4.70
LBY32100	-25.00	15	4	3.62	0.00	3.62	52.61	26.02	26.03	45.12	23.92	23.51	0.99	4.60
LBY32100	-25.00	15	5	3.04	0.00	3.04	52.61	26.02	26.03	38.92	22.20	24.17	0.99	3.72
LBY32100	-25.00	15	6	2.10	0.00	2.10	52.61	26.02	26.03	34.36	20.67	24.46	0.99	2.40
LBY32100	-25.00	19	1	4.32	0.00	4.32	52.54	26.02	26.03	47.47	24.85	24.83	0.99	5.75
LBY32100	-25.00	19	2	4.36	0.00	4.36	52.54	26.02	26.03	48.59	25.07	24.72	0.99	5.83
LBY32100	-25.00	19	3	3.73	0.00	3.73	52.54	26.02	26.03	48.12	24.49	23.26	0.99	4.77
LBY32100	-25.00	19	4	3.67	0.00	3.67	52.54	26.02	26.03	45.16	23.97	23.61	0.99	4.68
LBY32100	-25.00	19	5	3.10	0.00	3.10	52.54	26.02	26.03	39.01	22.27	24.27	0.99	3.80
LBY32100	-25.00	19	6	2.16	0.00	2.16	52.54	26.02	26.03	34.46	20.74	24.56	0.99	2.48
LIE25300	-37.00	3	1	4.08	0.00	4.08	47.14	30.05	28.67	33.11	27.70	22.91	4.07	4.05
LIE25300	-37.00	3	2	4.05	0.00	4.05	47.14	30.05	28.67	33.08	27.69	22.86	4.07	4.01
LIE25300	-37.00	3	3	4.07	0.00	4.07	47.14	30.05	28.67	33.09	27.65	22.92	4.07	4.04
LIE25300	-37.00	3	4	4.13	0.00	4.13	47.14	30.05	28.67	33.17	27.74	22.99	4.07	4.11
LIE25300	-37.00	7	1	4.12	0.00	4.12	47.14	30.05	28.67	33.20	27.79	22.94	4.07	4.10
LIE25300	-37.00	7	2	4.09	0.00	4.09	47.14	30.05	28.67	33.16	27.78	22.89	4.07	4.06
LIE25300	-37.00	7	3	4.12	0.00	4.12	47.14	30.05	28.67	33.18	27.74	22.96	4.07	4.10
LIE25300	-37.00	7	4	4.18	0.00	4.18	47.14	30.05	28.67	33.26	27.83	23.02	4.07	4.17
LIE25300	-37.00	11	1	4.12	0.00	4.12	47.14	30.05	28.67	33.20	27.79	22.93	4.07	4.10
LIE25300	-37.00	11	2	4.09	0.00	4.09	47.14	30.05	28.67	33.16	27.77	22.88	4.07	4.06
LIE25300	-37.00	11	3	4.11	0.00	4.11	47.14	30.05	28.67	33.18	27.74	22.94	4.07	4.09
LIE25300	-37.00	11	4	4.17	0.00	4.17	47.14	30.05	28.67	33.26	27.83	23.01	4.07	4.16
LIE25300	-37.00	15	1	4.18	0.00	4.18	47.14	30.05	28.67	33.33	27.87	22.96	4.07	4.17
LIE25300	-37.00	15	2	4.14	0.00	4.14	47.14	30.05	28.67	33.30	27.86	22.91	4.07	4.13
LIE25300	-37.00	15	3	4.17	0.00	4.17	47.14	30.05	28.67	33.31	27.82	22.97	4.07	4.16
LIE25300	-37.00	15	4	4.23	0.00	4.23	47.14	30.05	28.67	33.39	27.91	23.04	4.07	4.23
LIE25300	-37.00	19	1	4.20	0.00	4.20	47.15	30.05	28.67	33.59	27.87	22.87	4.07	4.19
LIE25300	-37.00	19	2	4.16	0.00	4.16	47.15	30.05	28.67	33.54	27.85	22.82	4.07	4.15
LIE25300	-37.00	19	3	4.19	0.00	4.19	47.15	30.05	28.67	33.57	27.82	22.88	4.07	4.19
LIE25300	-37.00	19	4	4.25	0.00	4.25	47.15	30.05	28.67	33.64	27.91	22.95	4.07	4.26
LSO30500	5.00	24	1	7.17	0.00	7.17	44.23	44.50	43.73	36.74	37.94	23.72	13.01	6.41
LSO30500	5.00	24	2	5.27	0.00	5.27	44.23	44.50	43.73	34.55	35.79	21.80	13.01	4.42
LSO30500	5.00	24	3	5.37	0.00	5.37	44.23	44.50	43.73	34.82	35.96	21.85	13.01	4.52
LSO30500	5.00	24	4	7.36	0.00	7.36	44.23	44.50	43.73	36.78	38.06	23.97	13.01	6.60
LSO30500	5.00	24	5	6.15	0.00	6.15	44.23	44.50	43.73	35.44	36.72	22.73	13.01	5.34
LSO30500	5.00	28	1	7.25	0.00	7.25	44.23	44.50	43.73	37.44	38.03	23.62	13.01	6.49
LSO30500	5.00	28	2	5.35	0.00	5.35	44.23	44.50	43.73	35.25	35.88	21.70	13.01	4.50
LSO30500	5.00	28	3	5.45	0.00	5.45	44.23	44.50	43.73	35.52	36.05	21.75	13.01	4.60
LSO30500	5.00	28	4	7.44	0.00	7.44	44.23	44.50	43.73	37.48	38.15	23.87	13.01	6.69
LSO30500	5.00	28	5	6.24	0.00	6.24	44.23	44.50	43.73	36.14	36.81	22.63	13.01	5.43
LSO30500	5.00	32	1	5.81	0.00	5.81	44.12	44.50	43.73	32.48	37.96	23.72	12.92	4.98
LSO30500	5.00	32	2	3.83	0.00	3.83	44.12	44.50	43.73	30.28	35.81	21.80	12.92	2.93
LSO30500	5.00	32	3	3.98	0.00	3.98	44.12	44.50	43.73	30.55	35.98	21.85	12.92	3.09
LSO30500	5.00	32	4	5.96	0.00	5.96	44.12	44.50	43.73	32.52	38.07	23.97	12.92	5.14
LSO30500	5.00	32	5	4.71	0.00	4.71	44.12	44.50	43.73	31.17	36.73	22.73	12.92	3.85
LSO30500	5.00	36	1	6.97	0.00	6.97	44.23	44.50	43.73	36.16	38.03	23.62	13.01	6.19
LSO30500	5.00	36	2	5.06	0.00	5.06	44.23	44.50	43.73	33.96	35.89	21.70	13.01	4.20
LSO30500	5.00	36	3	5.17	0.00	5.17	44.23	44.50	43.73	34.23	36.05	21.75	13.01	4.31
LSO30500	5.00	36	4	7.16	0.00	7.16	44.23	44.50	43.73	36.19	38.15	23.87	13.01	6.39
LSO30500	5.00	36	5	5.94	0.00	5.94	44.23	44.50	43.73	34.85	36.81	22.63	13.01	5.12
LSO30500	5.00	40	1	7.89	0.00	7.89	44.12	44.50	43.73	31.28	37.94		13.53	7.14
LSO30500	5.00	40	2	5.80	0.00	5.80	44.12	44.50	43.73	29.09	35.80		13.53	4.94
LSO30500	5.00	40	3	6.05	0.00	6.05	44.12	44.50	43.73	29.36	35.96		13.53	5.21
LSO30500	5.00	40	4	7.93	0.00	7.93	44.12	44.50	43.73	31.32	38.06		13.53	7.18
LSO30500	5.00	40	5	6.65	0.00	6.65	44.12	44.50	43.73	29.98	36.72		13.53	5.84
LUX11400	-19.00	3	1	2.27	0.00	2.27	42.86	25.45	28.28	32.58	21.51	24.48	1.31	2.51
LUX11400	-19.00	3	2	0.81	0.00	0.81	42.86	25.45	28.28	30.01	19.77	23.22	1.31	0.65
LUX11400	-19.00	3	3	0.00	-0.01	0.01	42.86	25.45	28.28	28.88	19.25	21.61	1.31	-0.31
LUX11400	-19.00	3	4	-0.52	-0.55	0.03	42.86	25.45	28.28	29.11	18.48	20.43	1.31	-0.91
LUX11400	-19.00	3	5	1.98	0.00	1.98	42.86	25.45	28.28	32.40	21.12	23.97	1.31	2.13
LUX11400	-19.00	3	6	2.23	0.00	2.23	42.86	25.45	28.28	32.65	21.35	24.56	1.31	2.46
LUX11400	-19.00	7	1	2.28	0.00	2.28	42.86	25.45	28.28	32.68	21.51	24.49	1.31	2.53
LUX11400	-19.00	7	2	0.83	0.00	0.83	42.86	25.45	28.28	30.11	19.77	23.23	1.31	0.68
LUX11400	-19.00	7	3	0.02	0.00	0.02	42.86	25.45	28.28	28.97	19.25	21.62	1.31	-0.28
LUX11400	-19.00	7	4	-0.50	-0.53	0.03	42.86	25.45	28.28	29.19	18.49	20.44	1.31	-0.89
LUX11400	-19.00	7	5	2.00	0.00	2.00	42.86	25.45	28.28	32.49	21.12	23.97	1.31	2.16
LUX11400	-19.00	7	6	2.25	0.00	2.25	42.86	25.45	28.28	32.75	21.35	24.56	1.31	2.49
LUX11400	-19.00	11	1	2.28	0.00	2.28	42.86	25.45	28.28	32.67	21.51	24.49	1.31	2.53
LUX11400	-19.00	11	2	0.83	0.00	0.83	42.86	25.45	28.28	30.10	19.77	23.22	1.31	0.68
LUX11400	-19.00	11	3	0.02	0.00	0.02	42.86	25.45	28.28	28.96	19.25	21.62	1.31	-0.28
LUX11400	-19.00	11	4	-0.50	-0.53	0.03	42.86	25.45	28.28	29.19	18.49	20.44	1.31	-0.89
LUX11400	-19.00	11	5	2.00	0.00	2.00	42.86	25.45	28.28	32.48	21.12	23.98	1.31	2.16
LUX11400	-19.00	11	6	2.25	0.00	2.25	42.86	25.45	28.28	32.74	21.35	24.57	1.31	2.48
LUX11400	-19.00	15	1	2.33	0.00	2.33	42.86	25.45	28.28	32.93	21.51	24.49	1.31	2.59
LUX11400	-19.00	15	2	0.89	0.00	0.89	42.86	25.45	28.28	30.38	19.76	23.23	1.31	0.76
LUX11400	-19.00	15	3	0.09	0.00	0.09	42.86	25.45	28.28	29.22	19.25	21.62	1.31	-0.21
LUX11400	-19.00	15	4	-0.45	-0.49	0.04	42.86	25.45	28.28	29.42	18.48	20.44	1.31	-0.83
LUX11400	-19.00	15	5	2.04	0.00	2.04	42.86	25.45	28.28	32.74	21.11	23.98	1.31	2.21
LUX11400	-19.00	15	6	2.29	0.00	2.29	42.86	25.45	28.28	33.00	21.35	24.57	1.31	2.54
LUX11400	-19.00	19	1	2.38	0.00	2.38	42.86	25.45	28.28	33.27	21.50	24.49	1.31	2.66
LUX11400	-19.00	19	2	0.97	0.00	0.97	42.86	25.45	28.28	30.75	19.75	23.22	1.31	0.85
LUX11400	-19.00	19	3	0.16	0.00	0.16	42.86	25.45	28.28	29.56	19.23	21.62	1.31	-0.12
LUX11400	-19.00	19	4	-0.39	-0.43	0.04	42.86	25.45	28.28	29.73	18.47	20.44	1.31	-0.76
LUX11400	-19.00	19	5	2.09	0.00	2.09	42.86	25.45	28.28	33.07	21.10	23.98	1.31	2.28
LUX11400	-19.00	19	6	2.35	0.00	2.35	42.86	25.45	28.28	33.35	21.34	24.57	1.31	2.61
MAU24200	29.00	2	1	5.60	0.00	5.60	35.82	27.23	30.13	35.51	26.81	34.63	1.46	7.77
MAU24200	29.00	2	2	6.73	0.00	6.73	35.82	27.23	30.13	37.63	30.42	36.95	1.46	10.58

MAU24200	29.00	2	3	6.61	0.00	6.61	35.82	27.23	30.13	35.98	33.02	35.31	1.46	10.22
MAU24200	29.00	2	4	5.85	0.00	5.85	35.82	27.23	30.13	35.15	28.36	34.96	1.46	8.31
MAU24200	29.00	2	5	6.43	0.00	6.43	35.82	27.23	30.13	37.03	29.17	36.59	1.46	9.72
MAU24200	29.00	2	6	6.59	0.00	6.59	35.82	27.23	30.13	37.15	30.02	36.93	1.46	10.17
MAU24200	29.00	6	1	5.57	0.00	5.57	35.82	27.23	30.13	35.50	26.72	34.63	1.46	7.72
MAU24200	29.00	6	2	6.72	0.00	6.72	35.82	27.23	30.13	37.63	30.34	36.95	1.46	10.54
MAU24200	29.00	6	3	6.61	0.00	6.61	35.82	27.23	30.13	35.98	32.97	35.31	1.46	10.21
MAU24200	29.00	6	4	5.83	0.00	5.83	35.82	27.23	30.13	35.14	28.27	34.96	1.46	8.27
MAU24200	29.00	6	5	6.42	0.00	6.42	35.82	27.23	30.13	37.03	29.08	36.59	1.46	9.68
MAU24200	29.00	6	6	6.58	0.00	6.58	35.82	27.23	30.13	37.13	29.94	36.92	1.46	10.13
MAU24200	29.00	10	1	5.62	0.00	5.62	35.82	27.23	30.13	35.61	26.82	34.70	1.46	7.82
MAU24200	29.00	10	2	6.75	0.00	6.75	35.82	27.23	30.13	37.73	30.44	37.03	1.46	10.65
MAU24200	29.00	10	3	6.64	0.00	6.64	35.82	27.23	30.13	36.08	33.07	35.39	1.46	10.31
MAU24200	29.00	10	4	5.88	0.00	5.88	35.82	27.23	30.13	35.25	28.37	35.04	1.46	8.37
MAU24200	29.00	10	5	6.45	0.00	6.45	35.82	27.23	30.13	37.13	29.18	36.67	1.46	9.78
MAU24200	29.00	10	6	6.61	0.00	6.61	35.82	27.23	30.13	37.24	30.04	37.01	1.46	10.23
MAU24200	29.00	14	1	5.60	0.00	5.60	35.82	27.23	30.13	35.62	26.73	34.68	1.46	7.77
MAU24200	29.00	14	2	6.75	0.00	6.75	35.82	27.23	30.13	37.76	30.36	37.02	1.46	10.62
MAU24200	29.00	14	3	6.64	0.00	6.64	35.82	27.23	30.13	36.10	33.02	35.38	1.46	10.31
MAU24200	29.00	14	4	5.87	0.00	5.87	35.82	27.23	30.13	35.26	28.29	35.03	1.46	8.35
MAU24200	29.00	14	5	6.44	0.00	6.44	35.82	27.23	30.13	37.14	29.10	36.66	1.46	9.74
MAU24200	29.00	14	6	6.60	0.00	6.60	35.82	27.23	30.13	37.25	29.96	37.00	1.46	10.20
MAU24200	29.00	18	1	5.65	0.00	5.65	35.82	27.23	30.13	35.70	26.84	34.80	1.46	7.87
MAU24200	29.00	18	2	6.78	0.00	6.78	35.82	27.23	30.13	37.85	30.47	37.15	1.46	10.73
MAU24200	29.00	18	3	6.68	0.00	6.68	35.82	27.23	30.13	36.20	33.15	35.51	1.46	10.42
MAU24200	29.00	18	4	5.91	0.00	5.91	35.82	27.23	30.13	35.34	28.40	35.16	1.46	8.44
MAU24200	29.00	18	5	6.48	0.00	6.48	35.82	27.23	30.13	37.23	29.21	36.79	1.46	9.84
MAU24200	29.00	18	6	6.64	0.00	6.64	35.82	27.23	30.13	37.33	30.06	37.12	1.46	10.30
MAU24300	29.00	4	1	4.94	0.00	4.94	35.74	27.38	25.96	35.84	34.62	26.76	0.19	7.88
MAU24300	29.00	4	2	5.30	0.00	5.30	35.74	27.38	25.96	36.45	35.90	27.95	0.19	8.83
MAU24300	29.00	4	3	5.39	0.00	5.39	35.74	27.38	25.96	36.32	35.71	28.67	0.19	9.09
MAU24300	29.00	4	4	5.22	0.00	5.22	35.74	27.38	25.96	35.66	34.97	28.42	0.19	8.60
MAU24300	29.00	4	5	4.55	0.00	4.55	35.74	27.38	25.96	36.59	31.48	25.31	0.19	6.97
MAU24300	29.00	4	6	5.52	0.00	5.52	35.74	27.38	25.96	36.58	35.87	29.27	0.19	9.48
MAU24300	29.00	8	1	4.98	0.00	4.98	35.74	27.38	25.96	35.94	34.72	26.86	0.19	7.98
MAU24300	29.00	8	2	5.33	0.00	5.33	35.74	27.38	25.96	36.55	36.00	28.05	0.19	8.93
MAU24300	29.00	8	3	5.42	0.00	5.42	35.74	27.38	25.96	36.42	35.81	28.77	0.19	9.19
MAU24300	29.00	8	4	5.25	0.00	5.25	35.74	27.38	25.96	35.77	35.07	28.52	0.19	8.70
MAU24300	29.00	8	5	4.60	0.00	4.60	35.74	27.38	25.96	36.69	31.58	25.41	0.19	7.07
MAU24300	29.00	8	6	5.55	0.00	5.55	35.74	27.38	25.96	36.68	35.97	29.37	0.19	9.58
MAU24300	29.00	12	1	4.96	0.00	4.96	35.74	27.38	25.96	35.94	34.69	26.78	0.19	7.93
MAU24300	29.00	12	2	5.32	0.00	5.32	35.74	27.38	25.96	36.55	35.98	27.96	0.19	8.88
MAU24300	29.00	12	3	5.41	0.00	5.41	35.74	27.38	25.96	36.42	35.79	28.69	0.19	9.15
MAU24300	29.00	12	4	5.24	0.00	5.24	35.74	27.38	25.96	35.77	35.06	28.44	0.19	8.66
MAU24300	29.00	12	5	4.57	0.00	4.57	35.74	27.38	25.96	36.69	31.51	25.31	0.19	7.01
MAU24300	29.00	12	6	5.54	0.00	5.54	35.74	27.38	25.96	36.68	35.95	29.29	0.19	9.55
MAU24300	29.00	16	1	5.00	0.00	5.00	35.74	27.38	25.96	36.05	34.77	26.88	0.19	8.03
MAU24300	29.00	16	2	5.35	0.00	5.35	35.74	27.38	25.96	36.65	36.07	28.07	0.19	8.99
MAU24300	29.00	16	3	5.44	0.00	5.44	35.74	27.38	25.96	36.53	35.88	28.79	0.19	9.25
MAU24300	29.00	16	4	5.28	0.00	5.28	35.74	27.38	25.96	35.88	35.14	28.55	0.19	8.77
MAU24300	29.00	16	5	4.61	0.00	4.61	35.74	27.38	25.96	36.79	31.54	25.42	0.19	7.10
MAU24300	29.00	16	6	5.57	0.00	5.57	35.74	27.38	25.96	36.79	36.04	29.40	0.19	9.66
MCO11600	-37.00	21	1	1.06	0.00	1.06	49.18	26.89	28.90	33.32	19.14	22.05	2.67	0.70
MCO11600	-37.00	21	2	1.55	0.00	1.55	49.18	26.89	28.90	33.16	19.92	22.61	2.67	1.28
MCO11600	-37.00	21	3	-6.05	-6.08	0.03	49.18	26.89	28.90	27.03	11.84	13.37	2.67	-6.93
MCO11600	-37.00	21	4	2.67	0.00	2.67	49.18	26.89	28.90	33.57	21.76	23.74	2.67	2.64
MCO11600	-37.00	21	5	1.66	0.00	1.66	49.18	26.89	28.90	33.08	20.34	22.36	2.67	1.41
MCO11600	-37.00	21	6	2.46	0.00	2.46	49.18	26.89	28.90	33.17	21.48	23.58	2.67	2.37
MCO11600	-37.00	25	1	3.03	0.00	3.03	49.18	26.09	28.90	33.11	25.73	22.11	2.17	3.24
MCO11600	-37.00	25	2	3.15	0.00	3.15	49.18	26.09	28.90	32.96	25.40	22.66	2.17	3.39
MCO11600	-37.00	25	3	-3.62	-3.66	0.04	49.18	26.09	28.90	26.81	19.74	13.45	2.17	-4.38
MCO11600	-37.00	25	4	3.58	0.00	3.58	49.18	26.09	28.90	33.35	25.33	23.78	2.17	3.98
MCO11600	-37.00	25	5	3.04	0.00	3.04	49.18	26.09	28.90	32.89	25.34	22.42	2.17	3.25
MCO11600	-37.00	25	6	3.37	0.00	3.37	49.18	26.09	28.90	32.98	24.95	23.62	2.17	3.70
MCO11600	-37.00	29	1	2.97	0.00	2.97	43.15	26.09	28.90	33.11	25.73	22.11	1.92	3.24
MCO11600	-37.00	29	2	3.08	0.00	3.08	43.15	26.09	28.90	32.95	25.40	22.66	1.92	3.39
MCO11600	-37.00	29	3	-3.61	-3.65	0.04	43.15	26.09	28.90	26.96	19.74	13.45	1.92	-4.36
MCO11600	-37.00	29	4	3.51	0.00	3.51	43.15	26.09	28.90	33.35	25.32	23.77	1.92	3.98
MCO11600	-37.00	29	5	2.98	0.00	2.98	43.15	26.09	28.90	32.91	25.34	22.42	1.92	3.25
MCO11600	-37.00	29	6	3.30	0.00	3.30	43.15	26.09	28.90	32.97	24.95	23.61	1.92	3.69
MCO11600	-37.00	33	1	3.00	0.00	3.00	43.15	26.09	28.90	33.42	25.46	22.17	1.92	3.29
MCO11600	-37.00	33	2	3.11	0.00	3.11	43.15	26.09	28.90	33.26	25.15	22.71	1.92	3.43
MCO11600	-37.00	33	3	-3.57	-3.62	0.05	43.15	26.09	28.90	27.22	19.34	13.54	1.92	-4.32
MCO11600	-37.00	33	4	3.53	0.00	3.53	43.15	26.09	28.90	33.66	25.08	23.81	1.92	4.01
MCO11600	-37.00	33	5	2.99	0.00	2.99	43.15	26.09	28.90	33.16	25.05	22.48	1.92	3.27
MCO11600	-37.00	33	6	3.32	0.00	3.32	43.15	26.09	28.90	33.22	24.73	23.65	1.92	3.71
MCO11600	-37.00	37	1	2.99	0.00	2.99	43.15	26.09	28.90	33.11	25.74	22.17	1.92	3.28
MCO11600	-37.00	37	2	3.11	0.00	3.11	43.15	26.09	28.90	32.96	25.40	22.75	1.92	3.44
MCO11600	-37.00	37	3	-3.59	-3.64	0.05	43.15	26.09	28.90	26.76	19.73	13.53	1.92	-4.34
MCO11600	-37.00	37	4	3.52	0.00	3.52	43.15	26.09	28.90	33.35	25.32	23.83	1.92	4.00
MCO11600	-37.00	37	5	2.99	0.00	2.99	43.15	26.09	28.90	32.88	25.34	22.48	1.92	3.27
MCO11600	-37.00	37	6	3.30	0.00	3.30	43.15	26.09	28.90	32.97	24.95	23.62	1.92	3.69
MDG23600	29.00	1	1	6.99	0.00	6.99	35.57		27.52	36.53		28.53	2.53	9.52
MDG23600	29.00	1	2	7.27	0.00	7.27	35.57		27.52	37.58		28.84	2.53	10.18
MDG23600	29.00	1	3	7.17	0.00	7.17	35.57		27.52	36.86		29.02	2.53	9.93
MDG23600	29.00	1	4	7.56	0.00	7.56	35.57		27.52	37.91		30.00	2.53	10.94
MDG23600	29.00	1	5	7.86	0.00	7.86	35.57		27.52	38.77		30.89	2.53	11.82
MDG23600	29.00	1	6	7.45	0.00	7.45	35.57		27.52	37.03		30.38	2.53	10.64
MDG23600	29.00	5	1	4.62	0.00	4.62	35.57	26.68	27.52	36.62	26.01	28.63	0.47	6.80
MDG23600	29.00	5	2	5.17	0.00	5.17	35.57	26.68	27.52	37.67	27.97	28.94	0.47	8.03
MDG23600	29.00	5	3	5.27	0.00	5.27	35.57	26.68	27.52	36.95	29.12	29.12	0.47	8.29

MDG23600	29.00	5	4	5.58	0.00	5.58	35.57	26.68	27.52	38.00	29.55	30.09	0.47	9.10
MDG23600	29.00	5	5	5.94	0.00	5.94	35.57	26.68	27.52	38.86	31.10	30.99	0.47	10.21
MDG23600	29.00	5	6	5.60	0.00	5.60	35.57	26.68	27.52	37.12	30.40	30.48	0.47	9.18
MDG23600	29.00	9	1	4.59	0.00	4.59	35.57	26.68	27.52	36.62	25.92	28.54	0.47	6.73
MDG23600	29.00	9	2	5.14	0.00	5.14	35.57	26.68	27.52	37.67	27.88	28.85	0.47	7.97
MDG23600	29.00	9	3	5.25	0.00	5.25	35.57	26.68	27.52	36.95	29.05	29.04	0.47	8.24
MDG23600	29.00	9	4	5.56	0.00	5.56	35.57	26.68	27.52	38.00	29.46	30.01	0.47	9.05
MDG23600	29.00	9	5	5.92	0.00	5.92	35.57	26.68	27.52	38.86	31.02	30.91	0.47	10.16
MDG23600	29.00	9	6	5.59	0.00	5.59	35.57	26.68	27.52	37.12	30.32	30.40	0.47	9.13
MDG23600	29.00	13	1	4.63	0.00	4.63	35.57	26.68	27.52	36.72	26.02	28.64	0.47	6.83
MDG23600	29.00	13	2	5.18	0.00	5.18	35.57	26.68	27.52	37.77	27.98	28.95	0.47	8.07
MDG23600	29.00	13	3	5.29	0.00	5.29	35.57	26.68	27.52	37.05	29.14	29.14	0.47	8.34
MDG23600	29.00	13	4	5.59	0.00	5.59	35.57	26.68	27.52	38.10	29.56	30.11	0.47	9.14
MDG23600	29.00	13	5	5.95	0.00	5.95	35.57	26.68	27.52	38.96	31.12	31.01	0.47	10.26
MDG23600	29.00	13	6	5.62	0.00	5.62	35.57	26.68	27.52	37.22	30.42	30.50	0.47	9.23
MDG23600	29.00	17	1	4.61	0.00	4.61	35.57	26.68	27.52	36.76	25.93	28.56	0.47	6.78
MDG23600	29.00	17	2	5.16	0.00	5.16	35.57	26.68	27.52	37.82	27.89	28.86	0.47	8.02
MDG23600	29.00	17	3	5.28	0.00	5.28	35.57	26.68	27.52	37.09	29.06	29.05	0.47	8.30
MDG23600	29.00	17	4	5.58	0.00	5.58	35.57	26.68	27.52	38.14	29.47	30.03	0.47	9.10
MDG23600	29.00	17	5	5.94	0.00	5.94	35.57	26.68	27.52	39.00	31.03	30.92	0.47	10.22
MDG23600	29.00	17	6	5.61	0.00	5.61	35.57	26.68	27.52	37.26	30.34	30.42	0.47	9.20
MLA22700	86.00	16	1	6.40	0.00	6.40	75.50	29.07	25.16	53.63	26.58	31.40	1.68	9.30
MLA22700	86.00	16	2	6.34	0.00	6.34	75.50	29.07	25.16	53.95	26.48	31.04	1.68	9.14
MLA22700	86.00	16	3	6.51	0.00	6.51	75.50	29.07	25.16	54.55	26.74	31.97	1.68	9.57
MLA22700	86.00	16	4	6.67	0.00	6.67	75.50	29.07	25.16	54.67	27.04	32.78	1.68	9.97
MLA22700	86.00	16	5	6.45	0.00	6.45	75.50	29.07	25.16	53.88	26.63	31.67	1.68	9.41
MLA22700	86.00	16	6	6.69	0.00	6.69	75.50	29.07	25.16	54.40	27.32	32.10	1.68	10.03
MLA22700	86.00	18	1	8.51	0.00	8.51	45.83	25.15	45.25	44.88	31.47	35.43	2.88	13.19
MLA22700	86.00	18	2	7.29	0.00	7.29	45.83	25.15	45.25	36.71	31.11	32.78	2.88	9.77
MLA22700	86.00	18	3	6.86	0.00	6.86	45.83	25.15	45.25	34.51	32.04	33.95	2.88	8.87
MLA22700	86.00	18	4	8.13	0.00	8.13	45.83	25.15	45.25	38.73	32.86	36.07	2.88	11.93
MLA22700	86.00	18	5	8.76	0.00	8.76	45.83	25.15	45.25	47.54	31.74	37.62	2.88	14.21
MLA22700	86.00	18	6	8.82	0.00	8.82	45.83	25.15	45.25	47.03	32.18	37.75	2.88	14.46
MLA22700	86.00	20	1	15.04	0.00	15.04	45.82	45.24	45.47	45.00	35.40	35.54	14.51	15.15
MLA22700	86.00	20	2	10.82	0.00	10.82	45.82	45.24	45.47	36.73	32.75	32.83	14.51	10.21
MLA22700	86.00	20	3	9.88	0.00	9.88	45.82	45.24	45.47	34.52	33.92	34.01	14.51	9.19
MLA22700	86.00	20	4	13.08	0.00	13.08	45.82	45.24	45.47	38.76	36.04	36.16	14.51	12.76
MLA22700	86.00	20	5	16.74	0.00	16.74	45.82	45.24	45.47	47.75	37.60	37.79	14.51	17.51
MLA22700	86.00	20	6	16.71	0.00	16.71	45.82	45.24	45.47	47.20	37.73	37.91	14.51	17.46
MLA22700	86.00	22	1	15.03	0.00	15.03	45.82	45.45	45.47	44.85	35.51	35.46	14.54	15.12
MLA22700	86.00	22	2	10.82	0.00	10.82	45.82	45.45	45.47	36.71	32.80	32.79	14.54	10.20
MLA22700	86.00	22	3	9.87	0.00	9.87	45.82	45.45	45.47	34.51	33.98	33.96	14.54	9.18
MLA22700	86.00	22	4	13.07	0.00	13.07	45.82	45.45	45.47	38.72	36.13	36.08	14.54	12.74
MLA22700	86.00	22	5	16.71	0.00	16.71	45.82	45.45	45.47	47.48	37.76	37.64	14.54	17.45
MLA22700	86.00	22	6	16.69	0.00	16.69	45.82	45.45	45.47	46.99	37.89	37.78	14.54	17.41
MLA22700	86.00	24	1	14.31	0.00	14.31	42.16	45.45	78.07	41.19	35.53	63.05	11.85	15.19
MLA22700	86.00	24	2	10.93	0.00	10.93	42.16	45.45	78.07	35.90	32.86	64.14	11.85	10.70
MLA22700	86.00	24	3	9.82	0.00	9.82	42.16	45.45	78.07	34.04	34.04	64.57	11.85	9.40
MLA22700	86.00	24	4	12.57	0.00	12.57	42.16	45.45	78.07	37.60	36.15	64.48	11.85	12.73
MLA22700	86.00	24	5	15.11	0.00	15.11	42.16	45.45	78.07	42.06	37.71	63.21	11.85	16.50
MLA22700	86.00	24	6	15.28	0.00	15.28	42.16	45.45	78.07	42.43	37.85	63.71	11.85	16.80
MLA22800	86.00	2	1	8.47	0.00	8.47	45.21	57.59	27.66	40.35	43.86	27.06	5.20	9.87
MLA22800	86.00	2	2	8.03	0.00	8.03	45.21	57.59	27.66	48.10	41.23	25.38	5.20	9.13
MLA22800	86.00	2	3	8.89	0.00	8.89	45.21	57.59	27.66	49.00	39.14	27.03	5.20	10.61
MLA22800	86.00	2	4	9.50	0.00	9.50	45.21	57.59	27.66	46.99	45.51	28.27	5.20	11.85
MLA22800	86.00	2	5	9.09	0.00	9.09	45.21	57.59	27.66	40.96	47.05	28.34	5.20	11.01
MLA22800	86.00	4	1	7.47	0.00	7.47	45.21	27.64	30.32	40.38	27.04	35.78	3.47	9.50
MLA22800	86.00	4	2	7.16	0.00	7.16	45.21	27.64	30.32	48.20	25.35	36.46	3.47	8.90
MLA22800	86.00	4	3	7.83	0.00	7.83	45.21	27.64	30.32	48.89	27.01	35.22	3.47	10.24
MLA22800	86.00	4	4	8.36	0.00	8.36	45.21	27.64	30.32	47.11	28.25	38.01	3.47	11.50
MLA22800	86.00	4	5	8.03	0.00	8.03	45.21	27.64	30.32	40.99	28.31	37.97	3.47	10.70
MLA22800	86.00	6	1	7.48	0.00	7.48	45.21	30.30	27.66	40.35	35.75	27.06	3.47	9.51
MLA22800	86.00	6	2	7.18	0.00	7.18	45.21	30.30	27.66	48.07	36.43	25.38	3.47	8.92
MLA22800	86.00	6	3	7.84	0.00	7.84	45.21	30.30	27.66	48.95	35.19	27.03	3.47	10.27
MLA22800	86.00	6	4	8.36	0.00	8.36	45.21	30.30	27.66	46.97	37.98	28.27	3.47	11.51
MLA22800	86.00	6	5	8.04	0.00	8.04	45.21	30.30	27.66	40.95	37.94	28.34	3.47	10.71
MLA22800	86.00	8	1	7.52	0.00	7.52	45.22	27.64	30.32	40.47	27.13	35.88	3.47	9.59
MLA22800	86.00	8	2	7.22	0.00	7.22	45.22	27.64	30.32	48.44	25.45	36.55	3.47	9.00
MLA22800	86.00	8	3	7.88	0.00	7.88	45.22	27.64	30.32	49.30	27.11	35.29	3.47	10.35
MLA22800	86.00	8	4	8.40	0.00	8.40	45.22	27.64	30.32	47.49	28.35	38.10	3.47	11.62
MLA22800	86.00	8	5	8.07	0.00	8.07	45.22	27.64	30.32	41.08	28.41	38.07	3.47	10.80
MLD30600	44.00	12	1	13.80	0.00	13.80	76.71	35.60	34.53	49.02	33.81	37.11	10.02	15.62
MLD30600	44.00	12	2	11.97	0.00	11.97	76.71	35.60	34.53	47.20	31.60	32.46	10.02	12.60
MLD30600	44.00	12	3	13.34	0.00	13.34	76.71	35.60	34.53	50.04	32.91	35.78	10.02	14.76
MLD30600	44.00	12	4	12.47	0.00	12.47	76.71	35.60	34.53	50.21	31.58	33.88	10.02	13.34
MLD30600	44.00	12	5	14.27	0.00	14.27	76.71	35.60	34.53	50.15	34.65	38.18	10.02	16.55
MLD30600	44.00	12	6	13.16	0.00	13.16	76.71	35.60	34.53	51.48	33.95	33.46	10.02	14.46
MLD30600	44.00	16	1	14.13	0.00	14.13	79.80	35.60	34.53	51.56	33.81	38.74	10.03	16.26
MLD30600	44.00	16	2	13.07	0.00	13.07	79.80	35.60	34.53	50.16	31.60	37.50	10.03	14.31
MLD30600	44.00	16	3	13.88	0.00	13.88	79.80	35.60	34.53	52.53	32.91	39.21	10.03	15.76
MLD30600	44.00	16	4	13.35	0.00	13.35	79.80	35.60	34.53	53.00	31.58	39.74	10.03	14.79
MLD30600	44.00	16	5	14.50	0.00	14.50	79.80	35.60	34.53	52.34	34.65	39.36	10.03	17.05
MLD30600	44.00	16	6	14.50	0.00	14.50	79.80	35.60	34.53	54.44	33.95	41.61	10.03	17.06
MLI32700	-37.00	2	1	4.68	0.00	4.68	57.73	23.22	23.06	51.65	31.07	36.59	-1.88	13.81
MLI32700	-37.00	2	2	4.61	0.00	4.61	57.73	23.22	23.06	47.89	31.43	34.12	-1.88	13.18
MLI32700	-37.00	2	3	4.50	0.00	4.50	57.73	23.22	23.06	44.85	30.95	33.16	-1.88	12.26
MLI32700	-37.00	2	4	4.45	0.00	4.45	57.73	23.22	23.06	49.38	29.37	33.94	-1.88	11.87
MLI32700	-37.00	2	5	4.28	0.00	4.28	57.73	23.22	23.06	51.58	28.84	31.38	-1.88	10.82
MLI32700	-37.00	6	1	4.67	0.00	4.67	57.73	23.22	23.06	51.61	30.97	36.49	-1.88	13.71
MLI32700	-37.00	6	2	4.60	0.00	4.60	57.73	23.22	23.06	47.85	31.33	34.03	-1.88	13.08

MLI32700	-37.00	6	3	4.49	0.00	4.49	57.73	23.22	23.06	44.83	30.85	33.06	-1.88	12.17
MLI32700	-37.00	6	4	4.44	0.00	4.44	57.73	23.22	23.06	49.34	29.27	33.85	-1.88	11.78
MLI32700	-37.00	6	5	4.26	0.00	4.26	57.73	23.22	23.06	51.51	28.74	31.28	-1.88	10.72
MLI32700	-37.00	10	1	4.67	0.00	4.67	57.73	23.22	23.06	51.53	30.97	36.49	-1.88	13.71
MLI32700	-37.00	10	2	4.60	0.00	4.60	57.73	23.22	23.06	47.80	31.33	34.03	-1.88	13.08
MLI32700	-37.00	10	3	4.49	0.00	4.49	57.73	23.22	23.06	44.75	30.85	33.06	-1.88	12.16
MLI32700	-37.00	10	4	4.44	0.00	4.44	57.73	23.22	23.06	49.27	29.27	33.85	-1.88	11.78
MLI32700	-37.00	10	5	4.26	0.00	4.26	57.73	23.22	23.06	51.45	28.74	31.28	-1.88	10.72
MLI32700	-37.00	14	1	4.66	0.00	4.66	57.73	23.22	23.06	51.65	30.87	36.39	-1.88	13.62
MLI32700	-37.00	14	2	4.59	0.00	4.59	57.73	23.22	23.06	47.89	31.23	33.93	-1.88	12.99
MLI32700	-37.00	14	3	4.48	0.00	4.48	57.73	23.22	23.06	44.72	30.76	32.97	-1.88	12.07
MLI32700	-37.00	14	4	4.42	0.00	4.42	57.73	23.22	23.06	49.33	29.17	33.75	-1.88	11.68
MLI32700	-37.00	14	5	4.25	0.00	4.25	57.73	23.22	23.06	51.61	28.64	31.18	-1.88	10.63
MLI32700	-37.00	18	1	4.66	0.00	4.66	57.73	23.22	23.06	51.60	30.77	36.55	-1.88	13.57
MLI32700	-37.00	18	2	4.59	0.00	4.59	57.73	23.22	23.06	47.73	31.13	34.08	-1.88	12.97
MLI32700	-37.00	18	3	4.47	0.00	4.47	57.73	23.22	23.06	44.71	30.66	33.06	-1.88	12.05
MLI32700	-37.00	18	4	4.42	0.00	4.42	57.73	23.22	23.06	49.31	29.08	33.86	-1.88	11.64
MLI32700	-37.00	18	5	4.24	0.00	4.24	57.73	23.22	23.06	51.58	28.54	31.25	-1.88	10.59
MLI32800	-37.00	4	1	3.98	0.00	3.98	40.04	27.74	25.83	42.54	24.21	24.47	1.08	5.12
MLI32800	-37.00	4	2	3.78	0.00	3.78	40.04	27.74	25.83	44.30	23.98	23.88	1.08	4.79
MLI32800	-37.00	4	3	4.15	0.00	4.15	40.04	27.74	25.83	45.33	25.64	23.63	1.08	5.40
MLI32800	-37.00	4	4	6.48	0.00	6.48	40.04	27.74	25.83	41.36	34.57	28.60	1.08	10.59
MLI32800	-37.00	4	5	6.35	0.00	6.35	40.04	27.74	25.83	42.22	32.10	28.50	1.08	10.19
MLI32800	-37.00	4	6	5.34	0.00	5.34	40.04	27.74	25.83	41.60	28.21	26.24	1.08	7.64
MLI32800	-37.00	8	1	4.01	0.00	4.01	40.04	27.74	25.83	42.62	24.21	24.57	1.08	5.17
MLI32800	-37.00	8	2	3.81	0.00	3.81	40.04	27.74	25.83	44.38	23.98	23.98	1.08	4.85
MLI32800	-37.00	8	3	4.19	0.00	4.19	40.04	27.74	25.83	45.42	25.64	23.73	1.08	5.46
MLI32800	-37.00	8	4	6.51	0.00	6.51	40.04	27.74	25.83	41.45	34.57	28.70	1.08	10.67
MLI32800	-37.00	8	5	6.38	0.00	6.38	40.04	27.74	25.83	42.31	32.10	28.60	1.08	10.26
MLI32800	-37.00	8	6	5.37	0.00	5.37	40.04	27.74	25.83	41.68	28.21	26.34	1.08	7.70
MLI32800	-37.00	12	1	3.98	0.00	3.98	40.04	27.74	25.83	42.55	24.21	24.47	1.08	5.12
MLI32800	-37.00	12	2	3.78	0.00	3.78	40.04	27.74	25.83	44.31	23.98	23.88	1.08	4.79
MLI32800	-37.00	12	3	4.15	0.00	4.15	40.04	27.74	25.83	45.35	25.64	23.63	1.08	5.40
MLI32800	-37.00	12	4	6.48	0.00	6.48	40.04	27.74	25.83	41.36	34.57	28.60	1.08	10.59
MLI32800	-37.00	12	5	6.35	0.00	6.35	40.04	27.74	25.83	42.22	32.10	28.50	1.08	10.19
MLI32800	-37.00	12	6	5.34	0.00	5.34	40.04	27.74	25.83	41.60	28.21	26.24	1.08	7.64
MLI32800	-37.00	16	1	3.98	0.00	3.98	40.04	27.74	25.83	42.58	24.21	24.47	1.08	5.13
MLI32800	-37.00	16	2	3.78	0.00	3.78	40.04	27.74	25.83	44.35	23.98	23.88	1.08	4.80
MLI32800	-37.00	16	3	4.15	0.00	4.15	40.04	27.74	25.83	45.39	25.64	23.63	1.08	5.40
MLI32800	-37.00	16	4	6.48	0.00	6.48	40.04	27.74	25.83	41.38	34.57	28.60	1.08	10.60
MLI32800	-37.00	16	5	6.35	0.00	6.35	40.04	27.74	25.83	42.24	32.10	28.51	1.08	10.19
MLI32800	-37.00	16	6	5.34	0.00	5.34	40.04	27.74	25.83	41.62	28.21	26.24	1.08	7.64
MLI32800	-37.00	20	1	3.88	0.00	3.88	40.04	27.78	31.13	42.55	24.31	22.35	3.14	4.05
MLI32800	-37.00	20	2	4.19	0.00	4.19	40.04	27.78	31.13	44.32	24.29	22.98	3.14	4.46
MLI32800	-37.00	20	3	6.42	0.00	6.42	40.04	27.78	31.13	45.36	28.99	25.68	3.14	7.82
MLI32800	-37.00	20	4	6.97	0.00	6.97	40.04	27.78	31.13	41.37	34.70	26.05	3.14	8.84
MLI32800	-37.00	20	5	7.18	0.00	7.18	40.04	27.78	31.13	42.23	32.17	26.98	3.14	9.25
MLI32800	-37.00	20	6	5.72	0.00	5.72	40.04	27.78	31.13	41.61	28.28	24.58	3.14	6.67
MLT14700	-13.00	4	1	6.78	0.00	6.78	62.78	39.49	34.96	35.85	28.72	24.93	11.62	6.08
MLT14700	-13.00	8	1	6.75	0.00	6.75	62.78	39.49	34.96	35.84	28.65	24.89	11.62	6.04
MLT14700	-13.00	12	1	6.78	0.00	6.78	62.78	39.49	34.96	35.89	28.75	24.90	11.62	6.08
MLT14700	-13.00	16	1	6.86	0.00	6.86	62.78	39.49	34.96	35.91	28.85	24.99	11.62	6.16
MNG24800	74.00	25	1	10.64	0.00	10.64	44.22	49.55	73.92	39.20	27.65	57.65	14.02	10.06
MNG24800	74.00	25	2	12.28	0.00	12.28	44.22	49.55	73.92	40.88	29.57	66.51	14.02	11.90
MNG24800	74.00	25	3	12.61	0.00	12.61	44.22	49.55	73.92	48.01	28.59	68.11	14.02	12.29
MNG24800	74.00	25	4	12.11	0.00	12.11	44.22	49.55	73.92	47.86	27.98	65.43	14.02	11.70
MNG24800	74.00	25	5	10.86	0.00	10.86	44.22	49.55	73.92	40.98	27.38	49.51	14.02	10.30
MNG24800	74.00	25	6	11.49	0.00	11.49	44.22	49.55	73.92	43.75	27.63	54.11	14.02	11.00
MNG24800	74.00	29	1	13.77	-0.72	14.49	43.45	68.52	73.92	38.07	42.39	57.75	13.45	13.82
MNG24800	74.00	29	2	19.79	0.00	19.79	43.45	68.52	73.92	54.76	46.02	66.61	13.45	27.34
MNG24800	74.00	29	3	19.66	0.00	19.66	43.45	68.52	73.92	51.93	47.95	68.21	13.45	26.47
MNG24800	74.00	29	4	18.63	0.00	18.63	43.45	68.52	73.92	46.95	46.79	65.52	13.45	22.28
MNG24800	74.00	29	5	14.47	-0.75	15.22	43.45	68.52	73.92	39.26	40.65	49.61	13.45	14.73
MNG24800	74.00	29	6	16.41	0.00	16.41	43.45	68.52	73.92	42.07	43.86	54.21	13.45	17.60
MNG24800	74.00	33	1	13.77	-1.62	15.39	43.45	68.52	74.08	38.07	42.39	57.75	13.45	13.82
MNG24800	74.00	33	2	19.79	0.00	19.79	43.45	68.52	74.08	54.76	46.02	66.61	13.45	27.34
MNG24800	74.00	33	3	19.66	0.00	19.66	43.45	68.52	74.08	51.93	47.95	68.21	13.45	26.47
MNG24800	74.00	33	4	18.63	0.00	18.63	43.45	68.52	74.08	46.95	46.79	65.52	13.45	22.28
MNG24800	74.00	33	5	14.47	-1.60	16.07	43.45	68.52	74.08	39.26	40.65	49.61	13.45	14.73
MNG24800	74.00	33	6	16.41	-0.39	16.80	43.45	68.52	74.08	42.07	43.86	54.21	13.45	17.60
MNG24800	74.00	37	1	13.85	0.00	13.85	43.45	68.52	74.08	38.17	42.49	57.85	13.45	13.92
MNG24800	74.00	37	2	19.81	0.00	19.81	43.45	68.52	74.08	54.86	46.12	66.71	13.45	27.44
MNG24800	74.00	37	3	19.68	0.00	19.68	43.45	68.52	74.08	52.03	48.05	68.31	13.45	26.57
MNG24800	74.00	37	4	18.66	0.00	18.66	43.45	68.52	74.08	47.05	46.89	65.61	13.45	22.38
MNG24800	74.00	37	5	14.54	0.00	14.54	43.45	68.52	74.08	39.36	40.75	49.71	13.45	14.83
MNG24800	74.00	37	6	16.47	0.00	16.47	43.45	68.52	74.08	42.17	43.96	54.30	13.45	17.70
MNG24800	74.00	39	1	13.48	0.00	13.48	43.34	74.07	68.54	37.72	57.82	42.51	13.34	13.49
MNG24800	74.00	39	2	15.88	0.00	15.88	43.34	74.07	68.54	41.01	66.68	46.14	13.34	16.80
MNG24800	74.00	39	3	18.79	0.00	18.79	43.34	74.07	68.54	47.62	68.29	48.08	13.34	23.03
MNG24800	74.00	39	4	18.41	0.00	18.41	43.34	74.07	68.54	46.46	65.58	46.91	13.34	21.87
MNG24800	74.00	39	5	14.48	0.00	14.48	43.34	74.07	68.54	39.31	49.68	40.77	13.34	14.79
MNG24800	74.00	39	6	16.40	0.00	16.40	43.34	74.07	68.54	42.11	54.28	43.99	13.34	17.65
MOZ30700	-1.00	4	1	5.84	0.00	5.84	68.32	25.37	25.35	43.08	26.97	40.31	0.35	10.18
MOZ30700	-1.00	4	2	6.24	0.00	6.24	68.32	25.37	25.35	44.28	28.67	40.29	0.35	11.73
MOZ30700	-1.00	4	3	4.19	0.00	4.19	68.32	25.37	25.35	43.60	29.76	23.10	0.35	6.05
MOZ30700	-1.00	4	4	4.37	0.00	4.37	68.32	25.37	25.35	43.27	22.72	40.22	0.35	6.41
MOZ30700	-1.00	4	5	5.22	0.00	5.22	68.32	25.37	25.35	43.75	24.77	41.20	0.35	8.35
MOZ30700	-1.00	8	1	5.80	0.00	5.80	68.33	25.33	25.35	43.00	26.87	40.28	0.33	10.08
MOZ30700	-1.00	8	2	6.21	0.00	6.21	68.33	25.33	25.35	44.20	28.57	40.26	0.33	11.64
MOZ30700	-1.00	8	3	4.13	0.00	4.13	68.33	25.33	25.35	43.51	29.66	23.00	0.33	5.95

MOZ30700	-1.00	8	4	4.31	0.00	4.31	68.33	25.33	25.35	43.18	22.62	40.19	0.33	6.32
MOZ30700	-1.00	8	5	5.17	0.00	5.17	68.33	25.33	25.35	43.66	24.67	41.17	0.33	8.25
MOZ30700	-1.00	12	1	7.72	0.00	7.72	77.43	25.33	62.72	43.06	26.97	40.29	3.33	10.17
MOZ30700	-1.00	12	2	8.35	0.00	8.35	77.43	25.33	62.72	44.25	28.67	40.27	3.33	11.72
MOZ30700	-1.00	12	3	5.32	0.00	5.32	77.43	25.33	62.72	43.56	29.76	23.00	3.33	5.97
MOZ30700	-1.00	12	4	5.62	0.00	5.62	77.43	25.33	62.72	43.23	22.72	40.20	3.33	6.41
MOZ30700	-1.00	12	5	6.80	0.00	6.80	77.43	25.33	62.72	43.72	24.77	41.18	3.33	8.34
MOZ30700	-1.00	16	1	7.74	0.00	7.74	68.32	45.10	25.40	43.13	26.97	40.47	3.35	10.19
MOZ30700	-1.00	16	2	8.37	0.00	8.37	68.32	45.10	25.40	44.33	28.67	40.43	3.35	11.75
MOZ30700	-1.00	16	3	5.39	0.00	5.39	68.32	45.10	25.40	43.64	29.76	23.10	3.35	6.06
MOZ30700	-1.00	16	4	5.63	0.00	5.63	68.32	45.10	25.40	43.30	22.72	40.37	3.35	6.42
MOZ30700	-1.00	16	5	6.81	0.00	6.81	68.32	45.10	25.40	43.79	24.77	41.36	3.35	8.35
MOZ30700	-1.00	20	1	5.83	0.00	5.83	68.31	25.33	25.35	43.02	26.97	40.56	0.33	10.18
MOZ30700	-1.00	20	2	6.14	0.00	6.14	68.31	25.33	25.35	44.21	28.68	36.07	0.33	11.35
MOZ30700	-1.00	20	3	4.95	0.00	4.95	68.31	25.33	25.35	43.52	29.77	25.34	0.33	7.70
MOZ30700	-1.00	20	4	4.24	0.00	4.24	68.31	25.33	25.35	43.19	22.72	33.80	0.33	6.17
MOZ30700	-1.00	20	5	5.19	0.00	5.19	68.31	25.33	25.35	43.69	24.77	39.68	0.33	8.31
MRA33200	122.00	3	1	4.23	0.00	4.23	52.76	60.37	61.17	28.02	27.11	47.81	22.55	3.24
MRA33200	122.00	3	2	8.55	0.00	8.55	52.76	60.37	61.17	37.77	24.79	53.58	22.55	7.59
MRA33200	122.00	3	3	6.96	0.00	6.96	52.76	60.37	61.17	35.54	23.41	50.63	22.55	5.99
MRA33200	122.00	7	1	4.21	0.00	4.21	52.76	60.37	61.23	28.02	27.01	47.89	22.55	3.23
MRA33200	122.00	7	2	8.48	0.00	8.48	52.76	60.37	61.23	37.77	24.69	53.65	22.55	7.51
MRA33200	122.00	7	3	6.89	0.00	6.89	52.76	60.37	61.23	35.54	23.31	50.71	22.55	5.91
MRA33200	122.00	11	1	4.23	0.00	4.23	52.76	60.97	62.16	28.02	27.11	48.07	22.58	3.24
MRA33200	122.00	11	2	8.56	0.00	8.56	52.76	60.97	62.16	37.78	24.79	53.85	22.58	7.59
MRA33200	122.00	11	3	6.97	0.00	6.97	52.76	60.97	62.16	35.55	23.41	50.90	22.58	5.99
MRA33200	122.00	15	1	4.14	0.00	4.14	52.80	62.39	62.40	27.94	27.01	52.72	22.65	3.16
MRA33200	122.00	15	2	8.47	0.00	8.47	52.80	62.39	62.40	37.72	24.69	58.68	22.65	7.50
MRA33200	122.00	15	3	6.88	0.00	6.88	52.80	62.39	62.40	35.50	23.31	55.77	22.65	5.91
MRA33200	122.00	19	1	11.99	0.00	11.99	58.77	60.91	61.53	51.67	27.12	53.44	28.05	11.01
MRA33200	122.00	19	2	9.64	0.00	9.64	58.77	60.91	61.53	47.83	24.79	59.36	28.05	8.65
MRA33200	122.00	19	3	8.23	0.00	8.23	58.77	60.91	61.53	45.30	23.41	56.48	28.05	7.24
MRA33201	122.00	3	1	4.24	0.00	4.24	66.11	86.40	88.81	28.02	27.11	47.81	36.10	3.24
MRA33201	122.00	3	2	8.59	0.00	8.59	66.11	86.40	88.81	37.77	24.79	53.58	36.10	7.59
MRA33201	122.00	3	3	6.99	0.00	6.99	66.11	86.40	88.81	35.54	23.41	50.63	36.10	5.99
MRA33201	122.00	7	1	4.22	0.00	4.22	66.11	86.41	88.88	28.02	27.01	47.89	36.10	3.23
MRA33201	122.00	7	2	8.51	0.00	8.51	66.11	86.41	88.88	37.77	24.69	53.65	36.10	7.51
MRA33201	122.00	7	3	6.91	0.00	6.91	66.11	86.41	88.88	35.54	23.31	50.71	36.10	5.91
MRA33201	122.00	11	1	4.24	0.00	4.24	66.11	86.43	88.90	28.02	27.11	48.07	36.10	3.24
MRA33201	122.00	11	2	8.59	0.00	8.59	66.11	86.43	88.90	37.78	24.79	53.85	36.10	7.59
MRA33201	122.00	11	3	6.99	0.00	6.99	66.11	86.43	88.90	35.55	23.41	50.90	36.10	5.99
MRA33201	122.00	15	1	4.16	0.00	4.16	66.10	87.02	90.05	27.94	27.01	52.72	36.09	3.16
MRA33201	122.00	15	2	8.50	0.00	8.50	66.10	87.02	90.05	37.72	24.69	58.68	36.09	7.50
MRA33201	122.00	15	3	6.91	0.00	6.91	66.10	87.02	90.05	35.50	23.31	55.77	36.09	5.91
MRA33201	122.00	19	1	12.01	0.00	12.01	66.19	88.39	89.55	51.67	27.12	53.44	36.18	11.01
MRA33201	122.00	19	2	9.65	0.00	9.65	66.19	88.39	89.55	47.83	24.79	59.36	36.18	8.65
MRA33201	122.00	19	3	8.23	0.00	8.23	66.19	88.39	89.55	45.30	23.41	56.48	36.18	7.24
MRC20900	-25.00	21	1	5.34	0.00	5.34	58.66	21.89	49.63	44.85	26.35	36.26	-0.12	9.59
MRC20900	-25.00	21	2	4.81	0.00	4.81	58.66	21.89	49.63	39.55	25.08	38.16	-0.12	8.03
MRC20900	-25.00	21	3	3.76	0.00	3.76	58.66	21.89	49.63	40.20	23.05	29.02	-0.12	5.67
MRC20900	-25.00	21	4	4.17	0.00	4.17	58.66	21.89	49.63	40.14	24.38	28.62	-0.12	6.50
MRC20900	-25.00	21	5	0.36	0.00	0.36	58.66	21.89	49.63	25.48	24.57	28.82	-0.12	0.45
MRC20900	-25.00	21	6	5.39	0.00	5.39	58.66	21.89	49.63	40.29	27.26	37.38	-0.12	9.77
MRC20900	-25.00	25	1	4.67	0.00	4.67	58.61	21.90	49.68	44.80	24.14	36.17	-0.11	7.66
MRC20900	-25.00	25	2	3.33	0.00	3.33	58.61	21.90	49.68	39.47	21.34	38.09	-0.11	4.85
MRC20900	-25.00	25	3	1.73	0.00	1.73	58.61	21.90	49.68	40.16	18.91	28.93	-0.11	2.32
MRC20900	-25.00	25	4	4.30	0.00	4.30	58.61	21.90	49.68	40.13	24.89	28.53	-0.11	6.79
MRC20900	-25.00	25	5	0.45	0.00	0.45	58.61	21.90	49.68	25.48	25.42	28.73	-0.11	0.56
MRC20900	-25.00	25	6	5.25	0.00	5.25	58.61	21.90	49.68	40.21	26.61	37.30	-0.11	9.27
MRC20900	-25.00	29	1	4.73	0.00	4.73	73.84		21.91	44.86	24.24	36.26	-0.09	7.76
MRC20900	-25.00	29	2	3.40	0.00	3.40	73.84		21.91	39.56	21.44	38.18	-0.09	4.95
MRC20900	-25.00	29	3	1.81	0.00	1.81	73.84		21.91	40.25	19.01	29.03	-0.09	2.42
MRC20900	-25.00	29	4	4.36	0.00	4.36	73.84		21.91	40.21	24.99	28.62	-0.09	6.89
MRC20900	-25.00	29	5	0.47	0.00	0.47	73.84		21.91	25.49	25.52	28.83	-0.09	0.59
MRC20900	-25.00	29	6	5.30	0.00	5.30	73.84		21.91	40.31	26.71	37.40	-0.09	9.37
MRC20900	-25.00	33	1	2.64	0.00	2.64	73.83	21.89	21.91	44.80	24.14	36.17	-3.11	7.66
MRC20900	-25.00	33	2	1.75	0.00	1.75	73.83	21.89	21.91	39.48	21.34	38.09	-3.11	4.85
MRC20900	-25.00	33	3	0.59	0.00	0.59	73.83	21.89	21.91	40.21	18.91	28.94	-3.11	2.32
MRC20900	-25.00	33	4	2.41	0.00	2.41	73.83	21.89	21.91	40.19	24.90	28.53	-3.11	6.80
MRC20900	-25.00	33	5	-0.48	-0.48	0.00	73.83	21.89	21.91	25.39	25.43	28.74	-3.11	0.49
MRC20900	-25.00	33	6	2.99	0.00	2.99	73.83	21.89	21.91	40.24	26.61	37.32	-3.11	9.28
MRC20900	-25.00	37	1	4.31	0.00	4.31	73.83	49.61	21.92	44.83	24.14	29.16	-0.09	6.78
MRC20900	-25.00	37	2	2.90	0.00	2.90	73.83	49.61	21.92	39.57	21.34	27.62	-0.09	4.10
MRC20900	-25.00	37	3	1.16	0.00	1.16	73.83	49.61	21.92	40.30	18.91	23.63	-0.09	1.50
MRC20900	-25.00	37	4	3.53	0.00	3.53	73.83	49.61	21.92	40.28	24.90	24.25	-0.09	5.20
MRC20900	-25.00	37	5	0.12	0.00	0.12	73.83	49.61	21.92	25.49	25.43	24.38	-0.09	0.14
MRC20900	-25.00	37	6	4.79	0.00	4.79	73.83	49.61	21.92	40.33	26.61	28.90	-0.09	7.92
MTN22300	-37.00	22	1	5.51	0.00	5.51	54.15	23.32	32.70	41.51	26.59	29.91	0.82	8.36
MTN22300	-37.00	22	2	5.72	0.00	5.72	54.15	23.32	32.70	43.41	27.18	29.77	0.82	8.87
MTN22300	-37.00	22	3	5.71	0.00	5.71	54.15	23.32	32.70	44.92	27.67	28.70	0.82	8.86
MTN22300	-37.00	22	4	4.29	0.00	4.29	54.15	23.32	32.70	44.72	22.50	31.36	0.82	5.83
MTN22300	-37.00	22	5	4.44	0.00	4.44	54.15	23.32	32.70	50.04	22.42	34.20	0.82	6.10
MTN22300	-37.00	22	6	4.89	0.00	4.89	54.15	23.32	32.70	38.98	24.93	29.94	0.82	6.99
MTN22300	-37.00	26	1	5.38	0.00	5.38	54.15	23.32	32.82	41.59	26.59	28.79	0.84	8.04
MTN22300	-37.00	26	2	5.59	0.00	5.59	54.15	23.32	32.82	43.50	27.18	28.77	0.84	8.53
MTN22300	-37.00	26	3	5.81	0.00	5.81	54.15	23.32	32.82	45.02	27.67	29.28	0.84	9.10
MTN22300	-37.00	26	4	4.28	0.00	4.28	54.15	23.32	32.82	44.82	22.51	31.18	0.84	5.81
MTN22300	-37.00	26	5	4.41	0.00	4.41	54.15	23.32	32.82	50.10	22.42	33.25	0.84	6.04
MTN22300	-37.00	26	6	5.01	0.00	5.01	54.15	23.32	32.82	39.08	24.97	30.97	0.84	7.22
MTN22300	-37.00	30	1	4.40	0.00	4.40	54.15	21.58	32.82	41.59	26.59	28.70	-0.75	8.00

MTN22300	-37.00	30	2	4.57	0.00	4.57	54.15	21.58	32.82	43.50	27.18	28.68	-0.75	8.49
MTN22300	-37.00	30	3	4.74	0.00	4.74	54.15	21.58	32.82	45.00	27.67	29.18	-0.75	9.06
MTN22300	-37.00	30	4	3.51	0.00	3.51	54.15	21.58	32.82	44.75	22.50	31.08	-0.75	5.80
MTN22300	-37.00	30	5	3.61	0.00	3.61	54.15	21.58	32.82	50.08	22.42	33.15	-0.75	6.03
MTN22300	-37.00	30	6	4.09	0.00	4.09	54.15	21.58	32.82	38.99	24.93	30.87	-0.75	7.16
MTN22300	-37.00	34	1	4.42	0.00	4.42	54.15	21.58	32.82	41.70	26.60	28.80	-0.75	8.05
MTN22300	-37.00	34	2	4.58	0.00	4.58	54.15	21.58	32.82	43.61	27.18	28.78	-0.75	8.54
MTN22300	-37.00	34	3	4.75	0.00	4.75	54.15	21.58	32.82	45.08	27.67	29.28	-0.75	9.10
MTN22300	-37.00	34	4	3.51	0.00	3.51	54.15	21.58	32.82	44.78	22.51	31.18	-0.75	5.81
MTN22300	-37.00	34	5	3.62	0.00	3.62	54.15	21.58	32.82	50.18	22.42	33.25	-0.75	6.04
MTN22300	-37.00	34	6	4.11	0.00	4.11	54.15	21.58	32.82	39.00	24.97	30.97	-0.75	7.21
MTN22300	-37.00	38	1	4.27	0.00	4.27	53.67	21.58	32.82	39.25	26.53	28.70	-0.75	7.65
MTN22300	-37.00	38	2	4.41	0.00	4.41	53.67	21.58	32.82	39.75	27.12	28.68	-0.75	8.02
MTN22300	-37.00	38	3	4.64	0.00	4.64	53.67	21.58	32.82	41.94	27.60	29.18	-0.75	8.75
MTN22300	-37.00	38	4	3.47	0.00	3.47	53.67	21.58	32.82	44.74	22.41	31.08	-0.75	5.72
MTN22300	-37.00	38	5	3.57	0.00	3.57	53.67	21.58	32.82	49.93	22.33	33.15	-0.75	5.94
MTN22300	-37.00	38	6	4.08	0.00	4.08	53.67	21.58	32.82	38.94	24.88	30.87	-0.75	7.12
MTN28800	-37.00	24	1	6.60	0.00	6.60	64.57	35.17	25.24	44.96	29.18	26.54	2.82	8.41
MTN28800	-37.00	24	2	6.68	0.00	6.68	64.57	35.17	25.24	45.42	28.37	27.29	2.82	8.56
MTN28800	-37.00	24	3	5.47	0.00	5.47	64.57	35.17	25.24	39.46	26.03	26.06	2.82	6.45
MTN28800	-37.00	24	4	6.42	0.00	6.42	64.57	35.17	25.24	44.78	26.84	27.89	2.82	8.08
MTN28800	-37.00	28	1	5.99	0.00	5.99	64.55	38.49	24.16	44.98	28.08	26.54	2.00	8.01
MTN28800	-37.00	28	2	6.35	0.00	6.35	64.55	38.49	24.16	45.44	28.85	27.29	2.00	8.75
MTN28800	-37.00	28	3	4.77	0.00	4.77	64.55	38.49	24.16	39.47	24.72	26.05	2.00	5.82
MTN28800	-37.00	28	4	5.78	0.00	5.78	64.55	38.49	24.16	44.80	25.94	27.89	2.00	7.58
MTN28800	-37.00	32	1	6.00	0.00	6.00	64.55	38.49	24.16	44.98	28.08	26.55	2.00	8.01
MTN28800	-37.00	32	2	6.35	0.00	6.35	64.55	38.49	24.16	45.37	28.85	27.29	2.00	8.75
MTN28800	-37.00	32	3	4.77	0.00	4.77	64.55	38.49	24.16	39.53	24.72	26.06	2.00	5.84
MTN28800	-37.00	32	4	5.78	0.00	5.78	64.55	38.49	24.16	44.78	25.94	27.90	2.00	7.59
MTN28800	-37.00	36	1	5.98	0.00	5.98	64.55	38.49	24.16	45.05	28.08	26.48	2.00	7.98
MTN28800	-37.00	36	2	6.33	0.00	6.33	64.55	38.49	24.16	45.35	28.85	27.22	2.00	8.71
MTN28800	-37.00	36	3	4.77	0.00	4.77	64.55	38.49	24.16	39.56	24.72	26.03	2.00	5.83
MTN28800	-37.00	36	4	5.77	0.00	5.77	64.55	38.49	24.16	44.83	25.94	27.86	2.00	7.58
MTN28800	-37.00	40	1	12.22	0.00	12.22	64.55	38.49	24.16	45.05	28.09		16.43	11.57
MTN28800	-37.00	40	2	12.87	0.00	12.87	64.55	38.49	24.16	45.36	28.85		16.43	12.27
MTN28800	-37.00	40	3	8.76	0.00	8.76	64.55	38.49	24.16	39.61	24.72		16.43	7.92
MTN28800	-37.00	40	4	10.38	0.00	10.38	64.55	38.49	24.16	44.82	25.94		16.43	9.60
MWI30800	-1.00	24	1	5.63	0.00	5.63	36.54	24.58	39.35	33.34	32.01	40.06	1.01	8.37
MWI30800	-1.00	24	2	6.08	0.00	6.08	36.54	24.58	39.35	34.51	33.20	40.90	1.01	9.54
MWI30800	-1.00	24	3	6.30	0.00	6.30	36.54	24.58	39.35	35.14	33.96	40.75	1.01	10.17
MWI30800	-1.00	24	4	5.86	0.00	5.86	36.54	24.58	39.35	34.11	33.46	35.27	1.01	8.95
MWI30800	-1.00	24	5	5.41	0.00	5.41	36.54	24.58	39.35	33.41	33.01	31.37	1.01	7.87
MWI30800	-1.00	24	6	5.01	0.00	5.01	36.54	24.58	39.35	32.06	31.26	35.09	1.01	7.02
MWI30800	-1.00	28	1	5.67	0.00	5.67	36.54	24.58	39.35	33.45	32.09	40.14	1.01	8.48
MWI30800	-1.00	28	2	6.12	0.00	6.12	36.54	24.58	39.35	34.62	33.27	40.97	1.01	9.64
MWI30800	-1.00	28	3	6.33	0.00	6.33	36.54	24.58	39.35	35.25	34.05	40.80	1.01	10.27
MWI30800	-1.00	28	4	5.90	0.00	5.90	36.54	24.58	39.35	34.22	33.55	35.28	1.01	9.05
MWI30800	-1.00	28	5	5.45	0.00	5.45	36.54	24.58	39.35	33.52	33.11	31.37	1.01	7.96
MWI30800	-1.00	28	6	5.06	0.00	5.06	36.54	24.58	39.35	32.17	31.34	35.12	1.01	7.12
MWI30800	-1.00	32	1	5.71	0.00	5.71	36.54	24.58	39.35	33.53	32.19	40.17	1.01	8.56
MWI30800	-1.00	32	2	6.15	0.00	6.15	36.54	24.58	39.35	34.71	33.37	41.01	1.01	9.73
MWI30800	-1.00	32	3	6.36	0.00	6.36	36.54	24.58	39.35	35.34	34.15	40.86	1.01	10.36
MWI30800	-1.00	32	4	5.93	0.00	5.93	36.54	24.58	39.35	34.30	33.65	35.37	1.01	9.14
MWI30800	-1.00	32	5	5.49	0.00	5.49	36.54	24.58	39.35	33.61	33.21	31.47	1.01	8.05
MWI30800	-1.00	32	6	5.10	0.00	5.10	36.54	24.58	39.35	32.25	31.44	35.20	1.01	7.21
MWI30800	-1.00	36	1	5.71	0.00	5.71	36.54	24.58	39.35	33.55	32.17	40.14	1.01	8.57
MWI30800	-1.00	36	2	6.15	0.00	6.15	36.54	24.58	39.35	34.72	33.35	40.97	1.01	9.73
MWI30800	-1.00	36	3	6.36	0.00	6.36	36.54	24.58	39.35	35.35	34.12	40.80	1.01	10.36
MWI30800	-1.00	36	4	5.93	0.00	5.93	36.54	24.58	39.35	34.31	33.64	35.28	1.01	9.13
MWI30800	-1.00	36	5	5.48	0.00	5.48	36.54	24.58	39.35	33.62	33.20	31.37	1.01	8.04
MWI30800	-1.00	36	6	5.10	0.00	5.10	36.54	24.58	39.35	32.26	31.43	35.12	1.01	7.21
MWI30800	-1.00	40	1	5.85	0.00	5.85	36.54	24.58	39.35	33.63	32.26		1.11	8.77
MWI30800	-1.00	40	2	6.29	0.00	6.29	36.54	24.58	39.35	34.80	33.44		1.11	9.95
MWI30800	-1.00	40	3	6.51	0.00	6.51	36.54	24.58	39.35	35.43	34.22		1.11	10.60
MWI30800	-1.00	40	4	6.19	0.00	6.19	36.54	24.58	39.35	34.39	33.73		1.11	9.66
MWI30800	-1.00	40	5	5.95	0.00	5.95	36.54	24.58	39.35	33.70	33.29		1.11	9.00
MWI30800	-1.00	40	6	5.33	0.00	5.33	36.54	24.58	39.35	32.35	31.52		1.11	7.58
MYT09800	29.00	24	1	13.82	0.00	13.82	47.26	44.60	44.62	38.87	37.78	38.62	15.26	13.50
MYT09800	29.00	28	1	13.91	0.00	13.91	47.26	44.60	44.61	38.97	37.86	38.72	15.26	13.60
MYT09800	29.00	32	1	13.91	0.00	13.91	47.26	44.60	44.61	38.97	37.86	38.72	15.26	13.60
MYT09800	29.00	36	1	13.99	0.00	13.99	47.26	44.60	44.61	39.07	37.94	38.81	15.26	13.69
MYT09800	29.00	40	1	14.60	0.00	14.60	47.26	44.60	44.61	39.07	37.93		16.14	14.26
MYT09801	29.00	24	1	-20.09	-20.09	0.00	23.62	-2.05	-2.04	38.87	37.78	38.62	-27.09	13.50
MYT09801	29.00	28	1	-20.09	-20.09	0.00	23.62	-2.05	-2.04	38.97	37.86	38.72	-27.09	13.60
MYT09801	29.00	32	1	-20.09	-20.09	0.00	23.62	-2.05	-2.04	38.97	37.86	38.72	-27.09	13.60
MYT09801	29.00	36	1	-20.09	-20.09	0.00	23.62	-2.05	-2.04	39.07	37.94	38.81	-27.09	13.69
MYT09801	29.00	40	1	-17.13	-17.13	0.00	23.62	-2.05	-2.04	39.07	37.93		-24.13	14.26
NCL10000	140.00	2	1	4.83	0.00	4.83	78.17	37.13	27.98	29.25	41.47	29.81	5.48	4.65
NCL10000	140.00	2	2	3.62	0.00	3.62	78.17	37.13	27.98	28.22	42.13	26.24	5.48	3.23
NCL10000	140.00	2	3	3.55	0.00	3.55	78.17	37.13	27.98	27.93	41.27	27.12	5.48	3.15
NCL10000	140.00	6	1	4.90	0.00	4.90	78.18	37.13	27.98	29.35	41.56	29.81	5.48	4.73
NCL10000	140.00	6	2	3.69	0.00	3.69	78.18	37.13	27.98	28.32	42.22	26.24	5.48	3.31
NCL10000	140.00	6	3	3.62	0.00	3.62	78.18	37.13	27.98	28.03	41.35	27.12	5.48	3.23
NCL10000	140.00	10	1	4.82	0.00	4.82	78.28	37.13	27.98	29.25	41.47	29.71	5.48	4.64
NCL10000	140.00	10	2	3.61	0.00	3.61	78.28	37.13	27.98	28.22	42.12	26.14	5.48	3.21
NCL10000	140.00	10	3	3.54	0.00	3.54	78.28	37.13	27.98	27.93	41.26	27.02	5.48	3.13
NCL10000	140.00	14	1	4.83	0.00	4.83	78.32	37.13	27.98	29.25	41.38	29.81	5.48	4.65
NCL10000	140.00	14	2	3.62	0.00	3.62	78.32	37.13	27.98	28.22	41.45	26.24	5.48	3.23
NCL10000	140.00	14	3	3.54	0.00	3.54	78.32	37.13	27.98	27.93	39.43	27.12	5.48	3.13

NCL10001	140.00	2	1	5.24	0.00	5.24	77.87	32.52	35.34	29.25	41.47	29.81	8.69	4.65
NCL10001	140.00	2	2	3.93	0.00	3.93	77.87	32.52	35.34	28.22	42.13	26.24	8.69	3.23
NCL10001	140.00	2	3	3.85	0.00	3.85	77.87	32.52	35.34	27.93	41.27	27.12	8.69	3.15
NCL10001	140.00	6	1	5.32	0.00	5.32	77.87	32.52	35.34	29.35	41.56	29.81	8.69	4.73
NCL10001	140.00	6	2	4.00	0.00	4.00	77.87	32.52	35.34	28.32	42.22	26.24	8.69	3.31
NCL10001	140.00	6	3	3.93	0.00	3.93	77.87	32.52	35.34	28.03	41.35	27.12	8.69	3.23
NCL10001	140.00	10	1	5.23	0.00	5.23	77.88	32.52	35.34	29.25	41.47	29.71	8.69	4.64
NCL10001	140.00	10	2	3.91	0.00	3.91	77.88	32.52	35.34	28.22	42.12	26.14	8.69	3.21
NCL10001	140.00	10	3	3.84	0.00	3.84	77.88	32.52	35.34	27.93	41.26	27.02	8.69	3.13
NCL10001	140.00	14	1	5.24	0.00	5.24	77.89	32.52	35.34	29.25	41.38	29.81	8.69	4.65
NCL10001	140.00	14	2	3.93	0.00	3.93	77.89	32.52	35.34	28.22	41.45	26.24	8.69	3.23
NCL10001	140.00	14	3	3.84	0.00	3.84	77.89	32.52	35.34	27.93	39.43	27.12	8.69	3.13
NGR11500	-25.00	24	1	8.04	0.00	8.04	55.69	28.31	44.74	51.69	27.85	27.56	6.16	8.64
NGR11500	-25.00	24	2	9.54	0.00	9.54	55.69	28.31	44.74	49.79	31.84	28.97	6.16	11.02
NGR11500	-25.00	24	3	9.87	0.00	9.87	55.69	28.31	44.74	46.41	39.87	28.30	6.16	11.63
NGR11500	-25.00	24	4	10.29	0.00	10.29	55.69	28.31	44.74	45.58	40.81	29.31	6.16	12.44
NGR11500	-25.00	24	5	8.98	0.00	8.98	55.69	28.31	44.74	41.19	33.57	28.10	6.16	10.08
NGR11500	-25.00	24	6	10.49	0.00	10.49	55.69	28.31	44.74	52.73	33.72	30.76	6.16	12.87
NGR11500	-25.00	28	1	7.98	0.00	7.98	55.68	28.31	44.73	51.84	27.75	27.46	6.16	8.54
NGR11500	-25.00	28	2	9.49	0.00	9.49	55.68	28.31	44.73	49.88	31.74	28.88	6.16	10.92
NGR11500	-25.00	28	3	9.83	0.00	9.83	55.68	28.31	44.73	46.44	39.82	28.20	6.16	11.54
NGR11500	-25.00	28	4	10.25	0.00	10.25	55.68	28.31	44.73	45.63	40.76	29.21	6.16	12.37
NGR11500	-25.00	28	5	8.94	0.00	8.94	55.68	28.31	44.73	41.21	33.49	28.00	6.16	10.00
NGR11500	-25.00	28	6	10.45	0.00	10.45	55.68	28.31	44.73	52.83	33.63	30.66	6.16	12.78
NGR11500	-25.00	32	1	8.04	0.00	8.04	55.68	28.31	44.73	51.78	27.85	27.56	6.16	8.64
NGR11500	-25.00	32	2	9.54	0.00	9.54	55.68	28.31	44.73	49.81	31.84	28.97	6.16	11.02
NGR11500	-25.00	32	3	9.88	0.00	9.88	55.68	28.31	44.73	46.43	39.91	28.30	6.16	11.63
NGR11500	-25.00	32	4	10.29	0.00	10.29	55.68	28.31	44.73	45.60	40.86	29.31	6.16	12.45
NGR11500	-25.00	32	5	8.99	0.00	8.99	55.68	28.31	44.73	41.21	33.58	28.10	6.16	10.08
NGR11500	-25.00	32	6	10.49	0.00	10.49	55.68	28.31	44.73	52.76	33.73	30.76	6.16	12.87
NGR11500	-25.00	36	1	8.05	0.00	8.05	55.68	28.31	44.73	51.92	27.85	27.56	6.16	8.64
NGR11500	-25.00	36	2	9.54	0.00	9.54	55.68	28.31	44.73	49.97	31.84	28.97	6.16	11.02
NGR11500	-25.00	36	3	9.88	0.00	9.88	55.68	28.31	44.73	46.53	39.92	28.30	6.16	11.64
NGR11500	-25.00	36	4	10.30	0.00	10.30	55.68	28.31	44.73	45.72	40.86	29.31	6.16	12.47
NGR11500	-25.00	36	5	9.00	0.00	9.00	55.68	28.31	44.73	41.31	33.59	28.10	6.16	10.10
NGR11500	-25.00	36	6	10.49	0.00	10.49	55.68	28.31	44.73	52.92	33.73	30.76	6.16	12.88
NGR11500	-25.00	40	1	9.98	0.00	9.98	55.68	28.31	44.73	51.77	27.85		6.26	11.74
NGR11500	-25.00	40	2	11.55	0.00	11.55	55.68	28.31	44.73	49.80	31.84		6.26	15.42
NGR11500	-25.00	40	3	12.59	0.00	12.59	55.68	28.31	44.73	46.41	39.90		6.26	20.08
NGR11500	-25.00	40	4	12.57	0.00	12.57	55.68	28.31	44.73	45.60	40.84		6.26	19.92
NGR11500	-25.00	40	5	11.18	0.00	11.18	55.68	28.31	44.73	41.21	33.58		6.26	14.38
NGR11500	-25.00	40	6	12.10	0.00	12.10	55.68	28.31	44.73	52.77	33.73		6.26	17.40
NIG11900	-19.00	22	1	10.18	0.00	10.18	44.92	33.31	78.36	42.09	32.97	28.33	9.74	10.27
NIG11900	-19.00	22	2	13.32	0.00	13.32	44.92	33.31	78.36	44.59	34.77	36.03	9.74	14.96
NIG11900	-19.00	22	3	11.03	0.00	11.03	44.92	33.31	78.36	41.27	30.20	33.98	9.74	11.38
NIG11900	-19.00	22	4	11.33	0.00	11.33	44.92	33.31	78.36	39.33	31.69	36.10	9.74	11.80
NIG11900	-19.00	22	5	10.87	0.00	10.87	44.92	33.31	78.36	40.57	33.63	30.31	9.74	11.17
NIG11900	-19.00	22	6	10.33	0.00	10.33	44.92	33.31	78.36	42.17	33.30	28.51	9.74	10.46
NIG11900	-19.00	26	1	10.15	0.00	10.15	44.92	78.34	33.33	42.11	33.00	28.25	9.76	10.22
NIG11900	-19.00	26	2	13.33	0.00	13.33	44.92	78.34	33.33	44.61	34.80	35.96	9.76	14.95
NIG11900	-19.00	26	3	11.03	0.00	11.03	44.92	78.34	33.33	41.27	30.22	33.89	9.76	11.38
NIG11900	-19.00	26	4	11.34	0.00	11.34	44.92	78.34	33.33	39.34	31.72	36.03	9.76	11.81
NIG11900	-19.00	26	5	10.88	0.00	10.88	44.92	78.34	33.33	40.59	33.65	30.29	9.76	11.17
NIG11900	-19.00	26	6	10.33	0.00	10.33	44.92	78.34	33.33	42.19	33.32	28.48	9.76	10.45
NIG11900	-19.00	30	1	10.21	0.00	10.21	44.92	33.31	63.99	42.12	33.13	28.33	9.74	10.30
NIG11900	-19.00	30	2	13.36	0.00	13.36	44.92	33.31	63.99	44.63	34.95	36.01	9.74	15.03
NIG11900	-19.00	30	3	11.09	0.00	11.09	44.92	33.31	63.99	41.30	30.37	33.94	9.74	11.47
NIG11900	-19.00	30	4	11.39	0.00	11.39	44.92	33.31	63.99	39.35	31.92	36.05	9.74	11.90
NIG11900	-19.00	30	5	10.90	0.00	10.90	44.92	33.31	63.99	40.60	33.80	30.31	9.74	11.21
NIG11900	-19.00	30	6	10.35	0.00	10.35	44.92	33.31	63.99	42.20	33.45	28.50	9.74	10.49
NIG11900	-19.00	34	1	10.44	0.00	10.44	50.14	63.97	33.33	42.13	33.16	28.35	10.79	10.32
NIG11900	-19.00	34	2	13.83	0.00	13.83	50.14	63.97	33.33	44.64	34.96	36.06	10.79	15.06
NIG11900	-19.00	34	3	11.37	0.00	11.37	50.14	63.97	33.33	41.30	30.38	33.99	10.79	11.49
NIG11900	-19.00	34	4	11.70	0.00	11.70	50.14	63.97	33.33	39.40	31.91	36.13	10.79	11.93
NIG11900	-19.00	34	5	11.20	0.00	11.20	50.14	63.97	33.33	40.65	33.82	30.39	10.79	11.28
NIG11900	-19.00	34	6	10.62	0.00	10.62	50.14	63.97	33.33	42.22	33.48	28.58	10.79	10.55
NIG11900	-19.00	38	1	9.64	0.00	9.64	46.48	33.31	33.33	42.10	32.98	28.33	7.69	10.27
NIG11900	-19.00	38	2	12.28	0.00	12.28	46.48	33.31	33.33	44.69	34.78	36.00	7.69	14.98
NIG11900	-19.00	38	3	10.37	0.00	10.37	46.48	33.31	33.33	41.25	30.20	33.93	7.69	11.37
NIG11900	-19.00	38	4	10.65	0.00	10.65	46.48	33.31	33.33	39.39	31.69	36.04	7.69	11.82
NIG11900	-19.00	38	5	10.25	0.00	10.25	46.48	33.31	33.33	40.65	33.63	30.29	7.69	11.19
NIG11900	-19.00	38	6	9.77	0.00	9.77	46.48	33.31	33.33	42.18	33.30	28.49	7.69	10.45
NIU05400	158.00	19	1	26.72	0.00	26.72	70.39	82.43	45.21	59.14	55.00	45.89	23.12	28.36
NIU05400	158.00	23	1	26.88	0.00	26.88	80.72	82.84	45.21	60.82	55.11	45.80	23.20	28.61
NIU05401	158.00	19	1	10.84	0.00	10.84	59.63	62.09	25.92	59.14	55.00	45.89	3.91	28.36
NIU05401	158.00	23	1	10.85	0.00	10.85	59.88	62.15	25.92	60.82	55.11	45.80	3.91	28.61
NMB02500	-19.00	25	1	13.89	0.00	13.89	59.74		32.49	44.11	36.38	36.07	10.44	15.41
NMB02500	-19.00	25	2	13.50	0.00	13.50	59.74		32.49	44.56	35.34	34.83	10.44	14.75
NMB02500	-19.00	25	3	12.37	0.00	12.37	59.74		32.49	41.85	34.30	33.21	10.44	12.99
NMB02500	-19.00	25	4	13.72	0.00	13.72	59.74		32.49	41.80	38.01	37.05	10.44	15.12
NMB02500	-19.00	25	5	11.65	0.00	11.65	59.74		32.49	37.60	37.20	35.19	10.44	11.99
NMB02500	-19.00	29	1	12.34	0.00	12.34	56.39	32.47	32.49	44.47	36.40	36.07	7.41	15.54
NMB02500	-19.00	29	2	12.09	0.00	12.09	56.39	32.47	32.49	45.19	35.35	34.83	7.41	14.91
NMB02500	-19.00	29	3	11.24	0.00	11.24	56.39	32.47	32.49	42.17	34.31	33.21	7.41	13.10
NMB02500	-19.00	29	4	12.21	0.00	12.21	56.39	32.47	32.49	41.98	38.03	37.05	7.41	15.22
NMB02500	-19.00	29	5	10.68	0.00	10.68	56.39	32.47	32.49	37.71	37.22	35.19	7.41	12.07
NMB02500	-19.00	33	1	12.30	0.00	12.30	56.39	32.47	32.50	44.27	36.39	35.99	7.42	15.44
NMB02500	-19.00	33	2	12.03	0.00	12.03	56.39	32.47	32.50	44.83	35.35	34.73	7.42	14.78

NMB02500	-19.00	33	3	11.20	0.00	11.20	56.39	32.47	32.50	41.99	34.31	33.15	7.42	13.02
NMB02500	-19.00	33	4	12.19	0.00	12.19	56.39	32.47	32.50	41.88	38.03	36.96	7.42	15.15
NMB02500	-19.00	33	5	10.64	0.00	10.64	56.39	32.47	32.50	37.65	37.21	35.09	7.42	12.00
NMB02500	-19.00	37	1	16.39	0.00	16.39		61.37	71.28	44.05	36.39	36.07	38.95	15.40
NMB02500	-19.00	37	2	15.72	0.00	15.72		61.37	71.28	44.47	35.35	34.82	38.95	14.72
NMB02500	-19.00	37	3	13.98	0.00	13.98		61.37	71.28	41.80	34.31	33.21	38.95	12.98
NMB02500	-19.00	37	4	16.11	0.00	16.11		61.37	71.28	41.77	38.03	37.04	38.95	15.11
NMB02500	-19.00	37	5	12.97	0.00	12.97		61.37	71.28	37.58	37.22	35.19	38.95	11.98
NOR12000	5.00	14	1	11.51	0.00	11.51	43.50	35.07	34.51	39.64	34.35	36.31	8.23	12.91
NOR12000	5.00	14	2	9.89	0.00	9.89	43.50	35.07	34.51	35.49	35.04	36.91	8.23	10.38
NOR12000	5.00	14	3	11.01	0.00	11.01	43.50	35.07	34.51	38.07	34.45	36.66	8.23	12.07
NOR12000	5.00	14	4	7.93	0.00	7.93	43.50	35.07	34.51	34.85	28.41	31.96	8.23	7.82
NOR12000	5.00	14	5	7.23	0.00	7.23	43.50	35.07	34.51	32.94	29.05	32.30	8.23	6.98
NOR12000	5.00	14	6	8.39	0.00	8.39	43.50	35.07	34.51	33.71	32.22	34.63	8.23	8.40
NOR12000	5.00	18	1	11.50	0.00	11.50	43.50	35.07	34.51	39.61	34.35	36.31	8.23	12.89
NOR12000	5.00	18	2	9.88	0.00	9.88	43.50	35.07	34.51	35.48	35.04	36.92	8.23	10.38
NOR12000	5.00	18	3	11.01	0.00	11.01	43.50	35.07	34.51	38.06	34.44	36.65	8.23	12.07
NOR12000	5.00	18	4	7.94	0.00	7.94	43.50	35.07	34.51	34.87	28.41	31.96	8.23	7.83
NOR12000	5.00	18	5	7.24	0.00	7.24	43.50	35.07	34.51	32.97	29.05	32.29	8.23	7.00
NOR12000	5.00	18	6	8.41	0.00	8.41	43.50	35.07	34.51	33.73	32.23	34.63	8.23	8.42
NOR12000	5.00	38	1	9.44	0.00	9.44	52.46	35.68	28.41	39.89	35.45	30.37	5.57	11.32
NOR12000	5.00	38	2	8.94	0.00	8.94	52.46	35.68	28.41	40.51	36.18	28.27	5.57	10.40
NOR12000	5.00	38	3	9.84	0.00	9.84	52.46	35.68	28.41	40.76	36.58	31.04	5.57	12.14
NOR12000	5.00	38	4	8.20	0.00	8.20	52.46	35.68	28.41	38.77	30.98	28.53	5.57	9.17
NOR12000	5.00	38	5	7.50	0.00	7.50	52.46	35.68	28.41	38.06	32.15	26.42	5.57	8.12
NOR12000	5.00	38	6	7.70	0.00	7.70	52.46	35.68	28.41	37.99	35.10	26.35	5.57	8.40
NOR12101	5.00	28	1	4.97	0.00	4.97	35.69	28.39	35.70	35.32	26.57	25.86	2.66	5.77
NOR12101	5.00	28	2	8.07	0.00	8.07	35.69	28.39	35.70	40.62	31.35	36.28	2.66	12.19
NOR12101	5.00	28	3	7.71	0.00	7.71	35.69	28.39	35.70	39.28	30.47	35.24	2.66	11.12
NOR12101	5.00	28	4	6.75	0.00	6.75	35.69	28.39	35.70	36.73	28.36	33.25	2.66	8.85
NOR12101	5.00	28	5	6.90	0.00	6.90	35.69	28.39	35.70	38.27	29.70	29.90	2.66	9.18
NOR12101	5.00	28	6	5.30	0.00	5.30	35.69	28.39	35.70	34.76	26.31	28.36	2.66	6.29
NOR12102	5.00	32	1	0.75	0.00	0.75	34.81	25.97	34.82	34.88	27.58	25.54	-5.64	2.58*
NOR12102	5.00	32	2	2.62	0.00	2.62	34.81	25.97	34.82	38.76	35.07	38.03	-5.64	7.39*
NOR12102	5.00	32	3	2.27	0.00	2.27	34.81	25.97	34.82	37.56	33.76	36.77	-5.64	6.19*
NOR12102	5.00	32	4	1.60	0.00	1.60	34.81	25.97	34.82	35.99	29.67	33.76	-5.64	4.38*
NOR12102	5.00	32	5	1.92	0.00	1.92	34.81	25.97	34.82	37.09	31.55	29.73	-5.64	5.20*
NOR12102	5.00	32	6	0.63	0.00	0.63	34.81	25.97	34.82	34.23	27.37	28.04	-5.64	2.34*
NPL12200	50.00	17	1	12.52	0.00	12.52	61.60	48.99	59.31	41.35	29.56	37.45	25.41	11.57
NPL12200	50.00	17	2	12.54	0.00	12.54	61.60	48.99	59.31	40.29	30.11	37.44	25.41	11.58
NPL12200	50.00	17	3	15.71	0.00	15.71	61.60	48.99	59.31	46.52	32.83	37.70	25.41	14.80
NPL12200	50.00	17	4	14.16	0.00	14.16	61.60	48.99	59.31	39.90	35.28	35.97	25.41	13.23
NPL12200	50.00	17	5	12.23	0.00	12.23	61.60	48.99	59.31	38.05	34.11	33.02	25.41	11.27
NPL12200	50.00	17	6	14.81	0.00	14.81	61.60	48.99	59.31	47.91	31.84	35.71	25.41	13.89
NPL12200	50.00	19	1	14.63	0.00	14.63	48.26	59.29	51.49	40.01	37.42	37.57	17.90	14.06
NPL12200	50.00	19	2	13.69	0.00	13.69	48.26	59.29	51.49	38.47	37.41	37.67	17.90	13.03
NPL12200	50.00	19	3	16.69	0.00	16.69	48.26	59.29	51.49	44.15	37.67	37.91	17.90	16.40
NPL12200	50.00	19	4	15.89	0.00	15.89	48.26	59.29	51.49	44.61	35.95	36.19	17.90	15.47
NPL12200	50.00	19	5	13.25	0.00	13.25	48.26	59.29	51.49	41.96	33.00	33.09	17.90	12.56
NPL12200	50.00	19	6	15.89	0.00	15.89	48.26	59.29	51.49	45.55	35.68	35.75	17.90	15.47
NPL12200	50.00	21	1	15.36	0.00	15.36	48.32	51.47	51.39	41.42	37.54	37.42	17.69	14.90
NPL12200	50.00	21	2	14.84	0.00	14.84	48.32	51.47	51.39	40.37	37.64	37.50	17.69	14.32
NPL12200	50.00	21	3	17.57	0.00	17.57	48.32	51.47	51.39	47.34	37.88	37.80	17.69	17.51
NPL12200	50.00	21	4	16.22	0.00	16.22	48.32	51.47	51.39	45.92	36.16	36.11	17.69	15.88
NPL12200	50.00	21	5	13.44	0.00	13.44	48.32	51.47	51.39	42.77	33.06	33.04	17.69	12.78
NPL12200	50.00	21	6	16.38	0.00	16.38	48.32	51.47	51.39	48.76	35.72	35.69	17.69	16.07
NRU30900	134.00	3	1	12.22	0.00	12.22	68.05	76.72	89.10	35.29	47.34	50.28	37.96	11.23
NRU30900	134.00	3	2	8.86	0.00	8.86	68.05	76.72	89.10	32.00	40.99	42.96	37.96	7.86
NRU30900	134.00	3	3	9.66	0.00	9.66	68.05	76.72	89.10	32.78	42.36	44.84	37.96	8.66
NRU30900	134.00	3	4	12.13	0.00	12.13	68.05	76.72	89.10	35.20	47.20	50.10	37.96	11.13
NRU30900	134.00	7	1	12.32	0.00	12.32	68.05	76.72	89.12	35.39	47.44	50.43	37.96	11.33
NRU30900	134.00	7	2	8.96	0.00	8.96	68.05	76.72	89.12	32.10	41.09	43.09	37.96	7.96
NRU30900	134.00	7	3	9.76	0.00	9.76	68.05	76.72	89.12	32.88	42.46	44.97	37.96	8.76
NRU30900	134.00	7	4	12.23	0.00	12.23	68.05	76.72	89.12	35.30	47.30	50.24	37.96	11.23
NRU30900	134.00	11	1	12.32	0.00	12.32	68.05	76.73	89.31	35.39	47.37	50.39	37.96	11.32
NRU30900	134.00	11	2	8.95	0.00	8.95	68.05	76.73	89.31	32.10	41.01	43.02	37.96	7.96
NRU30900	134.00	11	3	9.75	0.00	9.75	68.05	76.73	89.31	32.87	42.38	44.91	37.96	8.76
NRU30900	134.00	11	4	12.23	0.00	12.23	68.05	76.73	89.31	35.29	47.23	50.20	37.96	11.23
NRU30900	134.00	15	1	13.64	0.00	13.64	73.77	76.74	89.49	36.71	47.40	59.70	43.42	12.64
NRU30900	134.00	15	2	9.99	0.00	9.99	73.77	76.74	89.49	33.11	41.03	54.81	43.42	8.99
NRU30900	134.00	15	3	10.97	0.00	10.97	73.77	76.74	89.49	34.08	42.40	55.70	43.42	9.97
NRU30900	134.00	15	4	13.53	0.00	13.53	73.77	76.74	89.49	36.59	47.26	59.60	43.42	12.53
NZL05500	158.00	1	1	10.72	0.00	10.72	61.75		25.92	51.14		41.65	3.91	23.32
NZL05500	158.00	1	2	10.39	0.00	10.39	61.75		25.92	43.61		42.71	3.91	18.83
NZL05500	158.00	1	3	10.70	0.00	10.70	61.75		25.92	50.02		42.04	3.91	23.02
NZL05500	158.00	1	4	10.75	0.00	10.75	61.75		25.92	51.51		42.61	3.91	24.03
NZL05500	158.00	5	1	7.72	0.00	7.72	61.74	25.90	25.92	51.15	40.05	41.75	0.89	20.69
NZL05500	158.00	5	2	7.56	0.00	7.56	61.74	25.90	25.92	43.69	40.40	42.81	0.89	17.84
NZL05500	158.00	5	3	7.70	0.00	7.70	61.74	25.90	25.92	50.04	39.59	42.14	0.89	20.32
NZL05500	158.00	5	4	7.74	0.00	7.74	61.74	25.90	25.92	51.53	40.38	42.71	0.89	21.22
NZL05500	158.00	9	1	7.72	0.00	7.72	61.75	25.90	25.92	51.12	40.06	41.68	0.89	20.67
NZL05500	158.00	9	2	7.56	0.00	7.56	61.75	25.90	25.92	43.68	40.40	42.72	0.89	17.82
NZL05500	158.00	9	3	7.70	0.00	7.70	61.75	25.90	25.92	49.99	39.59	42.04	0.89	20.28
NZL05500	158.00	9	4	7.74	0.00	7.74	61.75	25.90	25.92	51.49	40.38	42.62	0.89	21.19
NZL05500	158.00	13	1	7.07	0.00	7.07	59.57	25.90	25.92	38.44	40.06	41.70	0.89	13.71
NZL05500	158.00	13	2	6.96	0.00	6.96	59.57	25.90	25.92	37.64	40.40	42.73	0.89	13.10
NZL05500	158.00	13	3	6.94	0.00	6.94	59.57	25.90	25.92	37.63	39.59	42.05	0.89	13.00
NZL05500	158.00	13	4	6.98	0.00	6.98	59.57	25.90	25.92	37.79	40.38	42.63	0.89	13.22

NZL28700	128.00	13	1	12.46	0.00	12.46	62.45	62.65	61.31	40.69	29.03	55.07	31.13	11.47
NZL28700	128.00	13	2	12.81	0.00	12.81	62.45	62.65	61.31	40.55	29.62	57.69	31.13	11.83
NZL28700	128.00	13	3	13.43	0.00	13.43	62.45	62.65	61.31	42.05	29.85	59.28	31.13	12.45
NZL28700	128.00	13	4	13.78	0.00	13.78	62.45	62.65	61.31	42.00	30.36	60.10	31.13	12.80
NZL28700	128.00	13	5	14.00	0.00	14.00	62.45	62.65	61.31	41.83	30.76	60.34	31.13	13.01
NZL28700	128.00	17	1	37.25	0.00	37.25	75.87	62.66	79.07	66.15	59.85	55.74	39.44	36.81
NZL28700	128.00	17	2	34.39	0.00	34.39	75.87	62.66	79.07	58.54	59.85	60.36	39.44	33.67
NZL28700	128.00	17	3	39.50	0.00	39.50	75.87	62.66	79.07	68.01	58.28	64.63	39.44	39.49
NZL28700	128.00	17	4	40.30	0.00	40.30	75.87	62.66	79.07	68.78	60.95	62.25	39.44	40.51
NZL28700	128.00	17	5	40.89	0.00	40.89	75.87	62.66	79.07	69.10	61.73	63.87	39.44	41.31
NZL28700	128.00	21	1	37.50	0.00	37.50	68.82	62.85	79.37	66.65	64.83	55.91	36.67	37.71
NZL28700	128.00	21	2	34.60	0.00	34.60	68.82	62.85	79.37	58.71	65.30	60.81	36.67	34.17
NZL28700	128.00	21	3	40.82	0.00	40.82	68.82	62.85	79.37	68.78	68.09	65.65	36.67	42.99
NZL28700	128.00	21	4	40.44	0.00	40.44	68.82	62.85	79.37	69.39	66.13	62.75	36.67	42.24
NZL28700	128.00	21	5	40.99	0.00	40.99	68.82	62.85	79.37	69.76	68.56	64.52	36.67	43.36
OCE10100	-160.00	4	1	35.75	0.00	35.75	66.07	67.70	69.00	60.83	61.52	61.96	35.32	35.83
OCE10100	-160.00	4	2	31.39	0.00	31.39	66.07	67.70	69.00	55.18	58.52	62.63	35.32	30.76
OCE10100	-160.00	4	3	35.20	0.00	35.20	66.07	67.70	69.00	59.94	60.45	64.01	35.32	35.14
OCE10100	-160.00	4	4	38.33	0.00	38.33	66.07	67.70	69.00	65.52	62.77	63.08	35.32	39.55
OCE10100	-160.00	8	1	35.83	0.00	35.83	66.09	67.70	69.00	60.93	61.59	62.03	35.33	35.93
OCE10100	-160.00	8	2	31.48	0.00	31.48	66.09	67.70	69.00	55.28	58.61	62.69	35.33	30.85
OCE10100	-160.00	8	3	35.28	0.00	35.28	66.09	67.70	69.00	60.04	60.55	64.08	35.33	35.23
OCE10100	-160.00	8	4	38.39	0.00	38.39	66.09	67.70	69.00	65.62	62.86	63.16	35.33	39.64
OCE10100	-160.00	12	1	32.47	0.00	32.47	66.11	67.70	68.87	60.84	61.57	49.94	35.34	31.95
OCE10100	-160.00	12	2	31.18	0.00	31.18	66.11	67.70	68.87	55.18	58.60	57.57	35.34	30.52
OCE10100	-160.00	12	3	35.22	0.00	35.22	66.11	67.70	68.87	59.95	60.54	64.04	35.34	35.15
OCE10100	-160.00	12	4	38.36	0.00	38.36	66.11	67.70	68.87	65.55	62.85	63.12	35.34	39.58
OCE10100	-160.00	16	1	33.41	0.00	33.41	66.13	63.46	69.49	64.69	61.82	50.22	34.78	33.10
OCE10100	-160.00	16	2	31.75	0.00	31.75	66.13	63.46	69.49	55.80	59.64	58.64	34.78	31.20
OCE10100	-160.00	16	3	35.34	0.00	35.34	66.13	63.46	69.49	59.95	61.83	69.36	34.78	35.46
OCE10100	-160.00	16	4	38.50	0.00	38.50	66.13	63.46	69.49	65.57	63.11	69.03	34.78	40.27
OMA12300	17.00	24	1	4.93	0.00	4.93	61.19	24.94	25.95	43.56	26.32	27.48	0.40	7.56
OMA12300	17.00	24	2	5.81	0.00	5.81	61.19	24.94	25.95	45.33	28.55	30.11	0.40	9.92
OMA12300	17.00	24	3	4.83	0.00	4.83	61.19	24.94	25.95	46.64	24.56	29.98	0.40	7.33
OMA12300	17.00	24	4	3.72	0.00	3.72	61.19	24.94	25.95	44.98	22.99	26.08	0.40	5.14
OMA12300	17.00	24	5	2.62	0.00	2.62	61.19	24.94	25.95	41.27	22.69	22.43	0.40	3.37
OMA12300	17.00	24	6	3.95	0.00	3.95	61.19	24.94	25.95	45.39	24.43	24.94	0.40	5.55
OMA12300	17.00	28	1	6.57	0.00	6.57	61.75	27.28	25.95	43.68	33.54	27.38	1.55	9.95
OMA12300	17.00	28	2	7.38	0.00	7.38	61.75	27.28	25.95	45.52	37.24	30.02	1.55	12.66
OMA12300	17.00	28	3	7.41	0.00	7.41	61.75	27.28	25.95	46.90	37.89	29.88	1.55	12.80
OMA12300	17.00	28	4	6.29	0.00	6.29	61.75	27.28	25.95	45.20	35.23	25.98	1.55	9.21
OMA12300	17.00	28	5	4.16	0.00	4.16	61.75	27.28	25.95	41.28	28.55	22.33	1.55	5.13
OMA12300	17.00	28	6	5.79	0.00	5.79	61.75	27.28	25.95	45.48	33.33	24.84	1.55	8.06
OMA12300	17.00	32	1	6.60	0.00	6.60	61.73	27.28	25.95	43.63	33.59	27.48	1.55	10.02
OMA12300	17.00	32	2	7.40	0.00	7.40	61.73	27.28	25.95	45.44	37.32	30.12	1.55	12.73
OMA12300	17.00	32	3	7.43	0.00	7.43	61.73	27.28	25.95	46.80	37.98	29.98	1.55	12.88
OMA12300	17.00	32	4	6.32	0.00	6.32	61.73	27.28	25.95	45.11	35.30	26.08	1.55	9.29
OMA12300	17.00	32	5	4.21	0.00	4.21	61.73	27.28	25.95	41.29	28.57	22.43	1.55	5.21
OMA12300	17.00	32	6	5.83	0.00	5.83	61.73	27.28	25.95	45.44	33.36	24.94	1.55	8.14
OMA12300	17.00	36	1	6.57	0.00	6.57	61.75	27.28	25.95	43.67	33.53	27.38	1.55	9.94
OMA12300	17.00	36	2	7.38	0.00	7.38	61.75	27.28	25.95	45.50	37.31	30.02	1.55	12.66
OMA12300	17.00	36	3	7.42	0.00	7.42	61.75	27.28	25.95	46.89	37.97	29.88	1.55	12.81
OMA12300	17.00	36	4	6.29	0.00	6.29	61.75	27.28	25.95	45.19	35.27	25.98	1.55	9.21
OMA12300	17.00	36	5	4.16	0.00	4.16	61.75	27.28	25.95	41.28	28.49	22.33	1.55	5.12
OMA12300	17.00	36	6	5.78	0.00	5.78	61.75	27.28	25.95	45.47	33.29	24.84	1.55	8.05
OMA12300	17.00	40	1	10.88	0.00	10.88	61.75	27.28	25.95	43.61	33.63		5.27	15.50
OMA12300	17.00	40	2	11.50	0.00	11.50	61.75	27.28	25.95	45.43	37.40		5.27	18.41
OMA12300	17.00	40	3	11.65	0.00	11.65	61.75	27.28	25.95	46.79	38.06		5.27	19.40
OMA12300	17.00	40	4	11.27	0.00	11.27	61.75	27.28	25.95	45.09	35.37		5.27	17.13
OMA12300	17.00	40	5	9.28	0.00	9.28	61.75	27.28	25.95	41.28	28.59		5.27	11.32
OMA12300	17.00	40	6	10.99	0.00	10.99	61.75	27.28	25.95	45.43	33.39		5.27	15.94
PAK12700	38.00	2	1	10.31	0.00	10.31	60.56	33.71	32.95	44.30	32.59	29.12	8.28	10.97
PAK12700	38.00	2	2	10.16	0.00	10.16	60.56	33.71	32.95	40.71	32.75	29.82	8.28	10.76
PAK12700	38.00	2	3	11.95	0.00	11.95	60.56	33.71	32.95	42.91	37.47	32.38	8.28	13.67
PAK12700	38.00	2	4	12.32	0.00	12.32	60.56	33.71	32.95	44.01	38.57	32.79	8.28	14.38
PAK12700	38.00	2	5	12.51	0.00	12.51	60.56	33.71	32.95	46.49	39.31	32.40	8.28	14.79
PAK12700	38.00	2	6	10.96	0.00	10.96	60.56	33.71	32.95	48.68	34.17	29.48	8.28	11.97
PAK12700	38.00	6	1	10.35	0.00	10.35	58.51	33.71	32.95	44.30	32.69	29.19	8.26	11.04
PAK12700	38.00	6	2	10.20	0.00	10.20	58.51	33.71	32.95	40.71	32.84	29.89	8.26	10.82
PAK12700	38.00	6	3	11.97	0.00	11.97	58.51	33.71	32.95	42.92	37.55	32.46	8.26	13.73
PAK12700	38.00	6	4	12.34	0.00	12.34	58.51	33.71	32.95	44.01	38.64	32.88	8.26	14.44
PAK12700	38.00	6	5	12.54	0.00	12.54	58.51	33.71	32.95	46.50	39.37	32.49	8.26	14.86
PAK12700	38.00	6	6	11.01	0.00	11.01	58.51	33.71	32.95	48.70	34.27	29.56	8.26	12.05
PAK12700	38.00	10	1	10.33	0.00	10.33	60.77	33.71	32.95	44.32	32.68	29.14	8.28	11.01
PAK12700	38.00	10	2	10.19	0.00	10.19	60.77	33.71	32.95	40.72	32.83	29.85	8.28	10.80
PAK12700	38.00	10	3	11.96	0.00	11.96	60.77	33.71	32.95	42.93	37.51	32.41	8.28	13.69
PAK12700	38.00	10	4	12.33	0.00	12.33	60.77	33.71	32.95	44.03	38.59	32.81	8.28	14.40
PAK12700	38.00	10	5	12.52	0.00	12.52	60.77	33.71	32.95	46.52	39.34	32.42	8.28	14.81
PAK12700	38.00	10	6	10.98	0.00	10.98	60.77	33.71	32.95	48.73	34.26	29.49	8.28	12.00
PAK12701	38.00	2	1	11.81	0.00	11.81	61.49	62.98	41.46	44.30	32.59	29.12	19.17	10.97
PAK12701	38.00	2	2	11.60	0.00	11.60	61.49	62.98	41.46	40.71	32.75	29.82	19.17	10.76
PAK12701	38.00	2	3	14.37	0.00	14.37	61.49	62.98	41.46	42.91	37.47	32.38	19.17	13.67
PAK12701	38.00	2	4	15.03	0.00	15.03	61.49	62.98	41.46	44.01	38.57	32.79	19.17	14.38
PAK12701	38.00	2	5	15.41	0.00	15.41	61.49	62.98	41.46	46.49	39.31	32.40	19.17	14.79
PAK12701	38.00	2	6	12.77	0.00	12.77	61.49	62.98	41.46	48.68	34.17	29.48	19.17	11.97
PAK12701	38.00	6	1	11.89	0.00	11.89	66.62	71.76	41.56	44.30	32.69	29.19	19.47	11.04
PAK12701	38.00	6	2	11.67	0.00	11.67	66.62	71.76	41.56	40.71	32.84	29.89	19.47	10.82
PAK12701	38.00	6	3	14.44	0.00	14.44	66.62	71.76	41.56	42.92	37.55	32.46	19.47	13.73
PAK12701	38.00	6	4	15.11	0.00	15.11	66.62	71.76	41.56	44.01	38.64	32.88	19.47	14.44

PAK12701	38.00	6	5	15.50	0.00	15.50	66.62	71.76	41.56	46.50	39.37	32.49	19.47	14.86
PAK12701	38.00	6	6	12.86	0.00	12.86	66.62	71.76	41.56	48.70	34.27	29.56	19.47	12.05
PAK21000	38.00	12	1	8.38	0.00	8.38	35.75	40.46	40.24	36.52	29.94	35.12	5.29	9.64
PAK21000	38.00	12	2	8.23	0.00	8.23	35.75	40.46	40.24	36.23	29.34	36.58	5.29	9.39
PAK21000	38.00	12	3	7.84	0.00	7.84	35.75	40.46	40.24	37.29	28.10	32.21	5.29	8.78
PAK21000	38.00	12	4	8.46	0.00	8.46	35.75	40.46	40.24	37.96	29.31	33.42	5.29	9.79
PAK21000	38.00	12	5	8.28	0.00	8.28	35.75	40.46	40.24	35.87	29.97	37.05	5.29	9.47
PAK21000	38.00	12	6	8.12	0.00	8.12	35.75	40.46	40.24	37.29	28.44	33.93	5.29	9.21
PAK21000	38.00	14	1	11.84	0.00	11.84	65.73	40.22	40.48	40.35	35.20	30.00	15.30	11.25
PAK21000	38.00	14	2	12.58	0.00	12.58	65.73	40.22	40.48	45.23	36.65	29.38	15.30	12.07
PAK21000	38.00	14	3	10.56	0.00	10.56	65.73	40.22	40.48	41.26	32.29	28.15	15.30	9.86
PAK21000	38.00	14	4	11.41	0.00	11.41	65.73	40.22	40.48	41.06	33.49	29.36	15.30	10.78
PAK21000	38.00	14	5	12.87	0.00	12.87	65.73	40.22	40.48	43.90	37.12	30.02	15.30	12.39
PAK21000	38.00	14	6	11.47	0.00	11.47	65.73	40.22	40.48	43.97	34.00	28.49	15.30	10.84
PAK21001	38.00	12	1	10.45	0.00	10.45	57.18	58.48	84.23	35.87	29.97	37.05	26.70	9.47
PAK21001	38.00	12	2	10.19	0.00	10.19	57.18	58.48	84.23	37.29	28.44	33.93	26.70	9.21
PAK21001	38.00	12	3	10.62	0.00	10.62	57.18	58.48	84.23	36.52	29.94	35.12	26.70	9.64
PAK21001	38.00	12	4	10.37	0.00	10.37	57.18	58.48	84.23	36.23	29.34	36.58	26.70	9.39
PAK21001	38.00	12	5	9.76	0.00	9.76	57.18	58.48	84.23	37.29	28.10	32.21	26.70	8.78
PAK21001	38.00	12	6	10.76	0.00	10.76	57.18	58.48	84.23	37.96	29.31	33.42	26.70	9.79
PAK28100	38.00	18	1	10.15	0.00	10.15	64.43	36.56	34.73	42.50	34.27	27.53	10.52	10.03
PAK28100	38.00	18	2	11.31	0.00	11.31	64.43	36.56	34.73	45.65	42.11	28.11	10.52	11.50
PAK28100	38.00	18	3	9.74	0.00	9.74	64.43	36.56	34.73	47.34	41.12	25.84	10.52	9.53
PAK28100	38.00	18	4	11.86	0.00	11.86	64.43	36.56	34.73	48.35	40.82	28.77	10.52	12.23
PAK28100	38.00	18	5	11.65	0.00	11.65	64.43	36.56	34.73	44.92	37.99	29.06	10.52	11.95
PAK28100	38.00	18	6	11.81	0.00	11.81	64.43	36.56	34.73	48.63	40.15	28.72	10.52	12.16
PAK28100	38.00	22	1	13.25	0.00	13.25	55.09	58.57	52.54	42.37	37.49	30.34	23.77	12.33
PAK28100	38.00	22	2	24.00	0.00	24.00	55.09	58.57	52.54	52.68	44.99	44.74	23.77	24.03
PAK28100	38.00	22	3	19.46	0.00	19.46	55.09	58.57	52.54	52.18	47.05	35.63	23.77	18.79
PAK28100	38.00	22	4	23.84	0.00	23.84	55.09	58.57	52.54	50.99	46.35	45.15	23.77	23.83
PAK28100	38.00	22	5	17.99	0.00	17.99	55.09	58.57	52.54	45.08	39.83	37.54	23.77	17.22
PAK28100	38.00	22	6	18.08	0.00	18.08	55.09	58.57	52.54	48.93	43.89	34.63	23.77	17.32
PAK28200	38.00	20	1	6.79	0.00	6.79	31.64	39.55	68.72	38.85	28.75	46.02	1.53	10.61
PAK28200	38.00	20	2	6.28	0.00	6.28	31.64	39.55	68.72	37.35	27.58	39.64	1.53	9.20
PAK28200	38.00	20	3	7.17	0.00	7.17	31.64	39.55	68.72	39.88	30.15	47.85	1.53	11.88
PAK28200	38.00	20	4	7.09	0.00	7.09	31.64	39.55	68.72	39.90	29.72	44.45	1.53	11.58
PAK28200	38.00	20	5	7.15	0.00	7.15	31.64	39.55	68.72	39.32	30.51	46.22	1.53	11.82
PAK28200	38.00	24	1	19.66	0.00	19.66	62.38	63.88	76.03	43.20	45.03	53.42	31.89	18.71
PAK28200	38.00	24	2	16.35	0.00	16.35	62.38	63.88	76.03	40.99	36.51	54.41	31.89	15.37
PAK28200	38.00	24	3	21.05	0.00	21.05	62.38	63.88	76.03	44.61	46.27	56.41	31.89	20.13
PAK28200	38.00	24	4	20.12	0.00	20.12	62.38	63.88	76.03	44.15	42.41	54.94	31.89	19.18
PAK28200	38.00	24	5	19.82	0.00	19.82	62.38	63.88	76.03	43.32	45.28	57.15	31.89	18.88
PAK28300	38.00	4	1	4.82	0.00	4.82	29.52	37.64	37.46	38.42	28.35	31.87	-0.69	9.20
PAK28300	38.00	4	2	4.95	0.00	4.95	29.52	37.64	37.46	37.73	28.92	34.36	-0.69	9.67
PAK28300	38.00	4	3	5.54	0.00	5.54	29.52	37.64	37.46	39.14	33.43	36.91	-0.69	12.46
PAK28300	38.00	4	4	5.09	0.00	5.09	29.52	37.64	37.46	39.04	29.91	32.36	-0.69	10.22
PAK28300	38.00	4	5	4.81	0.00	4.81	29.52	37.64	37.46	38.56	28.60	30.98	-0.69	9.15
PAK28300	38.00	4	6	5.42	0.00	5.42	29.52	37.64	37.46	38.02	33.17	37.12	-0.69	11.77
PAK28300	38.00	8	1	4.81	0.00	4.81	29.52	37.64	37.46	38.41	28.32	31.87	-0.70	9.18
PAK28300	38.00	8	2	4.94	0.00	4.94	29.52	37.64	37.46	37.70	28.89	34.35	-0.70	9.64
PAK28300	38.00	8	3	5.54	0.00	5.54	29.52	37.64	37.46	39.13	33.42	36.86	-0.70	12.44
PAK28300	38.00	8	4	5.09	0.00	5.09	29.52	37.64	37.46	39.04	29.88	32.35	-0.70	10.20
PAK28300	38.00	8	5	4.80	0.00	4.80	29.52	37.64	37.46	38.56	28.56	30.97	-0.70	9.13
PAK28300	38.00	8	6	5.42	0.00	5.42	29.52	37.64	37.46	37.99	33.16	37.06	-0.70	11.74
PAK28301	38.00	4	1	10.18	0.00	10.18	57.68	51.57	80.91	38.42	28.35	31.87	25.51	9.20
PAK28301	38.00	4	2	10.64	0.00	10.64	57.68	51.57	80.91	37.73	28.92	34.36	25.51	9.67
PAK28301	38.00	4	3	13.40	0.00	13.40	57.68	51.57	80.91	39.14	33.43	36.91	25.51	12.46
PAK28301	38.00	4	4	11.19	0.00	11.19	57.68	51.57	80.91	39.04	29.91	32.36	25.51	10.22
PAK28301	38.00	4	5	10.12	0.00	10.12	57.68	51.57	80.91	38.56	28.60	30.98	25.51	9.15
PAK28301	38.00	4	6	12.72	0.00	12.72	57.68	51.57	80.91	38.02	33.17	37.12	25.51	11.77
PAK28301	38.00	8	1	10.17	0.00	10.17	75.56	53.23	56.49	38.41	28.32	31.87	29.44	9.18
PAK28301	38.00	8	2	10.63	0.00	10.63	75.56	53.23	56.49	37.70	28.89	34.35	29.44	9.64
PAK28301	38.00	8	3	13.42	0.00	13.42	75.56	53.23	56.49	39.13	33.42	36.86	29.44	12.44
PAK28301	38.00	8	4	11.19	0.00	11.19	75.56	53.23	56.49	39.04	29.88	32.35	29.44	10.20
PAK28301	38.00	8	5	10.12	0.00	10.12	75.56	53.23	56.49	38.56	28.56	30.97	29.44	9.13
PAK28301	38.00	8	6	12.72	0.00	12.72	75.56	53.23	56.49	37.99	33.16	37.06	29.44	11.74
PHL28500	98.00	16	1	17.16	0.00	17.16	57.65	43.94	56.90	52.46	32.91	51.28	20.74	16.55
PHL28500	98.00	16	2	20.32	0.00	20.32	57.65	43.94	56.90	47.33	44.92	40.38	20.74	20.19
PHL28500	98.00	16	3	21.10	0.00	21.10	57.65	43.94	56.90	55.45	39.08	42.98	20.74	21.16
PHL28500	98.00	16	4	22.03	0.00	22.03	57.65	43.94	56.90	56.14	39.61	46.96	20.74	22.39
PHL28500	98.00	16	5	17.11	0.00	17.11	57.65	43.94	56.90	45.84	35.43	39.57	20.74	16.51
PHL28500	98.00	16	6	21.42	0.00	21.42	57.65	43.94	56.90	56.00	38.26	50.13	20.74	21.58
PHL28500	98.00	18	1	17.03	0.00	17.03	57.34	56.89	44.92	46.88	51.26	33.54	21.38	16.37
PHL28500	98.00	18	2	19.28	0.00	19.28	57.34	56.89	44.92	47.26	40.36	39.33	21.38	18.85
PHL28500	98.00	18	3	20.70	0.00	20.70	57.34	56.89	44.92	55.19	42.95	38.13	21.38	20.51
PHL28500	98.00	18	4	23.42	0.00	23.42	57.34	56.89	44.92	55.72	46.93	42.17	21.38	24.09
PHL28500	98.00	18	5	18.43	0.00	18.43	57.34	56.89	44.92	45.65	39.54	39.04	21.38	17.90
PHL28500	98.00	18	6	24.85	0.00	24.85	57.34	56.89	44.92	55.24	50.11	45.39	21.38	26.40
PHL28500	98.00	20	1	9.40	0.00	9.40	57.18	44.90	46.87	46.75	33.51	25.24	19.87	8.48
PHL28500	98.00	20	2	20.38	0.00	20.38	57.18	44.90	46.87	57.46	39.30	40.17	19.87	20.48
PHL28500	98.00	20	3	20.37	0.00	20.37	57.18	44.90	46.87	55.99	38.11	42.61	19.87	20.47
PHL28500	98.00	20	4	22.88	0.00	22.88	57.18	44.90	46.87	56.67	42.14	46.36	19.87	24.10
PHL28500	98.00	20	5	19.91	0.00	19.91	57.18	44.90	46.87	56.06	39.01	39.34	19.87	19.89
PHL28500	98.00	20	6	24.14	0.00	24.14	57.18	44.90	46.87	55.97	45.36	49.25	19.87	26.45
PHL28500	98.00	22	1	9.92	0.00	9.92	56.40	46.85	58.07	45.71	25.22	51.10	22.35	8.97
PHL28500	98.00	22	2	21.08	0.00	21.08	56.40	46.85	58.07	55.06	40.14	40.30	22.35	20.78
PHL28500	98.00	22	3	22.68	0.00	22.68	56.40	46.85	58.07	53.53	42.58	42.94	22.35	22.73

PHL28500	98.00	22	4	24.62	0.00	24.62	56.40	46.85	58.07	53.25	46.33	47.13	22.35	25.40
PHL28500	98.00	22	5	20.32	0.00	20.32	56.40	46.85	58.07	53.60	39.32	39.49	22.35	19.90
PHL28500	98.00	22	6	25.29	0.00	25.29	56.40	46.85	58.07	52.35	49.22	50.85	22.35	26.45
PHL28500	98.00	24	1	25.60	0.00	25.60	56.43	58.05	66.30	50.05	51.17	60.22	25.91	25.49
PHL28500	98.00	24	2	24.13	0.00	24.13	56.43	58.05	66.30	56.55	40.38	64.38	25.91	23.75
PHL28500	98.00	24	3	25.67	0.00	25.67	56.43	58.05	66.30	55.23	43.01	62.51	25.91	25.58
PHL28500	98.00	24	4	27.51	0.00	27.51	56.43	58.05	66.30	54.94	47.20	61.66	25.91	27.98
PHL28500	98.00	24	5	23.32	0.00	23.32	56.43	58.05	66.30	54.97	39.56	62.74	25.91	22.82
PHL28500	98.00	24	6	28.11	0.00	28.11	56.43	58.05	66.30	54.22	50.92	61.40	25.91	28.86
PLM33700	170.00	1	1	23.11	0.00	23.11	63.99		66.09	46.27		55.39	33.59	22.19
PLM33700	170.00	1	2	22.82	0.00	22.82	63.99		66.09	45.98		55.10	33.59	21.89
PLM33700	170.00	5	1	12.58	0.00	12.58	63.99	66.96	66.09	46.18	27.99	55.39	33.28	11.59
PLM33700	170.00	5	2	12.37	0.00	12.37	63.99	66.96	66.09	45.89	27.79	55.10	33.28	11.38
PLM33700	170.00	9	1	12.67	0.00	12.67	63.99	66.96	66.09	46.20	28.09	55.48	33.28	11.68
PLM33700	170.00	9	2	12.47	0.00	12.47	63.99	66.96	66.09	45.90	27.89	55.19	33.28	11.47
PLM33700	170.00	13	1	12.68	0.00	12.68	63.90	66.96	66.10	46.24	28.09	55.58	33.20	11.68
PLM33700	170.00	13	2	12.47	0.00	12.47	63.90	66.96	66.10	45.94	27.89	55.29	33.20	11.48
PLM33700	170.00	17	1	12.60	0.00	12.60	65.22	66.97	76.31	46.36	27.99	57.77	34.74	11.61
PLM33700	170.00	17	2	12.39	0.00	12.39	65.22	66.97	76.31	46.06	27.79	57.48	34.74	11.40
PLM33701	170.00	1	1	23.19	0.00	23.19	85.47		76.82	46.27		55.39	52.12	22.19
PLM33701	170.00	1	2	22.89	0.00	22.89	85.47		76.82	45.98		55.10	52.12	21.89
PLM33701	170.00	5	1	12.59	0.00	12.59	85.40	84.18	76.84	46.18	27.99	55.39	51.69	11.59
PLM33701	170.00	5	2	12.38	0.00	12.38	85.40	84.18	76.84	45.89	27.79	55.10	51.69	11.38
PLM33701	170.00	9	1	12.68	0.00	12.68	85.40	84.36	76.82	46.20	28.09	55.48	51.70	11.68
PLM33701	170.00	9	2	12.47	0.00	12.47	85.40	84.36	76.82	45.90	27.89	55.19	51.70	11.47
PLM33701	170.00	13	1	12.68	0.00	12.68	85.40	84.27	76.87	46.24	28.09	55.58	51.72	11.68
PLM33701	170.00	13	2	12.48	0.00	12.48	85.40	84.27	76.87	45.94	27.89	55.29	51.72	11.48
PLM33701	170.00	17	1	12.61	0.00	12.61	89.00	84.61	79.95	46.36	27.99	57.77	54.67	11.61
PLM33701	170.00	17	2	12.40	0.00	12.40	89.00	84.61	79.95	46.06	27.79	57.48	54.67	11.40
PNG13100	110.00	2	1	4.86	0.00	4.86	77.28	93.68	94.16	41.63	23.60	22.57	47.25	3.86
PNG13100	110.00	2	2	4.03	0.00	4.03	77.28	93.68	94.16	40.53	22.87	21.69	47.25	3.03
PNG13100	110.00	2	3	3.75	0.00	3.75	77.28	93.68	94.16	39.53	23.24	21.03	47.25	2.75
PNG13100	110.00	2	4	4.40	0.00	4.40	77.28	93.68	94.16	41.23	23.35	21.94	47.25	3.40
PNG13100	110.00	2	5	3.81	0.00	3.81	77.28	93.68	94.16	41.20	23.39	20.92	47.25	2.81
PNG13100	110.00	6	1	4.42	0.00	4.42	77.27	94.27	93.23	41.63	22.63	22.57	47.24	3.42
PNG13100	110.00	6	2	3.59	0.00	3.59	77.27	94.27	93.23	40.53	21.87	21.69	47.24	2.59
PNG13100	110.00	6	3	3.37	0.00	3.37	77.27	94.27	93.23	39.53	22.25	21.03	47.24	2.37
PNG13100	110.00	6	4	3.97	0.00	3.97	77.27	94.27	93.23	41.23	22.35	21.94	47.24	2.97
PNG13100	110.00	6	5	3.44	0.00	3.44	77.27	94.27	93.23	41.20	22.40	20.92	47.24	2.44
PNG13100	110.00	10	1	4.43	0.00	4.43	77.32	94.37	94.55	41.66	22.63	22.57	47.29	3.43
PNG13100	110.00	10	2	3.59	0.00	3.59	77.32	94.37	94.55	40.55	21.87	21.69	47.29	2.59
PNG13100	110.00	10	3	3.38	0.00	3.38	77.32	94.37	94.55	39.58	22.25	21.03	47.29	2.38
PNG13100	110.00	10	4	3.97	0.00	3.97	77.32	94.37	94.55	41.25	22.35	21.94	47.29	2.97
PNG13100	110.00	10	5	3.44	0.00	3.44	77.32	94.37	94.55	41.22	22.40	20.92	47.29	2.44
PNG13100	110.00	14	1	4.45	0.00	4.45	93.12	102.20	94.55	40.98	22.73	22.58	63.03	3.45
PNG13100	110.00	14	2	3.61	0.00	3.61	93.12	102.20	94.55	39.92	21.97	21.69	63.03	2.61
PNG13100	110.00	14	3	3.41	0.00	3.41	93.12	102.20	94.55	39.13	22.35	21.06	63.03	2.41
PNG13100	110.00	14	4	3.99	0.00	3.99	93.12	102.20	94.55	40.58	22.45	21.96	63.03	2.99
PNG13100	110.00	14	5	3.48	0.00	3.48	93.12	102.20	94.55	40.57	22.50	20.95	63.03	2.48
PNG27100	128.00	4	1	20.93	0.00	20.93	83.75	93.27	95.16	56.35	46.06	36.65	53.63	19.93
PNG27100	128.00	4	2	26.84	0.00	26.84	83.75	93.27	95.16	56.82	46.81	45.03	53.63	25.85
PNG27100	128.00	4	3	18.80	0.00	18.80	83.75	93.27	95.16	43.86	38.23	51.48	53.63	17.80
PNG27100	128.00	4	4	23.95	0.00	23.95	83.75	93.27	95.16	55.90	39.76	52.62	53.63	22.95
PNG27100	128.00	4	5	21.78	0.00	21.78	83.75	93.27	95.16	51.71	37.96	51.47	53.63	20.79
PNG27100	128.00	8	1	20.94	0.00	20.94	83.66	93.46	95.24	56.71	46.06	36.65	53.54	19.95
PNG27100	128.00	8	2	26.90	0.00	26.90	83.66	93.46	95.24	57.15	46.81	45.02	53.54	25.91
PNG27100	128.00	8	3	18.81	0.00	18.81	83.66	93.46	95.24	43.88	38.23	51.39	53.54	17.81
PNG27100	128.00	8	4	23.98	0.00	23.98	83.66	93.46	95.24	56.21	39.76	52.58	53.54	22.98
PNG27100	128.00	8	5	21.80	0.00	21.80	83.66	93.46	95.24	51.82	37.96	51.38	53.54	20.80
PNG27100	128.00	12	1	9.59	0.00	9.59	83.88	95.76	100.94	57.48	46.08	24.64	53.82	8.59
PNG27100	128.00	12	2	10.51	0.00	10.51	83.88	95.76	100.94	58.21	46.82	25.55	53.82	9.51
PNG27100	128.00	12	3	11.08	0.00	11.08	83.88	95.76	100.94	44.04	38.23	26.84	53.82	10.08
PNG27100	128.00	12	4	11.84	0.00	11.84	83.88	95.76	100.94	57.21	39.82	27.09	53.82	10.84
PNG27100	128.00	12	5	13.58	0.00	13.58	83.88	95.76	100.94	52.18	37.96	29.25	53.82	12.58
POL13200	-1.00	1	1	5.58	0.00	5.58	39.22		27.96	35.54		23.34	4.28	5.94
POL13200	-1.00	1	2	4.92	0.00	4.92	39.22		27.96	35.75		22.12	4.28	5.07
POL13200	-1.00	1	3	6.94	0.00	6.94	39.22		27.96	35.82		26.22	4.28	7.93
POL13200	-1.00	1	4	6.78	0.00	6.78	39.22		27.96	35.14		26.29	4.28	7.68
POL13200	-1.00	1	5	6.89	0.00	6.89	39.22		27.96	35.72		26.15	4.28	7.86
POL13200	-1.00	1	6	4.83	0.00	4.83	39.22		27.96	33.66		22.74	4.28	4.95
POL13200	-1.00	5	1	3.70	0.00	3.70	39.22	30.43	27.96	35.63	24.03	23.42	2.87	3.90
POL13200	-1.00	5	2	2.65	0.00	2.65	39.22	30.43	27.96	35.84	22.06	22.18	2.87	2.56
POL13200	-1.00	5	3	5.47	0.00	5.47	39.22	30.43	27.96	35.90	27.56	26.30	2.87	6.43
POL13200	-1.00	5	4	5.19	0.00	5.19	39.22	30.43	27.96	35.21	26.76	26.37	2.87	6.00
POL13200	-1.00	5	5	5.56	0.00	5.56	39.22	30.43	27.96	35.81	28.26	26.23	2.87	6.57
POL13200	-1.00	5	6	3.59	0.00	3.59	39.22	30.43	27.96	33.75	25.77	22.79	2.87	3.76
POL13200	-1.00	9	1	3.68	0.00	3.68	39.22	30.43	27.96	35.58	24.00	23.40	2.87	3.87
POL13200	-1.00	9	2	2.63	0.00	2.63	39.22	30.43	27.96	35.80	22.05	22.15	2.87	2.54
POL13200	-1.00	9	3	5.44	0.00	5.44	39.22	30.43	27.96	35.86	27.51	26.28	2.87	6.39
POL13200	-1.00	9	4	5.16	0.00	5.16	39.22	30.43	27.96	35.18	26.69	26.36	2.87	5.96
POL13200	-1.00	9	5	5.54	0.00	5.54	39.22	30.43	27.96	35.78	28.19	26.21	2.87	6.54
POL13200	-1.00	9	6	3.56	0.00	3.56	39.22	30.43	27.96	33.74	25.73	22.74	2.87	3.72
POL13200	-1.00	13	1	4.21	0.00	4.21	39.22	30.43	27.96	35.62	25.74	23.63	2.87	4.59
POL13200	-1.00	13	2	3.41	0.00	3.41	39.22	30.43	27.96	35.85	23.88	22.65	2.87	3.52
POL13200	-1.00	13	3	5.64	0.00	5.64	39.22	30.43	27.96	35.90	28.09	26.57	2.87	6.70
POL13200	-1.00	13	4	5.26	0.00	5.26	39.22	30.43	27.96	35.22	26.82	26.61	2.87	6.10
POL13200	-1.00	13	5	5.72	0.00	5.72	39.22	30.43	27.96	35.85	28.39	26.72	2.87	6.82
POL13200	-1.00	13	6	4.50	0.00	4.50	39.22	30.43	27.96	33.82	26.76	24.91	2.87	5.00
POL13200	-1.00	17	1	4.21	0.00	4.21	39.22	30.43	27.96	35.62	25.68	23.66	2.87	4.59

POL13200	-1.00	17	2	3.39	0.00	3.39	39.22	30.43	27.96	35.85	23.79	22.66	2.87	3.49
POL13200	-1.00	17	3	5.63	0.00	5.63	39.22	30.43	27.96	35.89	28.05	26.58	2.87	6.69
POL13200	-1.00	17	4	5.25	0.00	5.25	39.22	30.43	27.96	35.21	26.79	26.61	2.87	6.09
POL13200	-1.00	17	5	5.71	0.00	5.71	39.22	30.43	27.96	35.85	28.36	26.71	2.87	6.81
POL13200	-1.00	17	6	4.49	0.00	4.49	39.22	30.43	27.96	33.83	26.71	24.90	2.87	4.98
POR13300	-30.00	21	1	5.19	0.00	5.19	61.82	30.32	53.32	31.35	29.23	25.50	8.28	4.64
POR13300	-30.00	21	2	3.48	0.00	3.48	61.82	30.32	53.32	28.96	27.59	24.57	8.28	2.78
POR13300	-30.00	21	3	3.74	0.00	3.74	61.82	30.32	53.32	27.95	32.89	27.47	8.28	3.06
POR13300	-30.00	21	4	1.41	0.00	1.41	61.82	30.32	53.32	25.17	32.90	26.52	8.28	0.59
POR13300	-30.00	21	5	4.19	0.00	4.19	61.82	30.32	53.32	28.56	34.45	27.09	8.28	3.54
POR13300	-30.00	21	6	2.01	0.00	2.01	61.82	30.32	53.32	25.87	33.64	26.55	8.28	1.22
POR13300	-30.00	25	1	5.54	0.00	5.54	61.82	30.32	53.32	31.34	33.49	25.50	8.28	5.03
POR13300	-30.00	25	2	3.87	0.00	3.87	61.82	30.32	53.32	28.95	33.02	24.57	8.28	3.20
POR13300	-30.00	25	3	3.78	0.00	3.78	61.82	30.32	53.32	27.95	34.05	27.47	8.28	3.10
POR13300	-30.00	25	4	1.40	0.00	1.40	61.82	30.32	53.32	25.17	32.38	26.52	8.28	0.58
POR13300	-30.00	25	5	4.14	0.00	4.14	61.82	30.32	53.32	28.56	33.07	27.09	8.28	3.49
POR13300	-30.00	25	6	1.97	0.00	1.97	61.82	30.32	53.32	25.87	32.11	26.55	8.28	1.18
POR13300	-30.00	29	1	5.56	0.00	5.56	61.82	30.32	53.31	31.36	33.60	25.54	8.28	5.05
POR13300	-30.00	29	2	3.90	0.00	3.90	61.82	30.32	53.31	28.96	33.12	24.61	8.28	3.22
POR13300	-30.00	29	3	3.79	0.00	3.79	61.82	30.32	53.31	27.96	34.15	27.49	8.28	3.11
POR13300	-30.00	29	4	1.40	0.00	1.40	61.82	30.32	53.31	25.17	32.48	26.53	8.28	0.58
POR13300	-30.00	29	5	4.15	0.00	4.15	61.82	30.32	53.31	28.57	33.17	27.10	8.28	3.50
POR13300	-30.00	29	6	1.98	0.00	1.98	61.82	30.32	53.31	25.88	32.21	26.56	8.28	1.18
POR13300	-30.00	33	1	5.62	0.00	5.62	61.82	30.32	53.31	31.45	33.61	25.57	8.28	5.12
POR13300	-30.00	33	2	3.97	0.00	3.97	61.82	30.32	53.31	29.06	33.14	24.65	8.28	3.30
POR13300	-30.00	33	3	3.87	0.00	3.87	61.82	30.32	53.31	28.06	34.17	27.50	8.28	3.20
POR13300	-30.00	33	4	1.49	0.00	1.49	61.82	30.32	53.31	25.27	32.50	26.54	8.28	0.67
POR13300	-30.00	33	5	4.23	0.00	4.23	61.82	30.32	53.31	28.66	33.18	27.11	8.28	3.58
POR13300	-30.00	33	6	2.06	0.00	2.06	61.82	30.32	53.31	25.97	32.23	26.56	8.28	1.27
POR13300	-30.00	37	1	5.52	0.00	5.52	59.02	30.32	53.31	31.37	33.54	25.40	8.26	5.00
POR13300	-30.00	37	2	3.85	0.00	3.85	59.02	30.32	53.31	28.97	33.07	24.44	8.26	3.18
POR13300	-30.00	37	3	3.73	0.00	3.73	59.02	30.32	53.31	27.96	34.09	27.06	8.26	3.05
POR13300	-30.00	37	4	1.34	0.00	1.34	59.02	30.32	53.31	25.18	32.42	25.94	8.26	0.52
POR13300	-30.00	37	5	4.09	0.00	4.09	59.02	30.32	53.31	28.57	33.11	26.70	8.26	3.43
POR13300	-30.00	37	6	1.91	0.00	1.91	59.02	30.32	53.31	25.88	32.15	26.01	8.26	1.12
QAT24700	17.00	1	1	5.63	0.00	5.63	73.32		26.03	43.97		22.29	4.03	6.10
QAT24700	17.00	1	2	5.00	0.00	5.00	73.32		26.03	41.04		21.55	4.03	5.25
QAT24700	17.00	1	3	5.93	0.00	5.93	73.32		26.03	42.46		22.83	4.03	6.54
QAT24700	17.00	1	4	6.29	0.00	6.29	73.32		26.03	43.92		23.30	4.03	7.07
QAT24700	17.00	5	1	3.37	0.00	3.37	73.29	26.02	26.03	43.88	24.86	22.19	1.01	4.19
QAT24700	17.00	5	2	2.88	0.00	2.88	73.29	26.02	26.03	40.98	24.38	21.45	1.01	3.46
QAT24700	17.00	5	3	3.60	0.00	3.60	73.29	26.02	26.03	42.40	25.08	22.73	1.01	4.55
QAT24700	17.00	5	4	3.93	0.00	3.93	73.29	26.02	26.03	43.85	25.61	23.20	1.01	5.08
QAT24700	17.00	9	1	3.37	0.00	3.37	73.31	26.02	26.03	43.93	24.86	22.19	1.01	4.19
QAT24700	17.00	9	2	2.88	0.00	2.88	73.31	26.02	26.03	41.06	24.38	21.45	1.01	3.47
QAT24700	17.00	9	3	3.60	0.00	3.60	73.31	26.02	26.03	42.48	25.08	22.73	1.01	4.56
QAT24700	17.00	9	4	3.93	0.00	3.93	73.31	26.02	26.03	43.92	25.61	23.20	1.01	5.08
QAT24700	17.00	13	1	3.40	0.00	3.40	73.31	26.02	26.03	44.06	24.96	22.20	1.01	4.24
QAT24700	17.00	13	2	2.91	0.00	2.91	73.31	26.02	26.03	41.17	24.48	21.46	1.01	3.51
QAT24700	17.00	13	3	3.63	0.00	3.63	73.31	26.02	26.03	42.60	25.18	22.74	1.01	4.60
QAT24700	17.00	13	4	3.96	0.00	3.96	73.31	26.02	26.03	44.04	25.71	23.21	1.01	5.13
QAT24700	17.00	17	1	3.40	0.00	3.40	73.47	26.02	26.03	44.54	24.96	22.19	1.01	4.25
QAT24700	17.00	17	2	2.92	0.00	2.92	73.47	26.02	26.03	41.49	24.48	21.46	1.01	3.52
QAT24700	17.00	17	3	3.64	0.00	3.64	73.47	26.02	26.03	42.84	25.18	22.73	1.01	4.61
QAT24700	17.00	17	4	3.96	0.00	3.96	73.47	26.02	26.03	44.36	25.71	23.21	1.01	5.14
REU09700	29.00	22	1	10.20	0.00	10.20	39.04	34.08	34.10	37.59	37.56	37.52	6.05	12.39
REU09700	29.00	22	2	10.65	0.00	10.65	39.04	34.08	34.10	38.58	38.48	38.56	6.05	13.37
REU09700	29.00	22	3	10.68	0.00	10.68	39.04	34.08	34.10	38.65	38.54	38.63	6.05	13.44
REU09700	29.00	22	4	9.77	0.00	9.77	39.04	34.08	34.10	36.73	36.66	36.73	6.05	11.53
REU09700	29.00	26	1	10.26	0.00	10.26	39.04	34.08	34.10	37.71	37.66	37.62	6.05	12.50
REU09700	29.00	26	2	10.70	0.00	10.70	39.04	34.08	34.10	38.70	38.58	38.67	6.05	13.48
REU09700	29.00	26	3	10.72	0.00	10.72	39.04	34.08	34.10	38.76	38.65	38.74	6.05	13.55
REU09700	29.00	26	4	9.83	0.00	9.83	39.04	34.08	34.10	36.85	36.77	36.83	6.05	11.64
REU09700	29.00	30	1	10.30	0.00	10.30	39.04	34.08	34.10	37.81	37.76	37.72	6.05	12.60
REU09700	29.00	30	2	10.74	0.00	10.74	39.04	34.08	34.10	38.80	38.68	38.77	6.05	13.58
REU09700	29.00	30	3	10.76	0.00	10.76	39.04	34.08	34.10	38.86	38.75	38.84	6.05	13.65
REU09700	29.00	30	4	9.88	0.00	9.88	39.04	34.08	34.10	36.95	36.87	36.93	6.05	11.74
REU09700	29.00	34	1	10.30	0.00	10.30	39.04	34.08	34.10	37.81	37.76	37.72	6.05	12.60
REU09700	29.00	34	2	10.74	0.00	10.74	39.04	34.08	34.10	38.80	38.68	38.76	6.05	13.58
REU09700	29.00	34	3	10.76	0.00	10.76	39.04	34.08	34.10	38.86	38.75	38.84	6.05	13.65
REU09700	29.00	34	4	9.88	0.00	9.88	39.04	34.08	34.10	36.95	36.87	36.93	6.05	11.74
REU09700	29.00	38	1	10.35	0.00	10.35	39.04	34.08	34.10	37.91	37.86	37.82	6.05	12.70
REU09700	29.00	38	2	10.78	0.00	10.78	39.04	34.08	34.10	38.89	38.78	38.86	6.05	13.68
REU09700	29.00	38	3	10.80	0.00	10.80	39.04	34.08	34.10	38.96	38.85	38.93	6.05	13.75
REU09700	29.00	38	4	9.93	0.00	9.93	39.04	34.08	34.10	37.05	36.97	37.03	6.05	11.84
REU09701	29.00	22	1	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.59	37.56	37.52	-27.12	12.39
REU09701	29.00	22	2	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.58	38.48	38.56	-27.12	13.37
REU09701	29.00	22	3	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.65	38.54	38.63	-27.12	13.44
REU09701	29.00	22	4	-20.12	-20.12	0.00	23.63	-2.08	-2.06	36.73	36.66	36.73	-27.12	11.53
REU09701	29.00	26	1	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.71	37.66	37.62	-27.12	12.50
REU09701	29.00	26	2	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.70	38.58	38.67	-27.12	13.48
REU09701	29.00	26	3	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.76	38.65	38.74	-27.12	13.55
REU09701	29.00	26	4	-20.12	-20.12	0.00	23.63	-2.08	-2.06	36.85	36.77	36.83	-27.12	11.64
REU09701	29.00	30	1	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.81	37.76	37.72	-27.12	12.60
REU09701	29.00	30	2	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.80	38.68	38.77	-27.12	13.58
REU09701	29.00	30	3	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.86	38.75	38.84	-27.12	13.65
REU09701	29.00	30	4	-20.12	-20.12	0.00	23.63	-2.08	-2.06	36.95	36.87	36.93	-27.12	11.74
REU09701	29.00	34	1	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.81	37.76	37.72	-27.12	12.60
REU09701	29.00	34	2	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.80	38.68	38.76	-27.12	13.58
REU09701	29.00	34	3	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.86	38.75	38.84	-27.12	13.65

REU09701	29.00	34	4	-20.12	-20.12	0.00	23.63	-2.08	-2.06	36.95	36.87	36.93	-27.12	11.74
REU09701	29.00	38	1	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.91	37.86	37.82	-27.12	12.70
REU09701	29.00	38	2	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.89	38.78	38.86	-27.12	13.68
REU09701	29.00	38	3	-20.12	-20.12	0.00	23.63	-2.08	-2.06	38.96	38.85	38.93	-27.12	13.75
REU09701	29.00	38	4	-20.12	-20.12	0.00	23.63	-2.08	-2.06	37.05	36.97	37.03	-27.12	11.84
RRW31000	11.00	4	1	6.38	0.00	6.38	75.51	38.10	25.67	40.24	26.06	28.73	3.43	7.55
RRW31000	11.00	4	2	6.99	0.00	6.99	75.51	38.10	25.67	41.71	26.96	29.90	3.43	8.61
RRW31000	11.00	4	3	5.93	0.00	5.93	75.51	38.10	25.67	40.45	24.99	28.35	3.43	6.84
RRW31000	11.00	4	4	5.51	0.00	5.51	75.51	38.10	25.67	39.83	24.16	28.16	3.43	6.20
RRW31000	11.00	4	5	6.61	0.00	6.61	75.51	38.10	25.67	41.37	26.16	29.39	3.43	7.94
RRW31000	11.00	8	1	6.40	0.00	6.40	75.51	38.10	25.67	40.25	26.06	28.83	3.43	7.58
RRW31000	11.00	8	2	7.01	0.00	7.01	75.51	38.10	25.67	41.72	26.96	30.00	3.43	8.64
RRW31000	11.00	8	3	5.95	0.00	5.95	75.51	38.10	25.67	40.46	24.99	28.45	3.43	6.87
RRW31000	11.00	8	4	5.53	0.00	5.53	75.51	38.10	25.67	39.84	24.16	28.26	3.43	6.23
RRW31000	11.00	8	5	6.63	0.00	6.63	75.51	38.10	25.67	41.38	26.16	29.49	3.43	7.97
RRW31000	11.00	12	1	6.40	0.00	6.40	75.51	38.10	25.67	40.26	26.06	28.83	3.43	7.58
RRW31000	11.00	12	2	7.01	0.00	7.01	75.51	38.10	25.67	41.73	26.96	30.00	3.43	8.64
RRW31000	11.00	12	3	5.95	0.00	5.95	75.51	38.10	25.67	40.47	24.99	28.45	3.43	6.87
RRW31000	11.00	12	4	5.53	0.00	5.53	75.51	38.10	25.67	39.85	24.16	28.26	3.43	6.23
RRW31000	11.00	12	5	6.63	0.00	6.63	75.51	38.10	25.67	41.40	26.16	29.49	3.43	7.97
RRW31000	11.00	16	1	6.42	0.00	6.42	75.54	38.10	25.67	40.26	26.06	28.93	3.43	7.61
RRW31000	11.00	16	2	7.02	0.00	7.02	75.54	38.10	25.67	41.73	26.96	30.11	3.43	8.67
RRW31000	11.00	16	3	5.97	0.00	5.97	75.54	38.10	25.67	40.47	24.99	28.55	3.43	6.90
RRW31000	11.00	16	4	5.55	0.00	5.55	75.54	38.10	25.67	39.85	24.16	28.36	3.43	6.26
RRW31000	11.00	16	5	6.65	0.00	6.65	75.54	38.10	25.67	41.39	26.16	29.59	3.43	8.00
RRW31000	11.00	20	1	7.89	0.00	7.89	75.60	38.10	30.73	40.24	26.06	29.75	7.99	7.84
RRW31000	11.00	20	2	8.58	0.00	8.58	75.60	38.10	30.73	41.72	26.97	30.25	7.99	8.71
RRW31000	11.00	20	3	6.86	0.00	6.86	75.60	38.10	30.73	40.45	24.99	27.51	7.99	6.59
RRW31000	11.00	20	4	6.41	0.00	6.41	75.60	38.10	30.73	39.83	24.16	27.60	7.99	6.06
RRW31000	11.00	20	5	7.90	0.00	7.90	75.60	38.10	30.73	41.38	26.16	29.04	7.99	7.84
S 13800	5.00	4	1	9.16	0.00	9.16	54.33	34.49	35.09	39.44	32.44	27.30	9.62	9.02
S 13800	5.00	4	2	8.93	0.00	8.93	54.33	34.49	35.09	40.23	31.60	26.84	9.62	8.74
S 13800	5.00	4	3	12.21	0.00	12.21	54.33	34.49	35.09	40.64	36.36	33.61	9.62	13.17
S 13800	5.00	4	4	11.29	0.00	11.29	54.33	34.49	35.09	38.00	36.09	33.84	9.62	11.80
S 13800	5.00	4	5	10.06	0.00	10.06	54.33	34.49	35.09	38.09	33.53	29.97	9.62	10.15
S 13800	5.00	4	6	12.70	0.00	12.70	54.33	34.49	35.09	39.88	38.33	36.67	9.62	13.96
S 13800	5.00	8	1	9.14	0.00	9.14	54.33	34.49	35.09	39.42	32.36	27.30	9.62	9.00
S 13800	5.00	8	2	8.92	0.00	8.92	54.33	34.49	35.09	40.23	31.53	26.84	9.62	8.72
S 13800	5.00	8	3	12.20	0.00	12.20	54.33	34.49	35.09	40.63	36.31	33.60	9.62	13.15
S 13800	5.00	8	4	11.28	0.00	11.28	54.33	34.49	35.09	37.98	36.04	33.83	9.62	11.78
S 13800	5.00	8	5	10.04	0.00	10.04	54.33	34.49	35.09	38.07	33.46	29.97	9.62	10.12
S 13800	5.00	8	6	12.68	0.00	12.68	54.33	34.49	35.09	39.85	38.28	36.67	9.62	13.93
S 13800	5.00	34	1	7.37	0.00	7.37	52.46	35.68	28.41	40.60	26.68	28.70	5.57	7.93
S 13800	5.00	34	2	8.16	0.00	8.16	52.46	35.68	28.41	40.28	29.19	28.90	5.57	9.11
S 13800	5.00	34	3	9.46	0.00	9.46	52.46	35.68	28.41	40.54	34.91	30.21	5.57	11.37
S 13800	5.00	34	4	8.52	0.00	8.52	52.46	35.68	28.41	38.29	34.37	28.55	5.57	9.69
S 13800	5.00	34	5	8.01	0.00	8.01	52.46	35.68	28.41	38.77	30.72	28.05	5.57	8.88
S 13800	5.00	34	6	9.48	0.00	9.48	52.46	35.68	28.41	39.72	35.74	30.56	5.57	11.40
S 13900	5.00	30	1	8.66	0.00	8.66	52.46	35.68	28.41	41.10	30.09	29.65	5.57	9.93
S 13900	5.00	30	2	6.94	0.00	6.94	52.46	35.68	28.41	36.89	33.96	25.28	5.57	7.32
S 13900	5.00	30	3	7.17	0.00	7.17	52.46	35.68	28.41	39.39	28.64	26.53	5.57	7.65
S 13900	5.00	30	4	6.64	0.00	6.64	52.46	35.68	28.41	40.36	26.14	26.80	5.57	6.92
S 13900	5.00	30	5	8.81	0.00	8.81	52.46	35.68	28.41	40.25	33.42	28.66	5.57	10.17
S 13900	5.00	30	6	9.67	0.00	9.67	52.46	35.68	28.41	40.33	36.15	30.79	5.57	11.79
S 13902	5.00	40	1	2.54	0.00	2.54	34.81	25.97	28.41	38.27	32.59		-5.59	6.88 *
S 13902	5.00	40	2	1.32	0.00	1.32	34.81	25.97	28.41	35.14	28.24		-5.59	3.64 *
S 13902	5.00	40	3	1.49	0.00	1.49	34.81	25.97	28.41	35.52	28.64		-5.59	4.02 *
S 13902	5.00	40	4	1.75	0.00	1.75	34.81	25.97	28.41	36.18	28.85		-5.59	4.63 *
S 13902	5.00	40	5	2.26	0.00	2.26	34.81	25.97	28.41	37.36	31.72		-5.59	5.98 *
S 13902	5.00	40	6	3.00	0.00	3.00	34.81	25.97	28.41	40.00	35.64		-5.59	8.71 *
SDN23000	-7.00	23	1	4.41	0.00	4.41	34.34	25.53	26.43	42.45	27.00	27.70	-0.69	7.92
SDN23000	-7.00	23	2	3.27	0.00	3.27	34.34	25.53	26.43	43.16	23.70	25.36	-0.69	5.26
SDN23000	-7.00	23	3	3.02	0.00	3.02	34.34	25.53	26.43	43.91	23.44	24.47	-0.69	4.78
SDN23000	-7.00	23	4	2.48	0.00	2.48	34.34	25.53	26.43	43.03	22.90	23.01	-0.69	3.81
SDN23000	-7.00	23	5	2.93	0.00	2.93	34.34	25.53	26.43	43.12	24.01	23.54	-0.69	4.60
SDN23000	-7.00	23	6	3.78	0.00	3.78	34.34	25.53	26.43	40.43	26.14	25.47	-0.69	6.33
SDN23000	-7.00	27	1	4.45	0.00	4.45	34.34	25.53	26.43	42.54	27.10	27.80	-0.69	8.02
SDN23000	-7.00	27	2	3.32	0.00	3.32	34.34	25.53	26.43	43.28	23.80	25.46	-0.69	5.36
SDN23000	-7.00	27	3	3.08	0.00	3.08	34.34	25.53	26.43	44.03	23.54	24.57	-0.69	4.88
SDN23000	-7.00	27	4	2.54	0.00	2.54	34.34	25.53	26.43	43.15	23.00	23.11	-0.69	3.91
SDN23000	-7.00	27	5	2.98	0.00	2.98	34.34	25.53	26.43	43.23	24.11	23.64	-0.69	4.70
SDN23000	-7.00	27	6	3.82	0.00	3.82	34.34	25.53	26.43	40.49	26.24	25.57	-0.69	6.43
SDN23000	-7.00	31	1	4.42	0.00	4.42	34.34	25.53	26.43	42.54	27.01	27.73	-0.69	7.95
SDN23000	-7.00	31	2	3.28	0.00	3.28	34.34	25.53	26.43	43.28	23.70	25.39	-0.69	5.28
SDN23000	-7.00	31	3	3.03	0.00	3.03	34.34	25.53	26.43	44.02	23.44	24.49	-0.69	4.79
SDN23000	-7.00	31	4	2.49	0.00	2.49	34.34	25.53	26.43	43.15	22.90	23.02	-0.69	3.82
SDN23000	-7.00	31	5	2.94	0.00	2.94	34.34	25.53	26.43	43.23	24.01	23.55	-0.69	4.61
SDN23000	-7.00	31	6	3.79	0.00	3.79	34.34	25.53	26.43	40.49	26.14	25.49	-0.69	6.35
SDN23000	-7.00	35	1	4.45	0.00	4.45	34.34	25.53	26.43	42.60	27.11	27.83	-0.69	8.04
SDN23000	-7.00	35	2	3.33	0.00	3.33	34.34	25.53	26.43	43.36	23.80	25.49	-0.69	5.37
SDN23000	-7.00	35	3	3.08	0.00	3.08	34.34	25.53	26.43	44.11	23.54	24.59	-0.69	4.89
SDN23000	-7.00	35	4	2.55	0.00	2.55	34.34	25.53	26.43	43.23	23.00	23.12	-0.69	3.92
SDN23000	-7.00	35	5	2.99	0.00	2.99	34.34	25.53	26.43	43.30	24.11	23.65	-0.69	4.71
SDN23000	-7.00	35	6	3.83	0.00	3.83	34.34	25.53	26.43	40.53	26.24	25.59	-0.69	6.45
SDN23000	-7.00	39	1	4.43	0.00	4.43	34.34	25.53	26.43	42.58	27.01	27.76	-0.69	7.96
SDN23000	-7.00	39	2	3.29	0.00	3.29	34.34	25.53	26.43	43.33	23.70	25.41	-0.69	5.29
SDN23000	-7.00	39	3	3.04	0.00	3.04	34.34	25.53	26.43	44.08	23.44	24.50	-0.69	4.80
SDN23000	-7.00	39	4	2.50	0.00	2.50	34.34	25.53	26.43	43.20	22.90	23.04	-0.69	3.83
SDN23000	-7.00	39	5	2.94	0.00	2.94	34.34	25.53	26.43	43.25	24.01	23.56	-0.69	4.62

SDN23000	-7.00	39	6	3.79	0.00	3.79	34.34	25.53	26.43	40.50	26.14	25.51	-0.69	6.36
SDN23100	-7.00	22	1	3.94	0.00	3.94	37.67	31.37	25.95	37.38	40.15	21.44	1.61	4.75
SDN23100	-7.00	22	2	4.71	0.00	4.71	37.67	31.37	25.95	38.67	55.07	22.61	1.61	5.97
SDN23100	-7.00	22	3	6.34	0.00	6.34	37.67	31.37	25.95	38.35	47.90	26.87	1.61	9.24
SDN23100	-7.00	22	4	5.98	0.00	5.98	37.67	31.37	25.95	39.31	53.97	25.40	1.61	8.40
SDN23100	-7.00	22	5	6.98	0.00	6.98	37.67	31.37	25.95	41.36	52.16	28.18	1.61	11.01
SDN23100	-7.00	22	6	5.23	0.00	5.23	37.67	31.37	25.95	38.24	54.57	23.77	1.61	6.89
SDN23100	-7.00	26	1	3.73	0.00	3.73	35.05	35.24	25.95	37.41	40.08	21.35	1.18	4.67
SDN23100	-7.00	26	2	4.48	0.00	4.48	35.05	35.24	25.95	38.69	55.98	22.51	1.18	5.90
SDN23100	-7.00	26	3	6.07	0.00	6.07	35.05	35.24	25.95	38.39	48.04	26.81	1.18	9.21
SDN23100	-7.00	26	4	5.71	0.00	5.71	35.05	35.24	25.95	39.35	54.75	25.32	1.18	8.34
SDN23100	-7.00	26	5	6.66	0.00	6.66	35.05	35.24	25.95	41.41	52.42	28.11	1.18	10.97
SDN23100	-7.00	26	6	4.98	0.00	4.98	35.05	35.24	25.95	38.26	55.41	23.69	1.18	6.82
SDN23100	-7.00	30	1	3.80	0.00	3.80	35.05	35.24	25.95	37.49	40.19	21.45	1.18	4.77
SDN23100	-7.00	30	2	4.53	0.00	4.53	35.05	35.24	25.95	38.70	56.03	22.61	1.18	5.98
SDN23100	-7.00	30	3	6.10	0.00	6.10	35.05	35.24	25.95	38.47	48.21	26.91	1.18	9.30
SDN23100	-7.00	30	4	5.75	0.00	5.75	35.05	35.24	25.95	39.35	54.79	25.42	1.18	8.43
SDN23100	-7.00	30	5	6.69	0.00	6.69	35.05	35.24	25.95	41.47	52.64	28.21	1.18	11.06
SDN23100	-7.00	30	6	5.03	0.00	5.03	35.05	35.24	25.95	38.27	55.45	23.78	1.18	6.90
SDN23100	-7.00	34	1	3.74	0.00	3.74	35.05	35.24	25.95	37.49	40.10	21.35	1.18	4.68
SDN23100	-7.00	34	2	4.48	0.00	4.48	35.05	35.24	25.95	38.64	55.99	22.52	1.18	5.89
SDN23100	-7.00	34	3	6.08	0.00	6.08	35.05	35.24	25.95	38.47	48.12	26.84	1.18	9.26
SDN23100	-7.00	34	4	5.71	0.00	5.71	35.05	35.24	25.95	39.29	54.76	25.33	1.18	8.35
SDN23100	-7.00	34	5	6.67	0.00	6.67	35.05	35.24	25.95	41.46	52.57	28.13	1.18	11.00
SDN23100	-7.00	34	6	4.98	0.00	4.98	35.05	35.24	25.95	38.20	55.42	23.69	1.18	6.82
SDN23100	-7.00	38	1	3.80	0.00	3.80	35.05	35.24	25.95	37.57	40.19	21.45	1.18	4.78
SDN23100	-7.00	38	2	4.53	0.00	4.53	35.05	35.24	25.95	38.70	56.01	22.62	1.18	5.99
SDN23100	-7.00	38	3	6.12	0.00	6.12	35.05	35.24	25.95	38.54	48.20	26.94	1.18	9.35
SDN23100	-7.00	38	4	5.75	0.00	5.75	35.05	35.24	25.95	39.35	54.78	25.43	1.18	8.44
SDN23100	-7.00	38	5	6.70	0.00	6.70	35.05	35.24	25.95	41.52	52.64	28.23	1.18	11.10
SDN23100	-7.00	38	6	5.03	0.00	5.03	35.05	35.24	25.95	38.27	55.44	23.79	1.18	6.91
SDN23200	-7.00	24	1	1.31	0.00	1.31	25.54	26.05	33.14	37.89	27.57	50.90	-5.14	9.56
SDN23200	-7.00	24	2	1.14	0.00	1.14	25.54	26.05	33.14	36.22	26.58	47.80	-5.14	8.29
SDN23200	-7.00	24	3	1.38	0.00	1.38	25.54	26.05	33.14	37.73	28.68	48.80	-5.14	10.14
SDN23200	-7.00	24	4	1.10	0.00	1.10	25.54	26.05	33.14	36.61	25.91	52.46	-5.14	8.04
SDN23200	-7.00	24	5	1.25	0.00	1.25	25.54	26.05	33.14	36.71	27.54	51.84	-5.14	9.07
SDN23200	-7.00	24	6	0.90	0.00	0.90	25.54	26.05	33.14	34.88	25.13	54.32	-5.14	6.90
SDN23200	-7.00	28	1	1.31	0.00	1.31	25.54	26.05	33.14	37.93	27.51	51.02	-5.14	9.53
SDN23200	-7.00	28	2	1.14	0.00	1.14	25.54	26.05	33.14	36.24	26.52	47.87	-5.14	8.27
SDN23200	-7.00	28	3	1.38	0.00	1.38	25.54	26.05	33.14	37.75	28.66	48.83	-5.14	10.14
SDN23200	-7.00	28	4	1.10	0.00	1.10	25.54	26.05	33.14	36.63	25.86	52.39	-5.14	8.01
SDN23200	-7.00	28	5	1.25	0.00	1.25	25.54	26.05	33.14	36.73	27.47	51.96	-5.14	9.03
SDN23200	-7.00	28	6	0.89	0.00	0.89	25.54	26.05	33.14	34.90	25.05	54.26	-5.14	6.86
SDN23200	-7.00	32	1	1.32	0.00	1.32	25.54	26.05	33.14	37.99	27.61	51.06	-5.14	9.62
SDN23200	-7.00	32	2	1.15	0.00	1.15	25.54	26.05	33.14	36.29	26.62	47.89	-5.14	8.35
SDN23200	-7.00	32	3	1.39	0.00	1.39	25.54	26.05	33.14	37.82	28.76	48.92	-5.14	10.23
SDN23200	-7.00	32	4	1.11	0.00	1.11	25.54	26.05	33.14	36.68	25.96	52.47	-5.14	8.09
SDN23200	-7.00	32	5	1.26	0.00	1.26	25.54	26.05	33.14	36.77	27.57	51.99	-5.14	9.11
SDN23200	-7.00	32	6	0.90	0.00	0.90	25.54	26.05	33.14	34.93	25.15	54.33	-5.14	6.94
SDN23200	-7.00	36	1	1.31	0.00	1.31	25.54	26.05	33.14	37.99	27.55	51.02	-5.14	9.58
SDN23200	-7.00	36	2	1.14	0.00	1.14	25.54	26.05	33.14	36.30	26.55	47.87	-5.14	8.31
SDN23200	-7.00	36	3	1.38	0.00	1.38	25.54	26.05	33.14	37.82	28.74	48.83	-5.14	10.21
SDN23200	-7.00	36	4	1.10	0.00	1.10	25.54	26.05	33.14	36.66	25.91	52.37	-5.14	8.05
SDN23200	-7.00	36	5	1.25	0.00	1.25	25.54	26.05	33.14	36.77	27.49	51.95	-5.14	9.07
SDN23200	-7.00	36	6	0.89	0.00	0.89	25.54	26.05	33.14	34.92	25.07	54.25	-5.14	6.89
SDN23200	-7.00	40	1	1.63	0.00	1.63	25.81	26.05	33.14	38.06	27.65		-4.79	9.68
SDN23200	-7.00	40	2	1.45	0.00	1.45	25.81	26.05	33.14	36.35	26.65		-4.79	8.41
SDN23200	-7.00	40	3	1.70	0.00	1.70	25.81	26.05	33.14	37.90	28.84		-4.79	10.33
SDN23200	-7.00	40	4	1.41	0.00	1.41	25.81	26.05	33.14	36.74	26.01		-4.79	8.15
SDN23200	-7.00	40	5	1.56	0.00	1.56	25.81	26.05	33.14	36.82	27.59		-4.79	9.15
SDN23200	-7.00	40	6	1.18	0.00	1.18	25.81	26.05	33.14	34.97	25.17		-4.79	6.97
SEN22200	-37.00	29	1	5.22	0.00	5.22	41.47	30.13	25.40	41.24	31.23	24.02	1.66	6.84
SEN22200	-37.00	29	2	5.13	0.00	5.13	41.47	30.13	25.40	41.22	30.93	23.85	1.66	6.67
SEN22200	-37.00	29	3	5.49	0.00	5.49	41.47	30.13	25.40	44.28	31.40	24.36	1.66	7.35
SEN22200	-37.00	29	4	5.75	0.00	5.75	41.47	30.13	25.40	44.76	31.76	24.91	1.66	7.87
SEN22200	-37.00	29	5	6.06	0.00	6.06	41.47	30.13	25.40	45.23	31.69	25.76	1.66	8.54
SEN22200	-37.00	29	6	5.31	0.00	5.31	41.47	30.13	25.40	42.05	30.69	24.26	1.66	7.01
SEN22200	-37.00	33	1	5.23	0.00	5.23	41.47	30.13	25.40	41.31	31.23	24.02	1.66	6.85
SEN22200	-37.00	33	2	5.13	0.00	5.13	41.47	30.13	25.40	41.30	30.93	23.85	1.66	6.68
SEN22200	-37.00	33	3	5.49	0.00	5.49	41.47	30.13	25.40	44.34	31.40	24.36	1.66	7.36
SEN22200	-37.00	33	4	5.75	0.00	5.75	41.47	30.13	25.40	44.81	31.76	24.91	1.66	7.87
SEN22200	-37.00	33	5	6.07	0.00	6.07	41.47	30.13	25.40	45.27	31.69	25.76	1.66	8.54
SEN22200	-37.00	33	6	5.32	0.00	5.32	41.47	30.13	25.40	42.11	30.69	24.26	1.66	7.02
SEN22200	-37.00	37	1	5.28	0.00	5.28	41.47	30.13	25.40	41.34	31.33	24.11	1.66	6.94
SEN22200	-37.00	37	2	5.18	0.00	5.18	41.47	30.13	25.40	41.33	31.03	23.95	1.66	6.77
SEN22200	-37.00	37	3	5.54	0.00	5.54	41.47	30.13	25.40	44.39	31.50	24.46	1.66	7.45
SEN22200	-37.00	37	4	5.80	0.00	5.80	41.47	30.13	25.40	44.87	31.86	25.01	1.66	7.97
SEN22200	-37.00	37	5	6.11	0.00	6.11	41.47	30.13	25.40	45.33	31.79	25.86	1.66	8.64
SEN22200	-37.00	37	6	5.37	0.00	5.37	41.47	30.13	25.40	42.15	30.78	24.36	1.66	7.11
SEN22201	-37.00	21	1	6.84	0.00	6.84	62.66	60.69	60.87	41.25	26.76	24.01	30.93	5.84
SEN22201	-37.00	21	2	6.46	0.00	6.46	62.66	60.69	60.87	41.23	25.94	23.85	30.93	5.46
SEN22201	-37.00	21	3	6.04	0.00	6.04	62.66	60.69	60.87	44.29	24.02	24.36	30.93	5.05
SEN22201	-37.00	21	4	5.89	0.00	5.89	62.66	60.69	60.87	44.77	23.27	24.91	30.93	4.89
SEN22201	-37.00	21	5	7.78	0.00	7.78	62.66	60.69	60.87	45.25	26.15	25.76	30.93	6.78
SEN22201	-37.00	21	6	7.01	0.00	7.01	62.66	60.69	60.87	42.06	26.67	24.26	30.93	6.01
SEN22201	-37.00	25	1	7.85	0.00	7.85	62.65	74.25	60.91	41.31	31.23	24.02	31.69	6.85
SEN22201	-37.00	25	2	7.67	0.00	7.67	62.65	74.25	60.91	41.30	30.93	23.85	31.69	6.68
SEN22201	-37.00	25	3	8.35	0.00	8.35	62.65	74.25	60.91	44.34	31.40	24.37	31.69	7.36
SEN22201	-37.00	25	4	8.87	0.00	8.87	62.65	74.25	60.91	44.82	31.76	24.92	31.69	7.87
SEN22201	-37.00	25	5	9.53	0.00	9.53	62.65	74.25	60.91	45.28	31.69	25.76	31.69	8.54

SEN22201	-37.00	25	6	8.02	0.00	8.02	62.65	74.25	60.91	42.11	30.69	24.26	31.69	7.02
SMA33500	170.00	1	1	19.96	0.00	19.96	50.32	66.50	67.54	45.61		40.61	20.29	19.85
SMA33500	170.00	1	2	19.77	0.00	19.77	50.32	66.50	67.54	45.46		40.22	20.29	19.62
SMA33500	170.00	1	3	9.06	0.00	9.06	50.32	66.50	67.54	32.85		32.24	20.29	8.12
SMA33500	170.00	1	4	20.11	0.00	20.11	50.32	66.50	67.54	45.76		40.89	20.29	20.04
SMA33500	170.00	5	1	12.01	0.00	12.01	50.32	66.50	67.54	45.68	27.75	40.71	20.29	11.14
SMA33500	170.00	5	2	11.17	0.00	11.17	50.32	66.50	67.54	45.53	26.80	40.32	20.29	10.28
SMA33500	170.00	5	3	-0.04	-0.03	-0.01	50.32	66.50	67.54	32.92	15.52	32.34	20.29	-1.04
SMA33500	170.00	5	4	12.12	0.00	12.12	50.32	66.50	67.54	45.82	27.86	40.99	20.29	11.26
SMA33500	170.00	9	1	12.09	0.00	12.09	50.32	66.50	67.55	45.69	27.85	40.72	20.29	11.22
SMA33500	170.00	9	2	11.25	0.00	11.25	50.32	66.50	67.55	45.54	26.90	40.32	20.29	10.36
SMA33500	170.00	9	3	0.04	0.00	0.04	50.32	66.50	67.55	32.93	15.62	32.36	20.29	-0.95
SMA33500	170.00	9	4	12.21	0.00	12.21	50.32	66.50	67.55	45.83	27.96	41.00	20.29	11.34
SMA33500	170.00	13	1	11.99	0.00	11.99	50.58	66.51	67.55	45.48	27.75	40.62	20.55	11.11
SMA33500	170.00	13	2	11.16	0.00	11.16	50.58	66.51	67.55	45.33	26.80	40.23	20.55	10.26
SMA33500	170.00	13	3	-0.06	-0.04	-0.02	50.58	66.51	67.55	32.79	15.52	32.27	20.55	-1.05
SMA33500	170.00	13	4	12.11	0.00	12.11	50.58	66.51	67.55	45.63	27.86	40.90	20.55	11.24
SMA33500	170.00	17	1	12.22	0.00	12.22	50.89	73.38	57.39	45.89	27.75	54.55	20.73	11.34
SMA33500	170.00	17	2	11.36	0.00	11.36	50.89	73.38	57.39	45.83	26.80	54.29	20.73	10.47
SMA33500	170.00	17	3	0.05	0.00	0.05	50.89	73.38	57.39	33.16	15.52	42.11	20.73	-0.94
SMA33500	170.00	17	4	12.33	0.00	12.33	50.89	73.38	57.39	46.04	27.86	54.70	20.73	11.46
SMA33501	170.00	1	1	20.61	0.00	20.61	76.48	75.98	85.81	45.46		40.22	45.70	19.62
SMA33501	170.00	1	2	9.12	0.00	9.12	76.48	75.98	85.81	32.85		32.24	45.70	8.12
SMA33501	170.00	1	3	21.03	0.00	21.03	76.48	75.98	85.81	45.76		40.89	45.70	20.04
SMA33501	170.00	1	4	20.84	0.00	20.84	76.48	75.98	85.81	45.61		40.61	45.70	19.85
SMA33501	170.00	5	1	11.28	0.00	11.28	76.46	75.99	85.95	45.53	26.80	40.32	45.68	10.28
SMA33501	170.00	5	2	-0.04	-0.03	-0.01	76.46	75.99	85.95	32.92	15.52	32.34	45.68	-1.04
SMA33501	170.00	5	3	12.26	0.00	12.26	76.46	75.99	85.95	45.82	27.86	40.99	45.68	11.26
SMA33501	170.00	5	4	12.14	0.00	12.14	76.46	75.99	85.95	45.68	27.75	40.71	45.68	11.14
SMA33501	170.00	9	1	11.36	0.00	11.36	76.48	75.99	86.04	45.54	26.90	40.32	45.70	10.36
SMA33501	170.00	9	2	0.05	0.00	0.05	76.48	75.99	86.04	32.93	15.62	32.36	45.70	-0.95
SMA33501	170.00	9	3	12.34	0.00	12.34	76.48	75.99	86.04	45.83	27.96	41.00	45.70	11.34
SMA33501	170.00	9	4	12.22	0.00	12.22	76.48	75.99	86.04	45.69	27.85	40.72	45.70	11.22
SMA33501	170.00	13	1	11.26	0.00	11.26	75.88	76.04	86.31	45.33	26.80	40.23	45.21	10.26
SMA33501	170.00	13	2	-0.05	-0.04	-0.01	75.88	76.04	86.31	32.79	15.52	32.27	45.21	-1.05
SMA33501	170.00	13	3	12.24	0.00	12.24	75.88	76.04	86.31	45.63	27.86	40.90	45.21	11.24
SMA33501	170.00	13	4	12.11	0.00	12.11	75.88	76.04	86.31	45.48	27.75	40.62	45.21	11.11
SMA33501	170.00	17	1	11.47	0.00	11.47	76.07	77.03	84.84	45.83	26.80	54.29	45.47	10.47
SMA33501	170.00	17	2	0.06	0.00	0.06	76.07	77.03	84.84	33.16	15.52	42.11	45.47	-0.94
SMA33501	170.00	17	3	12.46	0.00	12.46	76.07	77.03	84.84	46.04	27.86	54.70	45.47	11.46
SMA33501	170.00	17	4	12.34	0.00	12.34	76.07	77.03	84.84	45.89	27.75	54.55	45.47	11.34
SMO05700	158.00	3	1	9.48	0.00	9.48	51.16	34.60	31.70	54.86	30.81	27.84	7.70	10.03
SMO05700	158.00	3	2	8.00	0.00	8.00	51.16	34.60	31.70	53.79	29.45	25.57	7.70	8.05
SMO05700	158.00	3	3	9.20	0.00	9.20	51.16	34.60	31.70	54.89	30.71	27.31	7.70	9.64
SMO05700	158.00	3	4	7.31	0.00	7.31	51.16	34.60	31.70	53.14	28.69	24.66	7.70	7.19
SMO05700	158.00	7	1	9.55	0.00	9.55	51.16	34.60	31.70	54.95	30.91	27.94	7.70	10.13
SMO05700	158.00	7	2	8.08	0.00	8.08	51.16	34.60	31.70	53.89	29.55	25.67	7.70	8.15
SMO05700	158.00	7	3	9.27	0.00	9.27	51.16	34.60	31.70	54.99	30.81	27.41	7.70	9.74
SMO05700	158.00	7	4	7.39	0.00	7.39	51.16	34.60	31.70	53.24	28.79	24.76	7.70	7.29
SMO05700	158.00	11	1	9.55	0.00	9.55	51.16	34.60	31.70	55.04	30.91	27.94	7.70	10.13
SMO05700	158.00	11	2	8.08	0.00	8.08	51.16	34.60	31.70	53.97	29.55	25.67	7.70	8.15
SMO05700	158.00	11	3	9.28	0.00	9.28	51.16	34.60	31.70	55.07	30.81	27.41	7.70	9.74
SMO05700	158.00	11	4	7.39	0.00	7.39	51.16	34.60	31.70	53.32	28.79	24.76	7.70	7.29
SMO05700	158.00	15	1	9.49	0.00	9.49	51.16	34.60	31.70	56.72	30.81	27.84	7.70	10.04
SMO05700	158.00	15	2	8.01	0.00	8.01	51.16	34.60	31.70	55.45	29.45	25.57	7.70	8.06
SMO05700	158.00	15	3	9.21	0.00	9.21	51.16	34.60	31.70	56.63	30.71	27.31	7.70	9.65
SMO05700	158.00	15	4	7.32	0.00	7.32	51.16	34.60	31.70	54.76	28.69	24.66	7.70	7.19
SMR31100	-37.00	1	1	4.46	0.00	4.46	42.66		26.45	29.67		27.21	3.84	4.60
SMR31100	-37.00	1	2	4.71	0.00	4.71	42.66		26.45	29.96		27.70	3.84	4.93
SMR31100	-37.00	5	1	3.00	0.00	3.00	42.66	27.48	26.45	29.72	25.43	27.30	1.57	3.41
SMR31100	-37.00	5	2	3.25	0.00	3.25	42.66	27.48	26.45	30.01	25.85	27.79	1.57	3.76
SMR31100	-37.00	9	1	2.96	0.00	2.96	42.66	27.48	26.45	29.67	25.36	27.29	1.57	3.36
SMR31100	-37.00	9	2	3.22	0.00	3.22	42.66	27.48	26.45	29.96	25.78	27.79	1.57	3.72
SMR31100	-37.00	13	1	3.01	0.00	3.01	42.66	27.48	26.45	29.72	25.44	27.38	1.57	3.42
SMR31100	-37.00	13	2	3.27	0.00	3.27	42.66	27.48	26.45	30.01	25.86	27.88	1.57	3.78
SMR31100	-37.00	17	1	3.07	0.00	3.07	42.66	27.48	26.45	29.81	25.47	27.48	1.57	3.50
SMR31100	-37.00	17	2	3.32	0.00	3.32	42.66	27.48	26.45	30.11	25.90	27.97	1.57	3.86
SNG15100	74.00	3	1	9.65	0.00	9.65	79.83	78.78	70.57	53.13	27.69	27.71	45.79	8.65
SNG15100	74.00	3	2	9.72	0.00	9.72	79.83	78.78	70.57	53.14	27.76	27.79	45.79	8.72
SNG15100	74.00	3	3	7.93	0.00	7.93	79.83	78.78	70.57	51.77	25.96	25.99	45.79	6.93
SNG15100	74.00	3	4	5.73	0.00	5.73	79.83	78.78	70.57	48.76	23.77	23.79	45.79	4.73
SNG15100	74.00	3	5	5.23	0.00	5.23	79.83	78.78	70.57	49.56	23.26	23.29	45.79	4.23
SNG15100	74.00	3	6	6.03	0.00	6.03	79.83	78.78	70.57	48.10	24.08	24.11	45.79	5.03
SNG15100	74.00	7	1	9.70	0.00	9.70	78.81	78.40	78.32	53.22	27.79	27.72	47.50	8.70
SNG15100	74.00	7	2	9.78	0.00	9.78	78.81	78.40	78.32	53.23	27.86	27.79	47.50	8.78
SNG15100	74.00	7	3	7.98	0.00	7.98	78.81	78.40	78.32	51.86	26.06	25.99	47.50	6.98
SNG15100	74.00	7	4	5.78	0.00	5.78	78.81	78.40	78.32	48.84	23.87	23.80	47.50	4.78
SNG15100	74.00	7	5	5.28	0.00	5.28	78.81	78.40	78.32	49.64	23.36	23.29	47.50	4.28
SNG15100	74.00	7	6	6.08	0.00	6.08	78.81	78.40	78.32	48.19	24.18	24.12	47.50	5.08
SNG15100	74.00	11	1	22.90	0.00	22.90	80.96	78.93	70.59	53.29	40.30	44.08	46.22	21.90
SNG15100	74.00	11	2	22.77	0.00	22.77	80.96	78.93	70.59	53.29	40.24	43.70	46.22	21.78
SNG15100	74.00	11	3	21.61	0.00	21.61	80.96	78.93	70.59	51.92	38.78	43.43	46.22	20.61
SNG15100	74.00	11	4	18.93	0.00	18.93	80.96	78.93	70.59	48.91	36.24	40.68	46.22	17.93
SNG15100	74.00	11	5	20.08	0.00	20.08	80.96	78.93	70.59	49.71	36.98	43.73	46.22	19.08
SNG15100	74.00	11	6	15.08	0.00	15.08	80.96	78.93	70.59	48.26	34.38	32.81	46.22	14.08
SNG15100	74.00	15	1	17.78	0.00	17.78	79.13	92.07	70.59	42.30	43.87	39.38	49.10	16.78
SNG15100	74.00	15	2	17.74	0.00	17.74	79.13	92.07	70.59	42.32	43.51	39.33	49.10	16.74
SNG15100	74.00	15	3	16.68	0.00	16.68	79.13	92.07	70.59	40.97	43.23	39.00	49.10	15.68
SNG15100	74.00	15	4	13.40	0.00	13.40	79.13	92.07	70.59	37.93	40.43	34.72	49.10	12.40

SNG15100	74.00	15	5	14.83	0.00	14.83	79.13	92.07	70.59	38.74	43.49	38.20	49.10	13.83
SNG15100	74.00	15	6	11.16	0.00	11.16	79.13	92.07	70.59	37.30	32.67	31.53	49.10	10.16
SOM31200	23.00	3	1	4.07	0.00	4.07	27.87	33.88	33.82	42.87	34.98	32.12	-2.47	13.00
SOM31200	23.00	3	2	4.11	0.00	4.11	27.87	33.88	33.82	43.09	37.27	31.91	-2.47	13.42
SOM31200	23.00	3	3	4.35	0.00	4.35	27.87	33.88	33.82	44.41	41.03	37.38	-2.47	17.09
SOM31200	23.00	3	4	4.28	0.00	4.28	27.87	33.88	33.82	42.30	40.01	36.74	-2.47	15.66
SOM31200	23.00	3	5	4.29	0.00	4.29	27.87	33.88	33.82	44.78	39.27	34.84	-2.47	15.83
SOM31200	23.00	7	1	4.08	0.00	4.08	27.87	33.88	33.82	42.96	35.08	32.19	-2.47	13.09
SOM31200	23.00	7	2	4.12	0.00	4.12	27.87	33.88	33.82	43.18	37.35	31.98	-2.47	13.50
SOM31200	23.00	7	3	4.35	0.00	4.35	27.87	33.88	33.82	44.50	41.12	37.46	-2.47	17.18
SOM31200	23.00	7	4	4.28	0.00	4.28	27.87	33.88	33.82	42.38	40.10	36.82	-2.47	15.74
SOM31200	23.00	7	5	4.29	0.00	4.29	27.87	33.88	33.82	44.87	39.37	34.92	-2.47	15.92
SOM31200	23.00	11	1	4.08	0.00	4.08	27.87	33.88	33.82	42.95	35.08	32.19	-2.47	13.09
SOM31200	23.00	11	2	4.12	0.00	4.12	27.87	33.88	33.82	43.17	37.33	31.98	-2.47	13.50
SOM31200	23.00	11	3	4.35	0.00	4.35	27.87	33.88	33.82	44.49	41.13	37.46	-2.47	17.18
SOM31200	23.00	11	4	4.28	0.00	4.28	27.87	33.88	33.82	42.37	40.10	36.82	-2.47	15.73
SOM31200	23.00	11	5	4.29	0.00	4.29	27.87	33.88	33.82	44.87	39.37	34.92	-2.47	15.92
SOM31200	23.00	15	1	4.09	0.00	4.09	27.87	33.88	33.82	43.07	35.18	32.29	-2.47	13.19
SOM31200	23.00	15	2	4.13	0.00	4.13	27.87	33.88	33.82	43.29	37.41	32.08	-2.47	13.60
SOM31200	23.00	15	3	4.35	0.00	4.35	27.87	33.88	33.82	44.61	41.25	37.54	-2.47	17.28
SOM31200	23.00	15	4	4.28	0.00	4.28	27.87	33.88	33.82	42.46	40.22	36.88	-2.47	15.81
SOM31200	23.00	15	5	4.30	0.00	4.30	27.87	33.88	33.82	44.98	39.48	35.02	-2.47	16.02
SOM31200	23.00	19	1	4.10	0.00	4.10	27.87	33.88	33.82	43.40	35.28	32.40	-2.47	13.35
SOM31200	23.00	19	2	4.14	0.00	4.14	27.87	33.88	33.82	43.65	37.50	32.19	-2.47	13.77
SOM31200	23.00	19	3	4.36	0.00	4.36	27.87	33.88	33.82	44.92	41.32	37.72	-2.47	17.51
SOM31200	23.00	19	4	4.30	0.00	4.30	27.87	33.88	33.82	42.72	40.29	37.07	-2.47	16.02
SOM31200	23.00	19	5	4.30	0.00	4.30	27.87	33.88	33.82	45.31	39.57	35.14	-2.47	16.20
SRL25900	-33.50	23	1	9.13	0.00	9.13	66.78	35.58	64.11	49.65	24.57	46.45	13.56	8.46
SRL25900	-33.50	23	2	8.68	0.00	8.68	66.78	35.58	64.11	48.85	24.09	45.87	13.56	7.97
SRL25900	-33.50	23	3	6.98	0.00	6.98	66.78	35.58	64.11	48.64	22.26	45.72	13.56	6.18
SRL25900	-33.50	23	4	7.07	0.00	7.07	66.78	35.58	64.11	46.33	22.40	45.69	13.56	6.27
SRL25900	-33.50	27	1	9.17	0.00	9.17	66.86	35.58	64.11	49.67	24.61	46.62	13.56	8.50
SRL25900	-33.50	27	2	8.74	0.00	8.74	66.86	35.58	64.11	48.92	24.15	46.04	13.56	8.04
SRL25900	-33.50	27	3	7.02	0.00	7.02	66.86	35.58	64.11	48.67	22.29	45.88	13.56	6.21
SRL25900	-33.50	27	4	7.13	0.00	7.13	66.86	35.58	64.11	46.38	22.46	45.85	13.56	6.33
SRL25900	-33.50	31	1	9.24	0.00	9.24	66.86	35.58	64.11	49.75	24.69	46.58	13.56	8.57
SRL25900	-33.50	31	2	8.79	0.00	8.79	66.86	35.58	64.11	49.00	24.20	46.01	13.56	8.09
SRL25900	-33.50	31	3	7.09	0.00	7.09	66.86	35.58	64.11	48.76	22.37	45.85	13.56	6.29
SRL25900	-33.50	31	4	7.18	0.00	7.18	66.86	35.58	64.11	46.47	22.51	45.82	13.56	6.38
SRL25900	-33.50	35	1	9.16	0.00	9.16	66.86	35.58	64.11	49.68	24.60	46.58	13.56	8.49
SRL25900	-33.50	35	2	8.71	0.00	8.71	66.86	35.58	64.11	48.93	24.12	46.00	13.56	8.00
SRL25900	-33.50	35	3	7.00	0.00	7.00	66.86	35.58	64.11	48.68	22.28	45.84	13.56	6.20
SRL25900	-33.50	35	4	7.09	0.00	7.09	66.86	35.58	64.11	46.38	22.42	45.80	13.56	6.29
SRL25900	-33.50	39	1	9.25	0.00	9.25	66.86	35.58	64.11	49.71	24.70	46.57	13.56	8.59
SRL25900	-33.50	39	2	8.80	0.00	8.80	66.86	35.58	64.11	48.96	24.22	45.99	13.56	8.10
SRL25900	-33.50	39	3	7.09	0.00	7.09	66.86	35.58	64.11	48.72	22.38	45.84	13.56	6.29
SRL25900	-33.50	39	4	7.18	0.00	7.18	66.86	35.58	64.11	46.44	22.52	45.81	13.56	6.39
STP24100	-13.00	4	1	6.94	0.00	6.94	61.99	88.48	47.77	41.69	25.62	24.94	24.84	5.96
STP24100	-13.00	4	2	4.55	0.00	4.55	61.99	88.48	47.77	39.39	23.61	22.23	24.84	3.56
STP24100	-13.00	4	3	6.42	0.00	6.42	61.99	88.48	47.77	41.12	24.98	24.53	24.84	5.43
STP24100	-13.00	4	4	1.18	0.00	1.18	61.99	88.48	47.77	36.60	20.56	18.57	24.84	0.19
STP24100	-13.00	8	1	6.98	0.00	6.98	62.05	47.75	47.77	41.71	25.63	25.04	22.27	6.01
STP24100	-13.00	8	2	4.60	0.00	4.60	62.05	47.75	47.77	39.41	23.61	22.33	22.27	3.61
STP24100	-13.00	8	3	6.46	0.00	6.46	62.05	47.75	47.77	41.14	24.98	24.63	22.27	5.48
STP24100	-13.00	8	4	1.25	0.00	1.25	62.05	47.75	47.77	36.64	20.58	18.67	22.27	0.25
STP24100	-13.00	12	1	6.95	0.00	6.95	91.66	47.75	82.43	41.70	25.62	24.94	25.74	5.96
STP24100	-13.00	12	2	4.55	0.00	4.55	91.66	47.75	82.43	39.41	23.61	22.23	25.74	3.56
STP24100	-13.00	12	3	6.43	0.00	6.43	91.66	47.75	82.43	41.13	24.98	24.53	25.74	5.44
STP24100	-13.00	12	4	1.19	0.00	1.19	91.66	47.75	82.43	36.63	20.57	18.57	25.74	0.19
STP24100	-13.00	16	1	6.99	0.00	6.99	61.99	47.75	88.50	41.70	25.63	25.04	24.82	6.01
STP24100	-13.00	16	2	4.60	0.00	4.60	61.99	47.75	88.50	39.41	23.61	22.33	24.82	3.61
STP24100	-13.00	16	3	6.47	0.00	6.47	61.99	47.75	88.50	41.14	24.98	24.63	24.82	5.48
STP24100	-13.00	16	4	1.25	0.00	1.25	61.99	47.75	88.50	36.63	20.58	18.67	24.82	0.25
STP24100	-13.00	20	1	9.71	0.00	9.71	61.99	47.75	47.77	41.78	25.63	37.27	22.26	8.76
STP24100	-13.00	20	2	7.65	0.00	7.65	61.99	47.75	47.77	39.48	23.61	34.85	22.26	6.68
STP24100	-13.00	20	3	9.08	0.00	9.08	61.99	47.75	47.77	41.21	24.98	36.71	22.26	8.12
STP24100	-13.00	20	4	4.51	0.00	4.51	61.99	47.75	47.77	36.69	20.58	29.82	22.26	3.53
SUI14000	-19.00	22	1	5.09	0.00	5.09	58.07	28.55	28.73	35.43	24.89	27.01	3.61	5.52
SUI14000	-19.00	22	2	5.40	0.00	5.40	58.07	28.55	28.73	35.43	25.48	27.61	3.61	5.96
SUI14000	-19.00	22	3	6.21	0.00	6.21	58.07	28.55	28.73	35.46	27.22	29.47	3.61	7.17
SUI14000	-19.00	22	4	6.29	0.00	6.29	58.07	28.55	28.73	35.56	27.34	29.63	3.61	7.29
SUI14000	-19.00	22	5	6.13	0.00	6.13	58.07	28.55	28.73	35.87	26.76	29.13	3.61	7.04
SUI14000	-19.00	22	6	5.47	0.00	5.47	58.07	28.55	28.73	35.38	25.57	27.89	3.61	6.06
SUI14000	-19.00	26	1	5.13	0.00	5.13	57.71	28.56	28.73	35.44	24.97	27.03	3.61	5.57
SUI14000	-19.00	26	2	5.43	0.00	5.43	57.71	28.56	28.73	35.44	25.55	27.66	3.61	6.01
SUI14000	-19.00	26	3	6.25	0.00	6.25	57.71	28.56	28.73	35.47	27.27	29.65	3.61	7.23
SUI14000	-19.00	26	4	6.33	0.00	6.33	57.71	28.56	28.73	35.55	27.39	29.83	3.61	7.35
SUI14000	-19.00	26	5	6.16	0.00	6.16	57.71	28.56	28.73	35.87	26.82	29.26	3.61	7.10
SUI14000	-19.00	26	6	5.51	0.00	5.51	57.71	28.56	28.73	35.39	25.64	27.96	3.61	6.11
SUI14000	-19.00	30	1	5.31	0.00	5.31	57.71	28.56	28.73	35.50	25.50	27.04	3.61	5.82
SUI14000	-19.00	30	2	5.60	0.00	5.60	57.71	28.56	28.73	35.51	26.05	27.67	3.61	6.24
SUI14000	-19.00	30	3	6.36	0.00	6.36	57.71	28.56	28.73	35.52	27.64	29.67	3.61	7.40
SUI14000	-19.00	30	4	6.42	0.00	6.42	57.71	28.56	28.73	35.59	27.74	29.85	3.61	7.51
SUI14000	-19.00	30	5	6.29	0.00	6.29	57.71	28.56	28.73	35.91	27.24	29.27	3.61	7.29
SUI14000	-19.00	30	6	5.66	0.00	5.66	57.71	28.56	28.73	35.43	26.12	27.98	3.61	6.33
SUI14000	-19.00	34	1	5.30	0.00	5.30	57.71	28.56	28.73	35.71	25.30	27.13	3.61	5.82
SUI14000	-19.00	34	2	5.60	0.00	5.60	57.71	28.56	28.73	35.70	25.87	27.76	3.61	6.25
SUI14000	-19.00	34	3	6.36	0.00	6.36	57.71	28.56	28.73	35.59	27.53	29.76	3.61	7.40
SUI14000	-19.00	34	4	6.43	0.00	6.43	57.71	28.56	28.73	35.66	27.64	29.93	3.61	7.52
SUI14000	-19.00	34	5	6.29	0.00	6.29	57.71	28.56	28.73	36.02	27.10	29.36	3.61	7.29

SUI14000	-19.00	34	6	5.65	0.00	5.65	57.71	28.56	28.73	35.57	25.95	28.06	3.61	6.32
SUI14000	-19.00	38	1	5.15	0.00	5.15	57.75	28.56	28.73	35.71	24.90	27.03	3.61	5.60
SUI14000	-19.00	38	2	5.48	0.00	5.48	57.75	28.56	28.73	35.78	25.48	27.67	3.61	6.07
SUI14000	-19.00	38	3	6.28	0.00	6.28	57.75	28.56	28.73	35.64	27.22	29.66	3.61	7.28
SUI14000	-19.00	38	4	6.35	0.00	6.35	57.75	28.56	28.73	35.69	27.35	29.83	3.61	7.39
SUI14000	-19.00	38	5	6.19	0.00	6.19	57.75	28.56	28.73	36.04	26.76	29.26	3.61	7.13
SUI14000	-19.00	38	6	5.52	0.00	5.52	57.75	28.56	28.73	35.54	25.57	27.96	3.61	6.12
SWZ31300	-1.00	1	1	8.23	0.00	8.23	41.63		28.02	42.44		26.23	4.97	9.62
SWZ31300	-1.00	1	2	7.61	0.00	7.61	41.63		28.02	42.03		25.12	4.97	8.59
SWZ31300	-1.00	1	3	8.17	0.00	8.17	41.63		28.02	42.66		26.07	4.97	9.51
SWZ31300	-1.00	1	4	7.64	0.00	7.64	41.63		28.02	41.97		25.18	4.97	8.64
SWZ31300	-1.00	1	5	8.19	0.00	8.19	41.63		28.02	42.44		26.15	4.97	9.55
SWZ31300	-1.00	5	1	5.51	0.00	5.51	41.63	44.51	28.02	42.33	23.94	26.14	4.89	5.65
SWZ31300	-1.00	5	2	4.84	0.00	4.84	41.63	44.51	28.02	41.91	23.21	25.03	4.89	4.80
SWZ31300	-1.00	5	3	5.53	0.00	5.53	41.63	44.51	28.02	42.54	24.06	25.98	4.89	5.67
SWZ31300	-1.00	5	4	4.95	0.00	4.95	41.63	44.51	28.02	41.85	23.41	25.09	4.89	4.93
SWZ31300	-1.00	5	5	5.46	0.00	5.46	41.63	44.51	28.02	42.32	23.86	26.06	4.89	5.57
SWZ31300	-1.00	9	1	5.57	0.00	5.57	41.63	44.51	28.02	42.42	24.04	26.16	4.89	5.72
SWZ31300	-1.00	9	2	4.90	0.00	4.90	41.63	44.51	28.02	42.01	23.31	25.04	4.89	4.87
SWZ31300	-1.00	9	3	5.58	0.00	5.58	41.63	44.51	28.02	42.64	24.15	26.00	4.89	5.74
SWZ31300	-1.00	9	4	5.00	0.00	5.00	41.63	44.51	28.02	41.95	23.51	25.11	4.89	5.00
SWZ31300	-1.00	9	5	5.51	0.00	5.51	41.63	44.51	28.02	42.42	23.96	26.08	4.89	5.64
SWZ31300	-1.00	13	1	5.60	0.00	5.60	41.63	44.51	28.02	42.43	24.04	26.26	4.89	5.76
SWZ31300	-1.00	13	2	4.93	0.00	4.93	41.63	44.51	28.02	42.01	23.31	25.14	4.89	4.90
SWZ31300	-1.00	13	3	5.61	0.00	5.61	41.63	44.51	28.02	42.64	24.16	26.10	4.89	5.78
SWZ31300	-1.00	13	4	5.04	0.00	5.04	41.63	44.51	28.02	41.95	23.51	25.21	4.89	5.04
SWZ31300	-1.00	13	5	5.54	0.00	5.54	41.63	44.51	28.02	42.43	23.96	26.18	4.89	5.68
SWZ31300	-1.00	17	1	5.53	0.00	5.53	41.63	44.51	28.02	42.53	23.94	26.17	4.89	5.67
SWZ31300	-1.00	17	2	4.86	0.00	4.86	41.63	44.51	28.02	42.11	23.21	25.05	4.89	4.82
SWZ31300	-1.00	17	3	5.55	0.00	5.55	41.63	44.51	28.02	42.74	24.06	26.01	4.89	5.69
SWZ31300	-1.00	17	4	4.97	0.00	4.97	41.63	44.51	28.02	42.05	23.41	25.12	4.89	4.95
SWZ31300	-1.00	17	5	5.47	0.00	5.47	41.63	44.51	28.02	42.52	23.86	26.09	4.89	5.59
SYR22900	11.00	22	1	3.67	0.00	3.67	39.60	30.73	24.33	35.58	25.92	23.91	0.82	4.77
SYR22900	11.00	22	2	3.89	0.00	3.89	39.60	30.73	24.33	41.73	26.68	22.92	0.82	5.15
SYR22900	11.00	22	3	2.92	0.00	2.92	39.60	30.73	24.33	42.90	25.88	20.97	0.82	3.62
SYR22900	11.00	22	4	2.89	0.00	2.89	39.60	30.73	24.33	42.77	24.65	21.39	0.82	3.58
SYR22900	11.00	22	5	2.97	0.00	2.97	39.60	30.73	24.33	40.53	22.81	23.06	0.82	3.69
SYR22900	11.00	22	6	3.83	0.00	3.83	39.60	30.73	24.33	38.80	25.00	24.11	0.82	5.04
SYR22900	11.00	26	1	3.76	0.00	3.76	39.60	30.73	24.35	35.41	25.93	24.29	0.83	4.92
SYR22900	11.00	26	2	4.11	0.00	4.11	39.60	30.73	24.35	41.38	26.69	23.50	0.83	5.51
SYR22900	11.00	26	3	3.01	0.00	3.01	39.60	30.73	24.35	42.64	25.90	21.15	0.83	3.75
SYR22900	11.00	26	4	2.96	0.00	2.96	39.60	30.73	24.35	42.47	24.69	21.52	0.83	3.67
SYR22900	11.00	26	5	3.03	0.00	3.03	39.60	30.73	24.35	40.06	22.87	23.23	0.83	3.77
SYR22900	11.00	26	6	3.89	0.00	3.89	39.60	30.73	24.35	38.38	25.04	24.37	0.83	5.13
SYR22900	11.00	30	1	3.75	0.00	3.75	39.60	30.73	24.35	35.40	25.93	24.25	0.83	4.90
SYR22900	11.00	30	2	4.09	0.00	4.09	39.60	30.73	24.35	41.34	26.68	23.44	0.83	5.47
SYR22900	11.00	30	3	2.97	0.00	2.97	39.60	30.73	24.35	42.59	25.88	21.07	0.83	3.69
SYR22900	11.00	30	4	2.92	0.00	2.92	39.60	30.73	24.35	42.43	24.65	21.45	0.83	3.61
SYR22900	11.00	30	5	2.99	0.00	2.99	39.60	30.73	24.35	40.04	22.81	23.18	0.83	3.72
SYR22900	11.00	30	6	3.87	0.00	3.87	39.60	30.73	24.35	38.36	25.00	24.32	0.83	5.09
SYR22900	11.00	34	1	3.78	0.00	3.78	39.60	30.73	24.35	35.52	25.93	24.29	0.83	4.95
SYR22900	11.00	34	2	4.11	0.00	4.11	39.60	30.73	24.35	41.49	26.69	23.50	0.83	5.51
SYR22900	11.00	34	3	3.01	0.00	3.01	39.60	30.73	24.35	42.74	25.90	21.15	0.83	3.75
SYR22900	11.00	34	4	2.96	0.00	2.96	39.60	30.73	24.35	42.58	24.69	21.52	0.83	3.67
SYR22900	11.00	34	5	3.03	0.00	3.03	39.60	30.73	24.35	40.17	22.87	23.24	0.83	3.78
SYR22900	11.00	34	6	3.90	0.00	3.90	39.60	30.73	24.35	38.49	25.04	24.38	0.83	5.15
SYR33900	11.00	38	1	3.21	0.00	3.21	38.60	27.46	23.91	34.65	25.94	24.36	-0.28	4.77
SYR33900	11.00	38	2	2.72	0.00	2.72	38.60	27.46	23.91	41.79	24.59	22.02	-0.28	3.93
SYR33900	11.00	38	3	2.16	0.00	2.16	38.60	27.46	23.91	38.33	22.10	22.68	-0.28	3.03
SYR33900	11.00	38	4	3.38	0.00	3.38	38.60	27.46	23.91	38.19	24.88	24.46	-0.28	5.09
SYR33900	11.00	38	5	3.59	0.00	3.59	38.60	27.46	23.91	43.30	27.66	22.92	-0.28	5.48
SYR33900	11.00	38	6	3.44	0.00	3.44	38.60	27.46	23.91	42.93	26.64	22.91	-0.28	5.19
TCD14300	-13.00	2	1	6.26	0.00	6.26	54.98	25.42	28.45	48.16	25.64	34.86	1.64	9.01
TCD14300	-13.00	2	2	7.11	0.00	7.11	54.98	25.42	28.45	47.91	28.92	33.52	1.64	11.37
TCD14300	-13.00	2	3	7.08	0.00	7.08	54.98	25.42	28.45	48.83	28.01	36.93	1.64	11.29
TCD14300	-13.00	2	4	5.00	0.00	5.00	54.98	25.42	28.45	48.01	23.36	30.20	1.64	6.47
TCD14300	-13.00	2	5	6.90	0.00	6.90	54.98	25.42	28.45	50.77	28.03	32.92	1.64	10.70
TCD14300	-13.00	2	6	7.24	0.00	7.24	54.98	25.42	28.45	49.39	28.88	35.58	1.64	11.84
TCD14300	-13.00	6	1	6.22	0.00	6.22	54.98	25.42	28.45	48.13	25.54	34.76	1.64	8.92
TCD14300	-13.00	6	2	7.09	0.00	7.09	54.98	25.42	28.45	47.87	28.84	33.42	1.64	11.29
TCD14300	-13.00	6	3	7.06	0.00	7.06	54.98	25.42	28.45	48.77	27.93	36.83	1.64	11.21
TCD14300	-13.00	6	4	4.95	0.00	4.95	54.98	25.42	28.45	47.95	23.26	30.10	1.64	6.37
TCD14300	-13.00	6	5	6.87	0.00	6.87	54.98	25.42	28.45	50.71	27.93	32.82	1.64	10.60
TCD14300	-13.00	6	6	7.22	0.00	7.22	54.98	25.42	28.45	49.34	28.81	35.48	1.64	11.76
TCD14300	-13.00	10	1	6.27	0.00	6.27	54.98	25.42	28.45	48.27	25.64	34.86	1.64	9.02
TCD14300	-13.00	10	2	7.11	0.00	7.11	54.98	25.42	28.45	48.00	28.92	33.52	1.64	11.38
TCD14300	-13.00	10	3	7.09	0.00	7.09	54.98	25.42	28.45	48.94	28.01	36.93	1.64	11.29
TCD14300	-13.00	10	4	5.01	0.00	5.01	54.98	25.42	28.45	48.09	23.36	30.20	1.64	6.47
TCD14300	-13.00	10	5	6.90	0.00	6.90	54.98	25.42	28.45	50.89	28.03	32.92	1.64	10.70
TCD14300	-13.00	10	6	7.24	0.00	7.24	54.98	25.42	28.45	49.49	28.88	35.58	1.64	11.84
TCD14300	-13.00	14	1	6.23	0.00	6.23	54.98	25.42	28.45	48.34	25.54	34.77	1.64	8.92
TCD14300	-13.00	14	2	7.09	0.00	7.09	54.98	25.42	28.45	48.07	28.84	33.42	1.64	11.30
TCD14300	-13.00	14	3	7.06	0.00	7.06	54.98	25.42	28.45	49.09	27.93	36.83	1.64	11.22
TCD14300	-13.00	14	4	4.95	0.00	4.95	54.98	25.42	28.45	48.12	23.26	30.10	1.64	6.37
TCD14300	-13.00	14	5	6.87	0.00	6.87	54.98	25.42	28.45	51.05	27.93	32.82	1.64	10.61
TCD14300	-13.00	14	6	7.23	0.00	7.23	54.98	25.42	28.45	49.60	28.81	35.48	1.64	11.78
TCD14300	-13.00	18	1	6.26	0.00	6.26	54.98	25.42	28.45	48.41	25.64	34.76	1.64	9.01
TCD14300	-13.00	18	2	7.11	0.00	7.11	54.98	25.42	28.45	48.17	28.92	33.42	1.64	11.36
TCD14300	-13.00	18	3	7.08	0.00	7.08	54.98	25.42	28.45	49.12	28.01	36.83	1.64	11.29
TCD14300	-13.00	18	4	5.00	0.00	5.00	54.98	25.42	28.45	48.12	23.36	30.10	1.64	6.45

TCD14300	-13.00	18	5	6.89	0.00	6.89	54.98	25.42	28.45	50.97	28.03	32.82	1.64	10.68
TCD14300	-13.00	18	6	7.24	0.00	7.24	54.98	25.42	28.45	49.65	28.88	35.48	1.64	11.83
TGO22600	-25.00	2	1	5.18	0.00	5.18	49.45	24.79	90.90	36.21	27.92	25.11	2.70	6.07
TGO22600	-25.00	2	2	5.10	0.00	5.10	49.45	24.79	90.90	36.56	28.31	24.54	2.70	5.95
TGO22600	-25.00	2	3	4.63	0.00	4.63	49.45	24.79	90.90	36.48	27.88	23.52	2.70	5.25
TGO22600	-25.00	2	4	5.41	0.00	5.41	49.45	24.79	90.90	37.30	28.29	25.15	2.70	6.43
TGO22600	-25.00	2	5	5.56	0.00	5.56	49.45	24.79	90.90	37.49	28.48	25.43	2.70	6.67
TGO22600	-25.00	2	6	5.08	0.00	5.08	49.45	24.79	90.90	36.95	28.01	24.46	2.70	5.91
TGO22600	-25.00	6	1	3.88	0.00	3.88	49.45	24.79	24.81	36.20	27.92	25.06	-0.26	6.05
TGO22600	-25.00	6	2	3.82	0.00	3.82	49.45	24.79	24.81	36.56	28.31	24.50	-0.26	5.93
TGO22600	-25.00	6	3	3.47	0.00	3.47	49.45	24.79	24.81	36.47	27.88	23.48	-0.26	5.23
TGO22600	-25.00	6	4	4.05	0.00	4.05	49.45	24.79	24.81	37.29	28.28	25.10	-0.26	6.40
TGO22600	-25.00	6	5	4.16	0.00	4.16	49.45	24.79	24.81	37.49	28.48	25.39	-0.26	6.65
TGO22600	-25.00	6	6	3.81	0.00	3.81	49.45	24.79	24.81	36.94	28.01	24.42	-0.26	5.89
TGO22600	-25.00	10	1	3.90	0.00	3.90	49.47	24.79	24.81	36.23	27.92	25.11	-0.26	6.08
TGO22600	-25.00	10	2	3.84	0.00	3.84	49.47	24.79	24.81	36.59	28.31	24.54	-0.26	5.95
TGO22600	-25.00	10	3	3.48	0.00	3.48	49.47	24.79	24.81	36.49	27.88	23.52	-0.26	5.25
TGO22600	-25.00	10	4	4.06	0.00	4.06	49.47	24.79	24.81	37.31	28.29	25.15	-0.26	6.43
TGO22600	-25.00	10	5	4.17	0.00	4.17	49.47	24.79	24.81	37.50	28.48	25.43	-0.26	6.67
TGO22600	-25.00	10	6	3.82	0.00	3.82	49.47	24.79	24.81	36.96	28.01	24.46	-0.26	5.92
TGO22600	-25.00	14	1	7.03	0.00	7.03		74.86	24.81	36.16	27.92	25.06	52.86	6.03
TGO22600	-25.00	14	2	6.92	0.00	6.92		74.86	24.81	36.51	28.31	24.50	52.86	5.92
TGO22600	-25.00	14	3	6.22	0.00	6.22		74.86	24.81	36.42	27.88	23.48	52.86	5.22
TGO22600	-25.00	14	4	7.39	0.00	7.39		74.86	24.81	37.22	28.29	25.10	52.86	6.39
TGO22600	-25.00	14	5	7.63	0.00	7.63		74.86	24.81	37.42	28.48	25.39	52.86	6.63
TGO22600	-25.00	14	6	6.88	0.00	6.88		74.86	24.81	36.87	28.01	24.42	52.86	5.88
TGO22600	-25.00	18	1	5.18	0.00	5.18	49.45	90.88	24.81	36.25	27.92	25.06	2.72	6.06
TGO22600	-25.00	18	2	5.10	0.00	5.10	49.45	90.88	24.81	36.61	28.31	24.50	2.72	5.94
TGO22600	-25.00	18	3	4.63	0.00	4.63	49.45	90.88	24.81	36.51	27.88	23.48	2.72	5.24
TGO22600	-25.00	18	4	5.40	0.00	5.40	49.45	90.88	24.81	37.31	28.29	25.10	2.72	6.41
TGO22600	-25.00	18	5	5.55	0.00	5.55	49.45	90.88	24.81	37.51	28.48	25.39	2.72	6.65
TGO22600	-25.00	18	6	5.07	0.00	5.07	49.45	90.88	24.81	36.96	28.01	24.42	2.72	5.89
THA14200	74.00	1	1	5.35	0.00	5.35	60.35		24.92	40.81		22.62	2.91	6.22
THA14200	74.00	1	2	7.25	0.00	7.25	60.35		24.92	43.84		26.08	2.91	9.64
THA14200	74.00	1	3	7.81	0.00	7.81	60.35		24.92	50.55		27.11	2.91	10.98
THA14200	74.00	1	4	7.76	0.00	7.76	60.35		24.92	50.33		26.96	2.91	10.84
THA14200	74.00	1	5	5.21	0.00	5.21	60.35		24.92	40.33		22.42	2.91	6.00
THA14200	74.00	1	6	4.86	0.00	4.86	60.35		24.92	39.80		21.92	2.91	5.49
THA14200	74.00	5	1	2.56	0.00	2.56	58.18	24.91	24.93	40.85	22.83	22.72	-0.10	3.55
THA14200	74.00	5	2	4.41	0.00	4.41	58.18	24.91	24.93	43.83	26.34	26.17	-0.10	7.01
THA14200	74.00	5	3	4.86	0.00	4.86	58.18	24.91	24.93	50.42	27.18	27.21	-0.10	8.12
THA14200	74.00	5	4	4.80	0.00	4.80	58.18	24.91	24.93	50.22	27.03	27.06	-0.10	7.97
THA14200	74.00	5	5	2.38	0.00	2.38	58.18	24.91	24.93	40.30	22.49	22.52	-0.10	3.28
THA14200	74.00	5	6	2.05	0.00	2.05	58.18	24.91	24.93	39.79	21.99	22.02	-0.10	2.77
THA14200	74.00	9	1	2.49	0.00	2.49	59.05	24.91	24.92	40.78	22.83	22.50	-0.10	3.45
THA14200	74.00	9	2	4.39	0.00	4.39	59.05	24.91	24.92	43.76	26.34	26.07	-0.10	6.96
THA14200	74.00	9	3	5.61	0.00	5.61	59.05	24.91	24.92	50.24	27.09	36.68	-0.10	10.52
THA14200	74.00	9	4	5.51	0.00	5.51	59.05	24.91	24.92	50.10	26.95	34.39	-0.10	10.12
THA14200	74.00	9	5	2.35	0.00	2.35	59.05	24.91	24.92	40.29	22.49	22.42	-0.10	3.23
THA14200	74.00	9	6	2.00	0.00	2.00	59.05	24.91	24.92	39.77	21.99	21.87	-0.10	2.70
THA14200	74.00	13	1	8.74	0.00	8.74	56.53	27.86	27.87	42.26	44.88	32.76	2.84	14.28
THA14200	74.00	13	2	9.35	0.00	9.35	56.53	27.86	27.87	45.26	44.78	37.77	2.84	18.11
THA14200	74.00	13	3	9.60	0.00	9.60	56.53	27.86	27.87	47.53	44.46	44.01	2.84	21.28
THA14200	74.00	13	4	9.35	0.00	9.35	56.53	27.86	27.87	42.95	44.58	44.26	2.84	18.06
THA14200	74.00	13	5	8.95	0.00	8.95	56.53	27.86	27.87	40.07	44.77	40.72	2.84	15.32
THA14200	74.00	13	6	8.40	0.00	8.40	56.53	27.86	27.87	42.46	44.92	30.47	2.84	12.90
TKL05800	158.00	20	1	26.26	0.00	26.26	81.00	43.77	76.31	61.47	45.88	56.00	21.77	28.84
TKL05800	158.00	20	2	25.22	0.00	25.22	81.00	43.77	76.31	60.99	43.46	55.44	21.77	26.76
TKL05800	158.00	20	3	26.04	0.00	26.04	81.00	43.77	76.31	61.95	45.17	56.37	21.77	28.35
TKL05800	158.00	24	1	26.78	0.00	26.78	81.08	44.15	75.09	61.69	46.29	72.92	22.15	29.56
TKL05800	158.00	24	2	25.65	0.00	25.65	81.08	44.15	75.09	61.22	43.70	72.54	22.15	27.23
TKL05800	158.00	24	3	26.50	0.00	26.50	81.08	44.15	75.09	62.17	45.46	73.47	22.15	28.90
TKL05801	158.00	20	1	10.84	0.00	10.84	62.18	25.90	62.55	61.47	45.88	56.00	3.89	28.84
TKL05801	158.00	20	2	10.80	0.00	10.80	62.18	25.90	62.55	60.99	43.46	55.44	3.89	26.76
TKL05801	158.00	20	3	10.83	0.00	10.83	62.18	25.90	62.55	61.95	45.17	56.37	3.89	28.35
TKL05801	158.00	24	1	10.84	0.00	10.84	62.20	25.90	61.40	61.69	46.29	72.92	3.89	29.56
TKL05801	158.00	24	2	10.81	0.00	10.81	62.20	25.90	61.40	61.22	43.70	72.54	3.89	27.23
TKL05801	158.00	24	3	10.84	0.00	10.84	62.20	25.90	61.40	62.17	45.46	73.47	3.89	28.90
TON21500	170.00	4	1	15.42	0.00	15.42	88.64	69.84	77.43	48.83	40.67	31.31	46.85	14.42
TON21500	170.00	4	2	13.47	0.00	13.47	88.64	69.84	77.43	45.88	36.17	29.93	46.85	12.47
TON21500	170.00	4	3	17.27	0.00	17.27	88.64	69.84	77.43	50.54	51.95	32.75	46.85	16.27
TON21500	170.00	4	4	20.45	0.00	20.45	88.64	69.84	77.43	52.50	55.16	36.09	46.85	19.46
TON21500	170.00	4	5	20.52	0.00	20.52	88.64	69.84	77.43	52.04	53.54	36.26	46.85	19.52
TON21500	170.00	8	1	15.33	0.00	15.33	79.88	69.85	92.39	48.80	40.57	31.21	45.73	14.33
TON21500	170.00	8	2	13.38	0.00	13.38	79.88	69.85	92.39	45.86	36.07	29.83	45.73	12.38
TON21500	170.00	8	3	17.18	0.00	17.18	79.88	69.85	92.39	50.49	51.89	32.65	45.73	16.18
TON21500	170.00	8	4	20.36	0.00	20.36	79.88	69.85	92.39	52.43	55.14	35.99	45.73	19.36
TON21500	170.00	8	5	20.43	0.00	20.43	79.88	69.85	92.39	51.96	53.52	36.17	45.73	19.43
TON21500	170.00	12	1	15.39	0.00	15.39	79.88	92.37	92.39	48.83	40.58	31.28	49.80	14.39
TON21500	170.00	12	2	13.44	0.00	13.44	79.88	92.37	92.39	45.89	36.07	29.91	49.80	12.44
TON21500	170.00	12	3	17.23	0.00	17.23	79.88	92.37	92.39	50.55	51.92	32.71	49.80	16.23
TON21500	170.00	12	4	20.36	0.00	20.36	79.88	92.37	92.39	52.50	55.20	35.98	49.80	19.37
TON21500	170.00	12	5	20.35	0.00	20.35	79.88	92.37	92.39	52.04	53.59	36.06	49.80	19.35
TON21500	170.00	16	1	15.68	0.00	15.68	91.73	92.37	92.39	48.95	40.78	31.60	61.17	14.68
TON21500	170.00	16	2	13.55	0.00	13.55	91.73	92.37	92.39	45.93	36.21	30.02	61.17	12.55
TON21500	170.00	16	3	17.53	0.00	17.53	91.73	92.37	92.39	50.65	52.55	33.02	61.17	16.53
TON21500	170.00	16	4	21.23	0.00	21.23	91.73	92.37	92.39	52.66	56.53	36.95	61.17	20.23
TON21500	170.00	16	5	21.74	0.00	21.74	91.73	92.37	92.39	52.24	54.91	37.67	61.17	20.74

TUN15000	-25.00	22	1	7.77	0.00	7.77	53.71	45.02	36.55	43.27	27.10	25.60	13.53	7.01
TUN15000	-25.00	22	2	6.52	0.00	6.52	53.71	45.02	36.55	41.46	26.49	23.90	13.53	5.69
TUN15000	-25.00	22	3	9.77	0.00	9.77	53.71	45.02	36.55	46.16	28.87	27.95	13.53	9.16
TUN15000	-25.00	22	4	9.22	0.00	9.22	53.71	45.02	36.55	44.61	29.61	26.60	13.53	8.56
TUN15000	-25.00	22	5	11.18	0.00	11.18	53.71	45.02	36.55	48.53	31.72	28.64	13.53	10.72
TUN15000	-25.00	22	6	9.14	0.00	9.14	53.71	45.02	36.55	45.10	28.07	27.39	13.53	8.46
TUN15000	-25.00	26	1	7.90	0.00	7.90	53.69	45.02	36.62	43.40	27.20	25.76	13.59	7.14
TUN15000	-25.00	26	2	6.97	0.00	6.97	53.69	45.02	36.62	41.59	26.59	24.63	13.59	6.16
TUN15000	-25.00	26	3	9.95	0.00	9.95	53.69	45.02	36.62	46.30	28.97	28.21	13.59	9.34
TUN15000	-25.00	26	4	9.28	0.00	9.28	53.69	45.02	36.62	44.76	29.71	26.63	13.59	8.62
TUN15000	-25.00	26	5	11.36	0.00	11.36	53.69	45.02	36.62	48.71	31.82	28.88	13.59	10.91
TUN15000	-25.00	26	6	9.34	0.00	9.34	53.69	45.02	36.62	45.23	28.17	27.72	13.59	8.68
TUN15000	-25.00	30	1	7.85	0.00	7.85	53.69	45.02	36.62	43.37	27.10	25.74	13.59	7.09
TUN15000	-25.00	30	2	6.93	0.00	6.93	53.69	45.02	36.62	41.57	26.49	24.62	13.59	6.12
TUN15000	-25.00	30	3	9.91	0.00	9.91	53.69	45.02	36.62	46.28	28.88	28.21	13.59	9.29
TUN15000	-25.00	30	4	9.25	0.00	9.25	53.69	45.02	36.62	44.71	29.61	26.63	13.59	8.58
TUN15000	-25.00	30	5	11.33	0.00	11.33	53.69	45.02	36.62	48.68	31.72	28.88	13.59	10.88
TUN15000	-25.00	30	6	9.30	0.00	9.30	53.69	45.02	36.62	45.21	28.07	27.72	13.59	8.63
TUN15000	-25.00	34	1	7.90	0.00	7.90	53.69	45.02	36.62	43.44	27.20	25.76	13.59	7.15
TUN15000	-25.00	34	2	6.98	0.00	6.98	53.69	45.02	36.62	41.64	26.59	24.63	13.59	6.17
TUN15000	-25.00	34	3	9.95	0.00	9.95	53.69	45.02	36.62	46.34	28.98	28.21	13.59	9.34
TUN15000	-25.00	34	4	9.28	0.00	9.28	53.69	45.02	36.62	44.73	29.71	26.63	13.59	8.62
TUN15000	-25.00	34	5	11.36	0.00	11.36	53.69	45.02	36.62	48.73	31.82	28.88	13.59	10.91
TUN15000	-25.00	34	6	9.35	0.00	9.35	53.69	45.02	36.62	45.29	28.17	27.72	13.59	8.69
TUN27200	-25.00	38	1	2.71	0.00	2.71	51.27	43.36	32.02	35.49	19.84	23.89	9.42	1.89
TUN27200	-25.00	38	2	3.71	0.00	3.71	51.27	43.36	32.02	37.44	21.31	23.77	9.42	2.95
TUN27200	-25.00	38	3	5.67	0.00	5.67	51.27	43.36	32.02	41.47	25.20	23.59	9.42	5.05
TUN27200	-25.00	38	4	8.27	0.00	8.27	51.27	43.36	32.02	45.22	28.98	25.96	9.42	7.99
TUN27200	-25.00	38	5	7.62	0.00	7.62	51.27	43.36	32.02	42.08	28.42	25.35	9.42	7.23
TUN27200	-25.00	38	6	4.81	0.00	4.81	51.27	43.36	32.02	38.41	21.92	26.22	9.42	4.12
TUR14500	5.00	1	1	6.94	0.00	6.94	45.62		31.09	30.84		36.00	8.22	6.64
TUR14500	5.00	1	2	12.25	0.00	12.25	45.62		31.09	39.94		35.31	8.22	14.30
TUR14500	5.00	1	3	12.40	0.00	12.40	45.62		31.09	40.26		35.59	8.22	14.60
TUR14500	5.00	1	4	13.08	0.00	13.08	45.62		31.09	42.68		35.76	8.22	16.18
TUR14500	5.00	1	5	13.01	0.00	13.01	45.62		31.09	42.42		35.71	8.22	16.00
TUR14500	5.00	1	6	12.85	0.00	12.85	45.62		31.09	41.46		36.20	8.22	15.60
TUR14500	5.00	5	1	0.01	0.00	0.01	45.62	16.32	31.09	30.94	27.14	36.02	-5.86	5.39
TUR14500	5.00	5	2	0.11	0.00	0.11	45.62	16.32	31.09	40.03	22.50	35.34	-5.86	5.84
TUR14500	5.00	5	3	0.58	0.00	0.58	45.62	16.32	31.09	40.36	26.03	35.62	-5.86	8.75
TUR14500	5.00	5	4	0.74	0.00	0.74	45.62	16.32	31.09	42.73	27.58	35.78	-5.86	10.29
TUR14500	5.00	5	5	0.63	0.00	0.63	45.62	16.32	31.09	42.47	26.18	35.72	-5.86	9.18
TUR14500	5.00	5	6	0.65	0.00	0.65	45.62	16.32	31.09	41.53	26.55	36.22	-5.86	9.38
TUR14500	5.00	9	1	0.01	0.00	0.01	45.62	16.32	31.09	30.94	27.13	35.95	-5.86	5.38
TUR14500	5.00	9	2	0.10	0.00	0.10	45.62	16.32	31.09	39.98	22.44	35.28	-5.86	5.78
TUR14500	5.00	9	3	0.58	0.00	0.58	45.62	16.32	31.09	40.29	26.02	35.54	-5.86	8.72
TUR14500	5.00	9	4	0.74	0.00	0.74	45.62	16.32	31.09	42.69	27.58	35.70	-5.86	10.28
TUR14500	5.00	9	5	0.63	0.00	0.63	45.62	16.32	31.09	42.43	26.18	35.65	-5.86	9.17
TUR14500	5.00	9	6	0.65	0.00	0.65	45.62	16.32	31.09	41.49	26.54	36.15	-5.86	9.36
TUR14500	5.00	13	1	0.11	0.00	0.11	45.62	16.32	31.09	31.04	28.60	36.75	-5.86	5.83
TUR14500	5.00	13	2	0.20	0.00	0.20	45.62	16.32	31.09	40.05	22.99	36.14	-5.86	6.29
TUR14500	5.00	13	3	0.70	0.00	0.70	45.62	16.32	31.09	40.39	27.38	36.46	-5.86	9.80
TUR14500	5.00	13	4	0.83	0.00	0.83	45.62	16.32	31.09	42.82	28.93	36.59	-5.86	11.38
TUR14500	5.00	13	5	0.75	0.00	0.75	45.62	16.32	31.09	42.56	27.65	36.64	-5.86	10.41
TUR14500	5.00	13	6	0.75	0.00	0.75	45.62	16.32	31.09	41.59	27.84	37.05	-5.86	10.42
TUR14500	5.00	17	1	0.11	0.00	0.11	45.63	16.32	31.09	31.05	28.60	36.74	-5.86	5.84
TUR14500	5.00	17	2	0.20	0.00	0.20	45.63	16.32	31.09	40.05	22.98	36.12	-5.86	6.29
TUR14500	5.00	17	3	0.70	0.00	0.70	45.63	16.32	31.09	40.36	27.38	36.44	-5.86	9.79
TUR14500	5.00	17	4	0.83	0.00	0.83	45.63	16.32	31.09	43.04	28.93	36.57	-5.86	11.42
TUR14500	5.00	17	5	0.76	0.00	0.76	45.63	16.32	31.09	42.75	27.65	36.62	-5.86	10.44
TUR14500	5.00	17	6	0.76	0.00	0.76	45.63	16.32	31.09	41.71	27.84	37.03	-5.86	10.44
TZA22500	11.00	23	1	2.67	0.00	2.67	33.65		20.81	41.38	22.95	32.56	-2.42	6.16
TZA22500	11.00	23	2	3.67	0.00	3.67	33.65		20.81	41.54	28.13	32.24	-2.42	9.89
TZA22500	11.00	23	3	4.11	0.00	4.11	33.65		20.81	42.64	34.88	32.25	-2.42	12.98
TZA22500	11.00	23	4	4.26	0.00	4.26	33.65		20.81	43.26	37.03	34.44	-2.42	14.68
TZA22500	11.00	23	5	4.16	0.00	4.16	33.65		20.81	42.13	35.91	33.19	-2.42	13.50
TZA22500	11.00	23	6	3.34	0.00	3.34	33.65		20.81	41.98	25.35	34.91	-2.42	8.38
TZA22500	11.00	27	1	2.00	0.00	2.00	33.65	25.22	20.81	41.48	23.05	32.57	-3.47	6.25
TZA22500	11.00	27	2	2.81	0.00	2.81	33.65	25.22	20.81	41.65	28.21	32.25	-3.47	9.96
TZA22500	11.00	27	3	3.16	0.00	3.16	33.65	25.22	20.81	42.81	34.92	32.26	-3.47	13.04
TZA22500	11.00	27	4	3.28	0.00	3.28	33.65	25.22	20.81	43.42	37.08	34.45	-3.47	14.75
TZA22500	11.00	27	5	3.20	0.00	3.20	33.65	25.22	20.81	42.25	35.96	33.20	-3.47	13.55
TZA22500	11.00	27	6	2.55	0.00	2.55	33.65	25.22	20.81	42.07	25.44	34.92	-3.47	8.47
TZA22500	11.00	31	1	1.97	0.00	1.97	33.65	25.22	20.81	41.42	22.96	32.55	-3.47	6.17
TZA22500	11.00	31	2	2.80	0.00	2.80	33.65	25.22	20.81	41.59	28.13	32.23	-3.47	9.90
TZA22500	11.00	31	3	3.16	0.00	3.16	33.65	25.22	20.81	42.73	34.90	32.25	-3.47	13.01
TZA22500	11.00	31	4	3.28	0.00	3.28	33.65	25.22	20.81	43.33	37.06	34.44	-3.47	14.71
TZA22500	11.00	31	5	3.20	0.00	3.20	33.65	25.22	20.81	42.18	35.93	33.15	-3.47	13.50
TZA22500	11.00	31	6	2.53	0.00	2.53	33.65	25.22	20.81	42.01	25.35	34.90	-3.47	8.39
TZA22500	11.00	35	1	2.00	0.00	2.00	33.65	25.22	20.81	41.48	23.05	32.57	-3.47	6.25
TZA22500	11.00	35	2	2.81	0.00	2.81	33.65	25.22	20.81	41.65	28.21	32.24	-3.47	9.96
TZA22500	11.00	35	3	3.16	0.00	3.16	33.65	25.22	20.81	42.82	34.93	32.26	-3.47	13.04
TZA22500	11.00	35	4	3.28	0.00	3.28	33.65	25.22	20.81	43.42	37.09	34.45	-3.47	14.75
TZA22500	11.00	35	5	3.20	0.00	3.20	33.65	25.22	20.81	42.25	35.97	33.20	-3.47	13.56
TZA22500	11.00	35	6	2.55	0.00	2.55	33.65	25.22	20.81	42.07	25.44	34.92	-3.47	8.47
TZA22500	11.00	39	1	1.86	0.00	1.86	33.65	25.22	20.81	41.39	22.55	32.55	-3.47	5.82
TZA22500	11.00	39	2	2.69	0.00	2.69	33.65	25.22	20.81	41.57	27.09	32.23	-3.47	9.24
TZA22500	11.00	39	3	3.08	0.00	3.08	33.65	25.22	20.81	42.71	32.29	32.24	-3.47	12.16
TZA22500	11.00	39	4	3.23	0.00	3.23	33.65	25.22	20.81	43.31	34.28	34.43	-3.47	13.88
TZA22500	11.00	39	5	3.14	0.00	3.14	33.65	25.22	20.81	42.14	33.30	33.14	-3.47	12.73
TZA22500	11.00	39	6	2.46	0.00	2.46	33.65	25.22	20.81	41.96	24.94	34.89	-3.47	8.06

UAE27400	17.00	21	1	5.91	0.00	5.91	68.97	26.10	28.88	50.09	24.84	29.90	2.26	7.60
UAE27400	17.00	21	2	6.48	0.00	6.48	68.97	26.10	28.88	50.66	25.88	31.43	2.26	8.74
UAE27400	17.00	21	3	6.95	0.00	6.95	68.97	26.10	28.88	49.60	26.17	38.19	2.26	9.79
UAE27400	17.00	21	4	7.63	0.00	7.63	68.97	26.10	28.88	51.28	28.34	37.16	2.26	11.68
UAE27400	17.00	21	5	7.34	0.00	7.34	68.97	26.10	28.88	50.53	27.98	33.52	2.26	10.80
UAE27400	17.00	21	6	6.81	0.00	6.81	68.97	26.10	28.88	50.03	27.43	30.11	2.26	9.46
UAE27400	17.00	25	1	4.98	0.00	4.98	68.92	23.82	28.88	50.06	24.54	29.91	0.64	7.37
UAE27400	17.00	25	2	4.85	0.00	4.85	68.92	23.82	28.88	50.66	23.83	31.46	0.64	7.09
UAE27400	17.00	25	3	4.01	0.00	4.01	68.92	23.82	28.88	49.63	21.60	38.83	0.64	5.48
UAE27400	17.00	25	4	4.82	0.00	4.82	68.92	23.82	28.88	51.33	23.23	37.80	0.64	7.04
UAE27400	17.00	25	5	4.45	0.00	4.45	68.92	23.82	28.88	50.56	22.63	33.95	0.64	6.28
UAE27400	17.00	25	6	4.09	0.00	4.09	68.92	23.82	28.88	50.04	22.30	30.30	0.64	5.62
UAE27400	17.00	29	1	5.01	0.00	5.01	68.91	23.82	28.88	50.25	24.63	29.92	0.64	7.45
UAE27400	17.00	29	2	4.89	0.00	4.89	68.91	23.82	28.88	50.84	23.92	31.46	0.64	7.17
UAE27400	17.00	29	3	4.07	0.00	4.07	68.91	23.82	28.88	49.82	21.70	38.84	0.64	5.58
UAE27400	17.00	29	4	4.87	0.00	4.87	68.91	23.82	28.88	51.54	23.33	37.80	0.64	7.14
UAE27400	17.00	29	5	4.50	0.00	4.50	68.91	23.82	28.88	50.79	22.73	33.95	0.64	6.38
UAE27400	17.00	29	6	4.14	0.00	4.14	68.91	23.82	28.88	50.27	22.40	30.30	0.64	5.71
UAE27400	17.00	33	1	4.98	0.00	4.98	68.91	23.82	28.88	50.18	24.54	29.92	0.64	7.38
UAE27400	17.00	33	2	4.85	0.00	4.85	68.91	23.82	28.88	50.77	23.83	31.46	0.64	7.09
UAE27400	17.00	33	3	4.01	0.00	4.01	68.91	23.82	28.88	49.75	21.60	38.84	0.64	5.48
UAE27400	17.00	33	4	4.83	0.00	4.83	68.91	23.82	28.88	51.46	23.23	37.80	0.64	7.04
UAE27400	17.00	33	5	4.45	0.00	4.45	68.91	23.82	28.88	50.72	22.63	33.95	0.64	6.29
UAE27400	17.00	33	6	4.09	0.00	4.09	68.91	23.82	28.88	50.20	22.30	30.30	0.64	5.62
UAE27400	17.00	37	1	5.01	0.00	5.01	68.91	23.82	28.88	50.26	24.63	29.91	0.64	7.45
UAE27400	17.00	37	2	4.89	0.00	4.89	68.91	23.82	28.88	50.85	23.92	31.46	0.64	7.17
UAE27400	17.00	37	3	4.07	0.00	4.07	68.91	23.82	28.88	49.83	21.70	38.85	0.64	5.58
UAE27400	17.00	37	4	4.87	0.00	4.87	68.91	23.82	28.88	51.55	23.33	37.81	0.64	7.14
UAE27400	17.00	37	5	4.50	0.00	4.50	68.91	23.82	28.88	50.80	22.73	33.95	0.64	6.38
UAE27400	17.00	37	6	4.14	0.00	4.14	68.91	23.82	28.88	50.28	22.40	30.30	0.64	5.71
UGA05100	11.00	3	1	8.35	0.00	8.35	56.20	30.79	30.81	42.60	27.25	31.45	5.75	9.31
UGA05100	11.00	3	2	8.41	0.00	8.41	56.20	30.79	30.81	45.42	29.13	28.30	5.75	9.40
UGA05100	11.00	3	3	7.21	0.00	7.21	56.20	30.79	30.81	45.52	31.88	24.55	5.75	7.63
UGA05100	11.00	3	4	4.28	0.00	4.28	56.20	30.79	30.81	42.26	31.60	20.42	5.75	3.94
UGA05100	11.00	3	5	7.32	0.00	7.32	56.20	30.79	30.81	40.32	30.33	25.74	5.75	7.79
UGA05100	11.00	3	6	8.53	0.00	8.53	56.20	30.79	30.81	41.56	29.69	29.07	5.75	9.60
UGA05100	11.00	7	1	8.40	0.00	8.40	68.14	30.79	30.81	42.60	27.35	31.45	5.79	9.37
UGA05100	11.00	7	2	8.45	0.00	8.45	68.14	30.79	30.81	45.43	29.23	28.30	5.79	9.44
UGA05100	11.00	7	3	7.23	0.00	7.23	68.14	30.79	30.81	45.53	31.98	24.55	5.79	7.65
UGA05100	11.00	7	4	4.29	0.00	4.29	68.14	30.79	30.81	42.27	31.69	20.42	5.79	3.95
UGA05100	11.00	7	5	7.35	0.00	7.35	68.14	30.79	30.81	40.32	30.42	25.74	5.79	7.81
UGA05100	11.00	7	6	8.57	0.00	8.57	68.14	30.79	30.81	41.56	29.79	29.07	5.79	9.64
UGA05100	11.00	11	1	8.39	0.00	8.39	56.20	30.79	30.81	42.60	27.35	31.46	5.75	9.37
UGA05100	11.00	11	2	8.44	0.00	8.44	56.20	30.79	30.81	45.42	29.23	28.30	5.75	9.44
UGA05100	11.00	11	3	7.22	0.00	7.22	56.20	30.79	30.81	45.52	31.98	24.55	5.75	7.65
UGA05100	11.00	11	4	4.28	0.00	4.28	56.20	30.79	30.81	42.26	31.69	20.42	5.75	3.95
UGA05100	11.00	11	5	7.34	0.00	7.34	56.20	30.79	30.81	40.32	30.42	25.74	5.75	7.81
UGA05100	11.00	11	6	8.56	0.00	8.56	56.20	30.79	30.81	41.56	29.79	29.07	5.75	9.64
UGA05100	11.00	15	1	8.43	0.00	8.43	56.20	30.79	30.81	42.60	27.45	31.46	5.75	9.44
UGA05100	11.00	15	2	8.46	0.00	8.46	56.20	30.79	30.81	45.42	29.33	28.30	5.75	9.49
UGA05100	11.00	15	3	7.23	0.00	7.23	56.20	30.79	30.81	45.52	32.08	24.55	5.75	7.66
UGA05100	11.00	15	4	4.29	0.00	4.29	56.20	30.79	30.81	42.26	31.79	20.42	5.75	3.95
UGA05100	11.00	15	5	7.35	0.00	7.35	56.20	30.79	30.81	40.32	30.52	25.74	5.75	7.83
UGA05100	11.00	15	6	8.58	0.00	8.58	56.20	30.79	30.81	41.56	29.89	29.07	5.75	9.68
UGA05100	11.00	19	1	9.31	0.00	9.31	56.28	30.79	67.62	42.66	27.45	31.45	8.71	9.44
UGA05100	11.00	19	2	9.35	0.00	9.35	56.28	30.79	67.62	45.62	29.33	28.30	8.71	9.50
UGA05100	11.00	19	3	7.89	0.00	7.89	56.28	30.79	67.62	45.68	32.07	24.55	8.71	7.67
UGA05100	11.00	19	4	4.61	0.00	4.61	56.28	30.79	67.62	42.36	31.78	20.42	8.71	3.96
UGA05100	11.00	19	5	8.02	0.00	8.02	56.28	30.79	67.62	40.34	30.52	25.74	8.71	7.83
UGA05100	11.00	19	6	9.49	0.00	9.49	56.28	30.79	67.62	41.56	29.89	29.07	8.71	9.68
VUT12800	140.00	3	1	9.65	0.00	9.65	65.72	26.27	75.19	50.85	30.00	49.34	4.26	13.74
VUT12800	140.00	3	2	6.43	0.00	6.43	65.72	26.27	75.19	50.01	23.22	51.58	4.26	7.16
VUT12800	140.00	3	3	9.11	0.00	9.11	65.72	26.27	75.19	52.50	28.31	52.41	4.26	12.19
VUT12800	140.00	7	1	9.65	0.00	9.65	65.72	26.27	75.19	50.93	30.01	49.48	4.26	13.75
VUT12800	140.00	7	2	6.43	0.00	6.43	65.72	26.27	75.19	50.10	23.22	51.78	4.26	7.16
VUT12800	140.00	7	3	9.11	0.00	9.11	65.72	26.27	75.19	52.58	28.31	52.58	4.26	12.20
VUT12800	140.00	11	1	9.68	0.00	9.68	65.72	26.27	75.21	51.00	30.10	49.52	4.26	13.84
VUT12800	140.00	11	2	6.50	0.00	6.50	65.72	26.27	75.21	50.18	23.32	51.81	4.26	7.26
VUT12800	140.00	11	3	9.15	0.00	9.15	65.72	26.27	75.21	52.66	28.41	52.59	4.26	12.29
VUT12800	140.00	15	1	9.67	0.00	9.67	65.77	26.27	75.24	51.12	30.00	58.10	4.26	13.79
VUT12800	140.00	15	2	6.43	0.00	6.43	65.77	26.27	75.24	50.34	23.22	56.13	4.26	7.17
VUT12800	140.00	15	3	9.12	0.00	9.12	65.77	26.27	75.24	52.80	28.31	59.04	4.26	12.21
WAK33400	140.00	1	1	13.31	0.00	13.31	55.69		29.03	54.62		37.30	6.97	20.82
WAK33400	140.00	5	1	13.26	0.00	13.26	55.68	49.68	29.03	53.80	58.86	37.24	6.94	20.65
WAK33400	140.00	9	1	13.27	0.00	13.27	55.69	49.68	29.03	53.81	59.21	37.30	6.94	20.71
WAK33400	140.00	13	1	13.25	0.00	13.25	55.68	49.74	29.03	53.69	59.38	37.21	6.94	20.61
WAK33400	140.00	17	1	29.10	0.00	29.10	65.44	49.73	48.15	64.90	60.62	50.86	23.57	33.54
WAK33401	140.00	1	1	19.71	0.00	19.71	66.03		38.91	54.62		37.30	16.86	20.82
WAK33401	140.00	5	1	19.60	0.00	19.60	66.03	86.00	38.91	53.80	58.86	37.24	16.86	20.65
WAK33401	140.00	9	1	19.64	0.00	19.64	66.03	86.04	38.91	53.81	59.21	37.30	16.86	20.71
WAK33401	140.00	13	1	19.58	0.00	19.58	66.02	86.04	38.91	53.69	59.38	37.21	16.86	20.61
WAK33401	140.00	17	1	33.97	0.00	33.97	66.09	86.17	81.90	64.90	60.62	50.86	36.06	33.54
WAL10200	140.00	2	1	6.03	0.00	6.03	76.65	35.06	43.44	29.36	37.25	43.64	12.47	5.23
WAL10200	140.00	2	2	6.46	0.00	6.46	76.65	35.06	43.44	29.82	39.24	40.53	12.47	5.69
WAL10200	140.00	2	3	6.77	0.00	6.77	76.65	35.06	43.44	30.13	39.27	42.04	12.47	6.01
WAL10200	140.00	2	4	5.87	0.00	5.87	76.65	35.06	43.44	29.21	36.73	43.56	12.47	5.07
WAL10200	140.00	6	1	5.93	0.00	5.93	76.65	35.06	43.44	29.26	37.24	43.55	12.47	5.13
WAL10200	140.00	6	2	6.37	0.00	6.37	76.65	35.06	43.44	29.72	39.24	40.44	12.47	5.59
WAL10200	140.00	6	3	6.67	0.00	6.67	76.65	35.06	43.44	30.03	39.26	41.94	12.47	5.91

WAL10200	140.00	6	4	5.78	0.00	5.78	76.65	35.06	43.44	29.11	36.73	43.46	12.47	4.97
WAL10200	140.00	10	1	6.03	0.00	6.03	76.66	35.06	43.44	29.36	37.24	43.55	12.47	5.23
WAL10200	140.00	10	2	6.46	0.00	6.46	76.66	35.06	43.44	29.82	39.24	40.44	12.47	5.68
WAL10200	140.00	10	3	6.77	0.00	6.77	76.66	35.06	43.44	30.13	39.26	41.95	12.47	6.00
WAL10200	140.00	10	4	5.87	0.00	5.87	76.66	35.06	43.44	29.21	36.73	43.47	12.47	5.07
WAL10200	140.00	14	1	6.03	0.00	6.03	76.66	35.06	43.44	29.36	37.30	43.68	12.47	5.23
WAL10200	140.00	14	2	6.46	0.00	6.46	76.66	35.06	43.44	29.82	39.29	40.59	12.47	5.69
WAL10200	140.00	14	3	6.77	0.00	6.77	76.66	35.06	43.44	30.13	39.32	42.09	12.47	6.01
WAL10200	140.00	14	4	5.87	0.00	5.87	76.66	35.06	43.44	29.21	36.79	43.59	12.47	5.07
WAL10201	140.00	2	1	5.45	0.00	5.45	76.72	36.55	29.00	29.36	37.25	43.64	6.30	5.23
WAL10201	140.00	2	2	5.83	0.00	5.83	76.72	36.55	29.00	29.82	39.24	40.53	6.30	5.69
WAL10201	140.00	2	3	6.09	0.00	6.09	76.72	36.55	29.00	30.13	39.27	42.04	6.30	6.01
WAL10201	140.00	2	4	5.31	0.00	5.31	76.72	36.55	29.00	29.21	36.73	43.56	6.30	5.07
WAL10201	140.00	6	1	5.37	0.00	5.37	76.72	36.55	29.00	29.26	37.24	43.55	6.30	5.13
WAL10201	140.00	6	2	5.75	0.00	5.75	76.72	36.55	29.00	29.72	39.24	40.44	6.30	5.59
WAL10201	140.00	6	3	6.01	0.00	6.01	76.72	36.55	29.00	30.03	39.26	41.94	6.30	5.91
WAL10201	140.00	6	4	5.23	0.00	5.23	76.72	36.55	29.00	29.11	36.73	43.46	6.30	4.97
WAL10201	140.00	10	1	5.45	0.00	5.45	76.78	36.55	29.00	29.36	37.24	43.55	6.30	5.23
WAL10201	140.00	10	2	5.83	0.00	5.83	76.78	36.55	29.00	29.82	39.24	40.44	6.30	5.68
WAL10201	140.00	10	3	6.09	0.00	6.09	76.78	36.55	29.00	30.13	39.26	41.95	6.30	6.00
WAL10201	140.00	10	4	5.31	0.00	5.31	76.78	36.55	29.00	29.21	36.73	43.47	6.30	5.07
WAL10201	140.00	14	1	5.45	0.00	5.45	76.82	36.55	29.00	29.36	37.30	43.68	6.30	5.23
WAL10201	140.00	14	2	5.83	0.00	5.83	76.82	36.55	29.00	29.82	39.29	40.59	6.30	5.69
WAL10201	140.00	14	3	6.09	0.00	6.09	76.82	36.55	29.00	30.13	39.32	42.09	6.30	6.01
WAL10201	140.00	14	4	5.32	0.00	5.32	76.82	36.55	29.00	29.21	36.79	43.59	6.30	5.07
ZAI32200	-19.00	4	1	5.69	0.00	5.69	33.89	26.19	27.20	43.84	39.74	28.94	-0.38	11.84
ZAI32200	-19.00	4	2	5.37	0.00	5.37	33.89	26.19	27.20	42.00	36.01	27.84	-0.38	10.39
ZAI32200	-19.00	4	3	5.94	0.00	5.94	33.89	26.19	27.20	44.57	39.85	30.72	-0.38	13.31
ZAI32200	-19.00	4	4	5.93	0.00	5.93	33.89	26.19	27.20	43.95	40.44	30.74	-0.38	13.25
ZAI32200	-19.00	4	5	4.78	0.00	4.78	33.89	26.19	27.20	43.47	28.52	27.13	-0.38	8.41
ZAI32200	-19.00	4	6	4.47	0.00	4.47	33.89	26.19	27.20	41.04	34.60	24.47	-0.38	7.55
ZAI32200	-19.00	8	1	5.69	0.00	5.69	33.89	26.19	27.20	43.86	39.78	28.94	-0.38	11.85
ZAI32200	-19.00	8	2	5.37	0.00	5.37	33.89	26.19	27.20	42.02	36.04	27.84	-0.38	10.40
ZAI32200	-19.00	8	3	5.94	0.00	5.94	33.89	26.19	27.20	44.59	39.89	30.74	-0.38	13.33
ZAI32200	-19.00	8	4	5.93	0.00	5.93	33.89	26.19	27.20	43.96	40.49	30.75	-0.38	13.27
ZAI32200	-19.00	8	5	4.79	0.00	4.79	33.89	26.19	27.20	43.49	28.53	27.18	-0.38	8.44
ZAI32200	-19.00	8	6	4.49	0.00	4.49	33.89	26.19	27.20	41.08	34.62	24.52	-0.38	7.60
ZAI32200	-19.00	12	1	5.68	0.00	5.68	33.89	26.19	27.20	43.87	39.74	28.84	-0.38	11.77
ZAI32200	-19.00	12	2	5.35	0.00	5.35	33.89	26.19	27.20	42.03	36.01	27.74	-0.38	10.33
ZAI32200	-19.00	12	3	5.93	0.00	5.93	33.89	26.19	27.20	44.60	39.85	30.64	-0.38	13.26
ZAI32200	-19.00	12	4	5.92	0.00	5.92	33.89	26.19	27.20	43.97	40.44	30.65	-0.38	13.19
ZAI32200	-19.00	12	5	4.78	0.00	4.78	33.89	26.19	27.20	43.50	28.52	27.08	-0.38	8.38
ZAI32200	-19.00	12	6	4.45	0.00	4.45	33.89	26.19	27.20	41.06	34.60	24.42	-0.38	7.51
ZAI32200	-19.00	16	1	5.69	0.00	5.69	33.89	26.19	27.20	43.86	39.79	28.94	-0.38	11.85
ZAI32200	-19.00	16	2	5.37	0.00	5.37	33.89	26.19	27.20	42.02	36.04	27.84	-0.38	10.40
ZAI32200	-19.00	16	3	5.94	0.00	5.94	33.89	26.19	27.20	44.59	39.89	30.74	-0.38	13.33
ZAI32200	-19.00	16	4	5.93	0.00	5.93	33.89	26.19	27.20	43.96	40.49	30.75	-0.38	13.27
ZAI32200	-19.00	16	5	4.79	0.00	4.79	33.89	26.19	27.20	43.50	28.53	27.18	-0.38	8.44
ZAI32200	-19.00	16	6	4.48	0.00	4.48	33.89	26.19	27.20	41.05	34.62	24.52	-0.38	7.59
ZAI32200	-19.00	20	1	6.38	0.00	6.38	33.89	26.19	29.12	43.83	39.73	31.54	0.07	13.71
ZAI32200	-19.00	20	2	5.96	0.00	5.96	33.89	26.19	29.12	41.99	36.03	29.37	0.07	11.44
ZAI32200	-19.00	20	3	6.37	0.00	6.37	33.89	26.19	29.12	44.55	39.81	31.13	0.07	13.60
ZAI32200	-19.00	20	4	6.28	0.00	6.28	33.89	26.19	29.12	43.93	40.43	30.49	0.07	13.07
ZAI32200	-19.00	20	5	5.52	0.00	5.52	33.89	26.19	29.12	43.47	28.43	30.26	0.07	9.75
ZAI32200	-19.00	20	6	6.22	0.00	6.22	33.89	26.19	29.12	41.03	34.53	33.05	0.07	12.71
ZAI32300	-19.00	2	1	4.08	0.00	4.08	32.63	27.01	25.10	39.00	28.06	28.35	-1.31	8.18
ZAI32300	-19.00	2	2	4.96	0.00	4.96	32.63	27.01	25.10	39.35	31.93	37.07	-1.31	12.04
ZAI32300	-19.00	2	3	4.63	0.00	4.63	32.63	27.01	25.10	37.44	30.80	33.96	-1.31	10.25
ZAI32300	-19.00	2	4	4.99	0.00	4.99	32.63	27.01	25.10	40.06	31.64	37.08	-1.31	12.23
ZAI32300	-19.00	2	5	4.17	0.00	4.17	32.63	27.01	25.10	36.40	27.40	34.95	-1.31	8.45
ZAI32300	-19.00	2	6	3.34	0.00	3.34	32.63	27.01	25.10	36.88	25.36	27.13	-1.31	6.12
ZAI32300	-19.00	6	1	4.09	0.00	4.09	32.63	27.01	25.10	39.00	28.11	28.36	-1.31	8.21
ZAI32300	-19.00	6	2	4.96	0.00	4.96	32.63	27.01	25.10	39.36	32.02	37.10	-1.31	12.08
ZAI32300	-19.00	6	3	4.63	0.00	4.63	32.63	27.01	25.10	37.45	30.90	33.98	-1.31	10.29
ZAI32300	-19.00	6	4	4.99	0.00	4.99	32.63	27.01	25.10	40.07	31.74	37.10	-1.31	12.28
ZAI32300	-19.00	6	5	4.19	0.00	4.19	32.63	27.01	25.10	36.42	27.50	34.98	-1.31	8.52
ZAI32300	-19.00	6	6	3.35	0.00	3.35	32.63	27.01	25.10	36.92	25.41	27.14	-1.31	6.15
ZAI32300	-19.00	10	1	4.08	0.00	4.08	32.63	27.01	25.10	39.00	28.06	28.35	-1.31	8.18
ZAI32300	-19.00	10	2	4.96	0.00	4.96	32.63	27.01	25.10	39.35	31.93	37.07	-1.31	12.04
ZAI32300	-19.00	10	3	4.62	0.00	4.62	32.63	27.01	25.10	37.43	30.80	33.96	-1.31	10.25
ZAI32300	-19.00	10	4	4.99	0.00	4.99	32.63	27.01	25.10	40.06	31.64	37.08	-1.31	12.23
ZAI32300	-19.00	10	5	4.17	0.00	4.17	32.63	27.01	25.10	36.40	27.40	34.95	-1.31	8.46
ZAI32300	-19.00	10	6	3.34	0.00	3.34	32.63	27.01	25.10	36.89	25.36	27.13	-1.31	6.12
ZAI32300	-19.00	14	1	4.09	0.00	4.09	32.63	27.01	25.10	39.02	28.06	28.36	-1.31	8.19
ZAI32300	-19.00	14	2	4.96	0.00	4.96	32.63	27.01	25.10	39.37	31.93	37.10	-1.31	12.05
ZAI32300	-19.00	14	3	4.63	0.00	4.63	32.63	27.01	25.10	37.46	30.80	33.98	-1.31	10.26
ZAI32300	-19.00	14	4	4.99	0.00	4.99	32.63	27.01	25.10	40.08	31.64	37.10	-1.31	12.24
ZAI32300	-19.00	14	5	4.17	0.00	4.17	32.63	27.01	25.10	36.43	27.40	34.98	-1.31	8.47
ZAI32300	-19.00	14	6	3.34	0.00	3.34	32.63	27.01	25.10	36.93	25.36	27.14	-1.31	6.13
ZAI32300	-19.00	18	1	4.10	0.00	4.10	32.63	27.01	25.10	39.10	28.16	28.36	-1.31	8.24
ZAI32300	-19.00	18	2	4.97	0.00	4.97	32.63	27.01	25.10	39.44	32.03	37.16	-1.31	12.13
ZAI32300	-19.00	18	3	4.65	0.00	4.65	32.63	27.01	25.10	37.53	30.91	34.08	-1.31	10.35
ZAI32300	-19.00	18	4	5.00	0.00	5.00	32.63	27.01	25.10	40.16	31.75	37.20	-1.31	12.33
ZAI32300	-19.00	18	5	4.20	0.00	4.20	32.63	27.01	25.10	36.50	27.51	35.07	-1.31	8.56
ZAI32300	-19.00	18	6	3.37	0.00	3.37	32.63	27.01	25.10	36.98	25.46	27.14	-1.31	6.19
ZMB31400	-1.00	3	1	4.80	0.00	4.80	76.35	25.26	25.29	40.21	27.14	26.98	0.26	7.43
ZMB31400	-1.00	3	2	4.18	0.00	4.18	76.35	25.26	25.29	40.73	27.58	24.15	0.26	6.13
ZMB31400	-1.00	3	3	3.33	0.00	3.33	76.35	25.26	25.29	41.59	26.88	22.03	0.26	4.58
ZMB31400	-1.00	3	4	3.48	0.00	3.48	76.35	25.26	25.29	42.22	23.14	25.17	0.26	4.83
ZMB31400	-1.00	3	5	4.93	0.00	4.93	76.35	25.26	25.29	43.94	26.68	27.42	0.26	7.75

ZMB31400	-1.00	3	6	5.25	0.00	5.25	76.35	25.26	25.29	42.13	27.37	28.89	0.26	8.55
ZMB31400	-1.00	7	1	4.81	0.00	4.81	52.56	25.26	25.29	40.22	27.17	27.07	0.24	7.48
ZMB31400	-1.00	7	2	4.21	0.00	4.21	52.56	25.26	25.29	40.74	27.60	24.24	0.24	6.20
ZMB31400	-1.00	7	3	3.36	0.00	3.36	52.56	25.26	25.29	41.60	26.90	22.13	0.24	4.65
ZMB31400	-1.00	7	4	3.49	0.00	3.49	52.56	25.26	25.29	42.22	23.15	25.27	0.24	4.87
ZMB31400	-1.00	7	5	4.94	0.00	4.94	52.56	25.26	25.29	43.94	26.69	27.52	0.24	7.80
ZMB31400	-1.00	7	6	5.25	0.00	5.25	52.56	25.26	25.29	42.13	27.40	28.99	0.24	8.60
ZMB31400	-1.00	11	1	6.21	0.00	6.21	51.47	66.15	25.29	40.22	27.11	26.97	3.22	7.42
ZMB31400	-1.00	11	2	5.39	0.00	5.39	51.47	66.15	25.29	40.74	27.54	24.15	3.22	6.12
ZMB31400	-1.00	11	3	4.29	0.00	4.29	51.47	66.15	25.29	41.60	26.83	22.03	3.22	4.57
ZMB31400	-1.00	11	4	4.44	0.00	4.44	51.47	66.15	25.29	42.22	23.06	25.17	3.22	4.78
ZMB31400	-1.00	11	5	6.39	0.00	6.39	51.47	66.15	25.29	43.94	26.61	27.42	3.22	7.71
ZMB31400	-1.00	11	6	6.85	0.00	6.85	51.47	66.15	25.29	42.13	27.33	28.89	3.22	8.53
ZMB31400	-1.00	15	1	4.79	0.00	4.79	51.46	25.26	25.29	40.22	27.20	26.98	0.23	7.46
ZMB31400	-1.00	15	2	4.18	0.00	4.18	51.46	25.26	25.29	40.74	27.63	24.15	0.23	6.14
ZMB31400	-1.00	15	3	3.32	0.00	3.32	51.46	25.26	25.29	41.61	26.93	22.03	0.23	4.59
ZMB31400	-1.00	15	4	3.47	0.00	3.47	51.46	25.26	25.29	42.23	23.16	25.17	0.23	4.84
ZMB31400	-1.00	15	5	4.92	0.00	4.92	51.46	25.26	25.29	43.95	26.71	27.42	0.23	7.77
ZMB31400	-1.00	15	6	5.24	0.00	5.24	51.46	25.26	25.29	42.14	27.42	28.90	0.23	8.58
ZMB31400	-1.00	19	1	6.21	0.00	6.21	51.46	25.26	66.17	40.21	27.12	26.97	3.20	7.42
ZMB31400	-1.00	19	2	5.39	0.00	5.39	51.46	25.26	66.17	40.81	27.56	24.14	3.20	6.13
ZMB31400	-1.00	19	3	4.29	0.00	4.29	51.46	25.26	66.17	41.68	26.85	22.03	3.20	4.57
ZMB31400	-1.00	19	4	4.44	0.00	4.44	51.46	25.26	66.17	42.21	23.07	25.17	3.20	4.78
ZMB31400	-1.00	19	5	6.39	0.00	6.39	51.46	25.26	66.17	43.94	26.62	27.42	3.20	7.72
ZMB31400	-1.00	19	6	6.84	0.00	6.84	51.46	25.26	66.17	42.13	27.34	28.89	3.20	8.53
ZWE13500	-1.00	22	1	8.98	0.00	8.98	37.88	38.59	27.49	45.17	32.89	34.65	3.30	13.79
ZWE13500	-1.00	22	2	8.27	0.00	8.27	37.88	38.59	27.49	43.65	30.15	32.81	3.30	11.54
ZWE13500	-1.00	22	3	7.52	0.00	7.52	37.88	38.59	27.49	44.43	26.96	33.88	3.30	9.77
ZWE13500	-1.00	22	4	8.15	0.00	8.15	37.88	38.59	27.49	44.81	28.75	34.51	3.30	11.23
ZWE13500	-1.00	22	5	8.68	0.00	8.68	37.88	38.59	27.49	44.63	31.27	34.25	3.30	12.73
ZWE13500	-1.00	22	6	7.32	0.00	7.32	37.88	38.59	27.49	44.12	26.46	33.80	3.30	9.35
ZWE13500	-1.00	26	1	8.99	0.00	8.99	37.88	38.59	27.49	45.27	32.89	34.64	3.30	13.81
ZWE13500	-1.00	26	2	8.27	0.00	8.27	37.88	38.59	27.49	43.74	30.15	32.80	3.30	11.55
ZWE13500	-1.00	26	3	7.52	0.00	7.52	37.88	38.59	27.49	44.52	26.96	33.88	3.30	9.78
ZWE13500	-1.00	26	4	8.15	0.00	8.15	37.88	38.59	27.49	44.91	28.75	34.51	3.30	11.24
ZWE13500	-1.00	26	5	8.68	0.00	8.68	37.88	38.59	27.49	44.73	31.26	34.25	3.30	12.74
ZWE13500	-1.00	26	6	7.32	0.00	7.32	37.88	38.59	27.49	44.22	26.46	33.79	3.30	9.36
ZWE13500	-1.00	30	1	9.00	0.00	9.00	37.88	38.59	27.49	45.28	32.89	34.74	3.30	13.84
ZWE13500	-1.00	30	2	8.29	0.00	8.29	37.88	38.59	27.49	43.75	30.15	32.90	3.30	11.58
ZWE13500	-1.00	30	3	7.53	0.00	7.53	37.88	38.59	27.49	44.53	26.96	33.98	3.30	9.79
ZWE13500	-1.00	30	4	8.16	0.00	8.16	37.88	38.59	27.49	44.92	28.76	34.61	3.30	11.26
ZWE13500	-1.00	30	5	8.69	0.00	8.69	37.88	38.59	27.49	44.74	31.27	34.35	3.30	12.78
ZWE13500	-1.00	30	6	7.33	0.00	7.33	37.88	38.59	27.49	44.23	26.47	33.89	3.30	9.37
ZWE13500	-1.00	34	1	8.99	0.00	8.99	37.88	38.59	27.49	45.31	32.89	34.73	3.30	13.84
ZWE13500	-1.00	34	2	8.28	0.00	8.28	37.88	38.59	27.49	43.77	30.15	32.88	3.30	11.58
ZWE13500	-1.00	34	3	7.53	0.00	7.53	37.88	38.59	27.49	44.56	26.96	33.97	3.30	9.79
ZWE13500	-1.00	34	4	8.16	0.00	8.16	37.88	38.59	27.49	44.95	28.75	34.61	3.30	11.26
ZWE13500	-1.00	34	5	8.69	0.00	8.69	37.88	38.59	27.49	44.77	31.27	34.34	3.30	12.77
ZWE13500	-1.00	34	6	7.33	0.00	7.33	37.88	38.59	27.49	44.26	26.46	33.89	3.30	9.37
ZWE13500	-1.00	38	1	9.00	0.00	9.00	37.88	38.59	27.49	45.29	32.89	34.81	3.30	13.87
ZWE13500	-1.00	38	2	8.29	0.00	8.29	37.88	38.59	27.49	43.76	30.15	32.96	3.30	11.60
ZWE13500	-1.00	38	3	7.54	0.00	7.54	37.88	38.59	27.49	44.55	26.96	34.05	3.30	9.81
ZWE13500	-1.00	38	4	8.17	0.00	8.17	37.88	38.59	27.49	44.94	28.76	34.70	3.30	11.27
ZWE13500	-1.00	38	5	8.70	0.00	8.70	37.88	38.59	27.49	44.76	31.27	34.43	3.30	12.80
ZWE13500	-1.00	38	6	7.33	0.00	7.33	37.88	38.59	27.49	44.24	26.47	33.98	3.30	9.38
KO11201D	116.00	2	1	5.59	0.00	5.59	73.91	93.32	92.17	36.67	30.00	28.49	33.91	4.59 *
KO11201D	116.00	2	2	5.47	0.00	5.47	73.91	93.32	92.17	36.61	29.40	28.32	33.91	4.47 *
KO11201D	116.00	2	3	5.38	0.00	5.38	73.91	93.32	92.17	36.83	28.38	27.42	33.91	4.38 *
KO11201D	116.00	2	4	8.44	0.00	8.44	73.91	93.32	92.17	40.63	30.06	28.95	33.91	7.44 *
KO11201D	116.00	2	5	7.71	0.00	7.71	73.91	93.32	92.17	40.42	28.73	27.46	33.91	6.71 *
KO11201D	116.00	2	6	7.75	0.00	7.75	73.91	93.32	92.17	39.60	30.16	28.68	33.91	6.75 *
KO11201D	116.00	4	1	4.80	0.00	4.80	81.34	92.15	94.80	35.75	28.47	29.35	41.34	3.80 *
KO11201D	116.00	4	2	4.98	0.00	4.98	81.34	92.15	94.80	36.10	28.30	28.52	41.34	3.98 *
KO11201D	116.00	4	3	4.94	0.00	4.94	81.34	92.15	94.80	36.39	27.39	27.48	41.34	3.94 *
KO11201D	116.00	4	4	7.80	0.00	7.80	81.34	92.15	94.80	39.87	28.92	29.13	41.34	6.80 *
KO11201D	116.00	4	5	6.84	0.00	6.84	81.34	92.15	94.80	39.21	27.43	27.79	41.34	5.84 *
KO11201D	116.00	4	6	6.86	0.00	6.86	81.34	92.15	94.80	38.48	28.65	29.27	41.34	5.86 *
KO11201D	116.00	6	1	5.45	0.00	5.45	73.89	94.78	92.78	36.57	29.32	28.49	33.89	4.45 *
KO11201D	116.00	6	2	5.29	0.00	5.29	73.89	94.78	92.78	36.51	28.49	28.32	33.89	4.29 *
KO11201D	116.00	6	3	5.19	0.00	5.19	73.89	94.78	92.78	36.73	27.45	27.42	33.89	4.19 *
KO11201D	116.00	6	4	8.20	0.00	8.20	73.89	94.78	92.78	40.54	29.10	28.95	33.89	7.20 *
KO11201D	116.00	6	5	7.45	0.00	7.45	73.89	94.78	92.78	40.32	27.76	27.46	33.89	6.45 *
KO11201D	116.00	6	6	7.54	0.00	7.54	73.89	94.78	92.78	39.50	29.25	28.68	33.89	6.54 *
KO11201D	116.00	8	1	9.06	0.00	9.06	81.29	92.76	93.82	42.24	28.57	29.32	41.28	8.06 *
KO11201D	116.00	8	2	9.46	0.00	9.46	81.29	92.76	93.82	43.80	28.40	28.52	41.28	8.46 *
KO11201D	116.00	8	3	9.11	0.00	9.11	81.29	92.76	93.82	44.78	27.49	27.48	41.28	8.11 *
KO11201D	116.00	8	4	10.86	0.00	10.86	81.29	92.76	93.82	46.99	29.02	29.14	41.28	9.86 *
KO11201D	116.00	8	5	9.22	0.00	9.22	81.29	92.76	93.82	44.73	27.53	27.79	41.28	8.22 *
KO11201D	116.00	8	6	10.01	0.00	10.01	81.29	92.76	93.82	44.37	28.75	29.26	41.28	9.01 *
KO11201D	116.00	10	1	10.59	0.00	10.59	73.94	93.79	94.83	46.55	29.29	28.49	33.94	9.59 *
KO11201D	116.00	10	2	10.01	0.00	10.01	73.94	93.79	94.83	45.66	28.50	28.32	33.94	9.02 *
KO11201D	116.00	10	3	9.73	0.00	9.73	73.94	93.79	94.83	48.03	27.46	27.42	33.94	8.73 *
KO11201D	116.00	10	4	11.74	0.00	11.74	73.94	93.79	94.83	53.96	29.11	28.95	33.94	10.75 *
KO11201D	116.00	10	5	10.34	0.00	10.34	73.94	93.79	94.83	52.72	27.76	27.46	33.94	9.34 *
KO11201D	116.00	10	6	11.57	0.00	11.57	73.94	93.79	94.83	52.48	29.23	28.68	33.94	10.57 *
KO11201D	116.00	12	1	7.92	0.00	7.92	81.51	94.81	101.46	40.14	28.47	29.41	41.51	6.92 *
KO11201D	116.00	12	2	5.95	0.00	5.95	81.51	94.81	101.46	37.39	28.30	28.63	41.51	4.95 *
KO11201D	116.00	12	3	6.07	0.00	6.07	81.51	94.81	101.46	38.02	27.39	27.59	41.51	5.07 *
KO11201D	116.00	12	4	9.98	0.00	9.98	81.51	94.81	101.46	44.20	28.92	29.19	41.51	8.98 *
KO11201D	116.00	12	5	9.05	0.00	9.05	81.51	94.81	101.46	44.24	27.43	27.82	41.51	8.05 *
KO11201D	116.00	12	6	9.75	0.00	9.75	81.51	94.81	101.46	43.74	28.65	29.30	41.51	8.75 *

KOR11200	110.00	2	1	-0.75	-0.75	0.00	74.06	24.69	24.71	32.29	19.22	18.21	-0.31	-0.88
KOR11200	110.00	2	2	-0.80	-0.80	0.00	74.06	24.69	24.71	32.90	19.05	18.07	-0.31	-0.95
KOR11200	110.00	2	3	-1.61	-1.61	0.00	74.06	24.69	24.71	32.47	18.03	17.06	-0.31	-1.91
KOR11200	110.00	2	4	-0.28	-0.28	0.00	74.06	24.69	24.71	34.58	19.59	18.61	-0.31	-0.31
KOR11200	110.00	2	5	-1.19	-1.19	0.00	74.06	24.69	24.71	33.52	18.48	17.49	-0.31	-1.42
KOR11200	110.00	2	6	-0.42	-0.42	0.00	74.06	24.69	24.71	33.80	19.49	18.49	-0.31	-0.48
KOR11200	110.00	4	1	-0.78	-0.78	0.00	74.05	24.69	24.71	38.13	18.18	18.27	-0.31	-0.93
KOR11200	110.00	4	2	-0.89	-0.89	0.00	74.05	24.69	24.71	38.82	18.04	18.08	-0.31	-1.06
KOR11200	110.00	4	3	-1.73	-1.73	0.00	74.05	24.69	24.71	39.01	17.03	17.06	-0.31	-2.05
KOR11200	110.00	4	4	-0.41	-0.41	0.00	74.05	24.69	24.71	42.33	18.58	18.62	-0.31	-0.47
KOR11200	110.00	4	5	-1.32	-1.32	0.00	74.05	24.69	24.71	41.96	17.46	17.51	-0.31	-1.57
KOR11200	110.00	4	6	-0.51	-0.51	0.00	74.05	24.69	24.71	41.02	18.46	18.53	-0.31	-0.59
KOR11200	110.00	6	1	-1.09	-1.09	0.00	74.07	24.69	24.71	32.27	18.24	18.21	-0.31	-1.30
KOR11200	110.00	6	2	-1.16	-1.16	0.00	74.07	24.69	24.71	32.88	18.05	18.07	-0.31	-1.38
KOR11200	110.00	6	3	-1.98	-1.98	0.00	74.07	24.69	24.71	32.45	17.03	17.06	-0.31	-2.34
KOR11200	110.00	6	4	-0.63	-0.63	0.00	74.07	24.69	24.71	34.57	18.59	18.61	-0.31	-0.74
KOR11200	110.00	6	5	-1.56	-1.56	0.00	74.07	24.69	24.71	33.51	17.48	17.49	-0.31	-1.86
KOR11200	110.00	6	6	-0.77	-0.77	0.00	74.07	24.69	24.71	33.78	18.50	18.49	-0.31	-0.91
KOR11200	110.00	8	1	-0.66	-0.66	0.00	75.26	24.69	24.71	44.60	18.28	18.26	-0.31	-0.77
KOR11200	110.00	8	2	-0.78	-0.78	0.00	75.26	24.69	24.71	46.48	18.14	18.08	-0.31	-0.92
KOR11200	110.00	8	3	-1.62	-1.62	0.00	75.26	24.69	24.71	47.34	17.13	17.06	-0.31	-1.93
KOR11200	110.00	8	4	-0.33	-0.33	0.00	75.26	24.69	24.71	49.39	18.68	18.62	-0.31	-0.37
KOR11200	110.00	8	5	-1.25	-1.25	0.00	75.26	24.69	24.71	47.44	17.56	17.51	-0.31	-1.49
KOR11200	110.00	8	6	-0.43	-0.43	0.00	75.26	24.69	24.71	46.87	18.56	18.53	-0.31	-0.49
KOR11200	110.00	10	1	-1.01	-1.01	0.00	71.21	24.69	24.71	33.20	18.24	18.21	-0.31	-1.20
KOR11200	110.00	10	2	-1.09	-1.09	0.00	71.21	24.69	24.71	33.86	18.05	18.07	-0.31	-1.29
KOR11200	110.00	10	3	-1.92	-1.92	0.00	71.21	24.69	24.71	33.36	17.03	17.06	-0.31	-2.27
KOR11200	110.00	10	4	-0.60	-0.60	0.00	71.21	24.69	24.71	35.20	18.59	18.61	-0.31	-0.70
KOR11200	110.00	10	5	-1.53	-1.53	0.00	71.21	24.69	24.71	33.99	17.48	17.49	-0.31	-1.82
KOR11200	110.00	10	6	-0.72	-0.72	0.00	71.21	24.69	24.71	34.44	18.50	18.49	-0.31	-0.85
KOR11200	110.00	12	1	-0.71	-0.71	0.00	66.62	24.69	24.71	42.51	18.18	18.27	-0.31	-0.84
KOR11200	110.00	12	2	-0.87	-0.87	0.00	66.62	24.69	24.71	40.11	18.04	18.09	-0.31	-1.03
KOR11200	110.00	12	3	-1.70	-1.70	0.00	66.62	24.69	24.71	40.63	17.03	17.07	-0.31	-2.02
KOR11200	110.00	12	4	-0.38	-0.38	0.00	66.62	24.69	24.71	46.63	18.58	18.62	-0.31	-0.43
KOR11200	110.00	12	5	-1.29	-1.29	0.00	66.62	24.69	24.71	46.95	17.46	17.51	-0.31	-1.54
KOR11200	110.00	12	6	-0.47	-0.47	0.00	66.62	24.69	24.71	46.25	18.46	18.53	-0.31	-0.54
KOR11201	116.00	2	1	5.59	0.00	5.59	73.91	93.32	92.17	36.67	30.00	28.49	33.91	4.59 *
KOR11201	116.00	2	2	5.47	0.00	5.47	73.91	93.32	92.17	36.61	29.40	28.32	33.91	4.47 *
KOR11201	116.00	2	3	5.38	0.00	5.38	73.91	93.32	92.17	36.83	28.38	27.42	33.91	4.38 *
KOR11201	116.00	2	4	8.44	0.00	8.44	73.91	93.32	92.17	40.63	30.06	28.95	33.91	7.44 *
KOR11201	116.00	2	5	7.71	0.00	7.71	73.91	93.32	92.17	40.42	28.73	27.46	33.91	6.71 *
KOR11201	116.00	2	6	7.75	0.00	7.75	73.91	93.32	92.17	39.60	30.16	28.68	33.91	6.75 *
KOR11201	116.00	4	1	4.80	0.00	4.80	81.34	92.15	94.80	35.75	28.47	29.35	41.34	3.80 *
KOR11201	116.00	4	2	4.98	0.00	4.98	81.34	92.15	94.80	36.10	28.30	28.52	41.34	3.98 *
KOR11201	116.00	4	3	4.94	0.00	4.94	81.34	92.15	94.80	36.39	27.39	27.48	41.34	3.94 *
KOR11201	116.00	4	4	7.80	0.00	7.80	81.34	92.15	94.80	39.87	28.92	29.13	41.34	6.80 *
KOR11201	116.00	4	5	6.84	0.00	6.84	81.34	92.15	94.80	39.21	27.43	27.79	41.34	5.84 *
KOR11201	116.00	4	6	6.86	0.00	6.86	81.34	92.15	94.80	38.48	28.65	29.27	41.34	5.86 *
KOR11201	116.00	6	1	5.45	0.00	5.45	73.89	94.78	92.78	36.57	29.32	28.49	33.89	4.45 *
KOR11201	116.00	6	2	5.29	0.00	5.29	73.89	94.78	92.78	36.51	28.49	28.32	33.89	4.29 *
KOR11201	116.00	6	3	5.19	0.00	5.19	73.89	94.78	92.78	36.73	27.45	27.42	33.89	4.19 *
KOR11201	116.00	6	4	8.20	0.00	8.20	73.89	94.78	92.78	40.54	29.10	28.95	33.89	7.20 *
KOR11201	116.00	6	5	7.45	0.00	7.45	73.89	94.78	92.78	40.32	27.76	27.46	33.89	6.45 *
KOR11201	116.00	6	6	7.54	0.00	7.54	73.89	94.78	92.78	39.50	29.25	28.68	33.89	6.54 *
KOR11201	116.00	8	1	9.06	0.00	9.06	81.29	92.76	93.82	42.24	28.57	29.32	41.28	8.06 *
KOR11201	116.00	8	2	9.46	0.00	9.46	81.29	92.76	93.82	43.80	28.40	28.52	41.28	8.46 *
KOR11201	116.00	8	3	9.11	0.00	9.11	81.29	92.76	93.82	44.78	27.49	27.48	41.28	8.11 *
KOR11201	116.00	8	4	10.86	0.00	10.86	81.29	92.76	93.82	46.99	29.02	29.14	41.28	9.86 *
KOR11201	116.00	8	5	9.22	0.00	9.22	81.29	92.76	93.82	44.73	27.53	27.79	41.28	8.22 *
KOR11201	116.00	8	6	10.01	0.00	10.01	81.29	92.76	93.82	44.37	28.75	29.26	41.28	9.01 *
KOR11201	116.00	10	1	10.59	0.00	10.59	73.94	93.79	94.83	46.55	29.29	28.49	33.94	9.59 *
KOR11201	116.00	10	2	10.01	0.00	10.01	73.94	93.79	94.83	45.66	28.50	28.32	33.94	9.02 *
KOR11201	116.00	10	3	9.73	0.00	9.73	73.94	93.79	94.83	48.03	27.46	27.42	33.94	8.73 *
KOR11201	116.00	10	4	11.74	0.00	11.74	73.94	93.79	94.83	53.96	29.11	28.95	33.94	10.75 *
KOR11201	116.00	10	5	10.34	0.00	10.34	73.94	93.79	94.83	52.72	27.76	27.46	33.94	9.34 *
KOR11201	116.00	10	6	11.57	0.00	11.57	73.94	93.79	94.83	52.48	29.23	28.68	33.94	10.57 *
KOR11201	116.00	12	1	7.92	0.00	7.92	81.51	94.81	101.46	40.14	28.47	29.41	41.51	6.92 *
KOR11201	116.00	12	2	5.95	0.00	5.95	81.51	94.81	101.46	37.39	28.30	28.63	41.51	4.95 *
KOR11201	116.00	12	3	6.07	0.00	6.07	81.51	94.81	101.46	38.02	27.39	27.59	41.51	5.07 *
KOR11201	116.00	12	4	9.98	0.00	9.98	81.51	94.81	101.46	44.20	28.92	29.19	41.51	8.98 *
KOR11201	116.00	12	5	9.05	0.00	9.05	81.51	94.81	101.46	44.24	27.43	27.82	41.51	8.05 *
KOR11201	116.00	12	6	9.75	0.00	9.75	81.51	94.81	101.46	43.74	28.65	29.30	41.51	8.75 *
KRE28600	110.00	14	1	0.49	0.00	0.49	68.37	23.97	23.99	35.30	20.41	20.32	-1.03	0.94
KRE28600	110.00	14	2	0.41	0.00	0.41	68.37	23.97	23.99	35.75	20.25	20.16	-1.03	0.83
KRE28600	110.00	14	3	0.14	0.00	0.14	68.37	23.97	23.99	35.62	19.85	19.77	-1.03	0.45
KRE28600	110.00	14	4	-0.72	-0.72	0.00	68.37	23.97	23.99	34.03	18.76	18.68	-1.03	-0.67
KRE28600	110.00	14	5	-0.69	-0.69	0.00	68.37	23.97	23.99	33.73	18.83	18.74	-1.03	-0.64
KRE28600	110.00	14	6	0.18	0.00	0.18	68.37	23.97	23.99	34.58	20.02	19.93	-1.03	0.51
KRE28600	110.00	14	7	0.19	0.00	0.19	68.37	23.97	23.99	34.37	20.06	19.96	-1.03	0.52
KRE28600	110.00	14	8	0.06	0.00	0.06	68.37	23.97	23.99	34.28	19.87	19.77	-1.03	0.35
KRE28600	110.00	14	9	-2.67	-2.67	0.00	68.37	23.97	23.99	32.47	16.33	16.26	-1.03	-3.03
KRE28600	110.00	16	1	3.52	0.00	3.52	60.33	23.97	58.95	39.98	20.29	41.39	1.97	3.98
KRE28600	110.00	16	2	3.49	0.00	3.49	60.33	23.97	58.95	42.02	20.14	42.10	1.97	3.94
KRE28600	110.00	16	3	3.24	0.00	3.24	60.33	23.97	58.95	43.40	19.74	40.74	1.97	3.59
KRE28600	110.00	16	4	2.44	0.00	2.44	60.33	23.97	58.95	45.07	18.65	37.11	1.97	2.53
KRE28600	110.00	16	5	2.48	0.00	2.48	60.33	23.97	58.95	45.13	18.72	36.43	1.97	2.58
KRE28600	110.00	16	6	3.31	0.00	3.31	60.33	23.97	58.95	43.04	19.90	36.82	1.97	3.68
KRE28600	110.00	16	7	3.22	0.00	3.22	60.33	23.97	58.95	39.48	19.93	37.89	1.97	3.57
KRE28600	110.00	16	8	3.05	0.00	3.05	60.33	23.97	58.95	38.32	19.74	39.71	1.97	3.34
KRE28600	110.00	16	9	0.49	0.00	0.49	60.33	23.97	58.95	43.92	16.23	37.43	1.97	0.15
KRE28600	110.00	18	1	19.58	0.00	19.58	72.43	58.93	71.74	44.62	41.37	42.54	35.68	18.60
KRE28600	110.00	18	2	20.63	0.00	20.63	72.43	58.93	71.74	45.66	42.07	44.15	35.68	19.65

KRE28600	110.00	18	3	20.86	0.00	20.86	72.43	58.93	71.74	46.57	40.71	44.73	35.68	19.89
KRE28600	110.00	18	4	19.39	0.00	19.39	72.43	58.93	71.74	47.32	37.08	43.08	35.68	18.41
KRE28600	110.00	18	5	18.84	0.00	18.84	72.43	58.93	71.74	47.12	36.40	42.23	35.68	17.86
KRE28600	110.00	18	6	18.79	0.00	18.79	72.43	58.93	71.74	46.46	36.79	41.91	35.68	17.80
KRE28600	110.00	18	7	18.21	0.00	18.21	72.43	58.93	71.74	44.39	37.86	40.83	35.68	17.23
KRE28600	110.00	18	8	18.20	0.00	18.20	72.43	58.93	71.74	43.44	39.69	40.74	35.68	17.21
KRE28600	110.00	18	9	19.01	0.00	19.01	72.43	58.93	71.74	45.77	37.40	43.32	35.68	18.03
KRE28600	110.00	20	1	20.18	0.00	20.18	72.33	71.72	74.18	44.29	42.51	49.49	41.24	19.19
KRE28600	110.00	20	2	21.41	0.00	21.41	72.33	71.72	74.18	45.35	44.13	52.69	41.24	20.42
KRE28600	110.00	20	3	22.36	0.00	22.36	72.33	71.72	74.18	46.34	44.70	55.24	41.24	21.37
KRE28600	110.00	20	4	22.74	0.00	22.74	72.33	71.72	74.18	47.33	43.05	57.44	41.24	21.75
KRE28600	110.00	20	5	22.35	0.00	22.35	72.33	71.72	74.18	47.16	42.20	57.04	41.24	21.36
KRE28600	110.00	20	6	21.69	0.00	21.69	72.33	71.72	74.18	46.38	41.88	54.37	41.24	20.70
KRE28600	110.00	20	7	19.70	0.00	19.70	72.33	71.72	74.18	44.14	40.81	49.17	41.24	18.71
KRE28600	110.00	20	8	18.83	0.00	18.83	72.33	71.72	74.18	43.10	40.71	47.13	41.24	17.84
KRE28600	110.00	20	9	21.58	0.00	21.58	72.33	71.72	74.18	45.69	43.30	56.50	41.24	20.59
KRE28600	110.00	22	1	18.16	0.00	18.16	60.06	74.16	73.77	41.86	49.56	42.67	30.00	17.22
KRE28600	110.00	22	2	19.06	0.00	19.06	60.06	74.16	73.77	42.63	52.77	44.35	30.00	18.13
KRE28600	110.00	22	3	18.40	0.00	18.40	60.06	74.16	73.77	41.82	55.32	44.92	30.00	17.46
KRE28600	110.00	22	4	13.97	0.00	13.97	60.06	74.16	73.77	37.16	57.51	43.23	30.00	12.99
KRE28600	110.00	22	5	13.11	0.00	13.11	60.06	74.16	73.77	36.30	57.11	42.36	30.00	12.13
KRE28600	110.00	22	6	14.40	0.00	14.40	60.06	74.16	73.77	37.68	54.44	42.01	30.00	13.42
KRE28600	110.00	22	7	15.76	0.00	15.76	60.06	74.16	73.77	39.31	49.24	40.92	30.00	14.80
KRE28600	110.00	22	8	16.67	0.00	16.67	60.06	74.16	73.77	40.41	47.21	40.84	30.00	15.71
KRE28600	110.00	22	9	14.50	0.00	14.50	60.06	74.16	73.77	37.70	56.57	43.57	30.00	13.52
MLA2280A	86.00	10	1	8.13	0.00	8.13	68.10	30.30	27.66	52.83	35.85	27.16	3.77	10.55
MLA2280A	86.00	10	2	7.37	0.00	7.37	68.10	30.30	27.66	48.69	36.52	25.48	3.77	9.03
MLA2280A	86.00	10	3	8.06	0.00	8.06	68.10	30.30	27.66	50.34	35.26	27.13	3.77	10.40
MLA2280A	86.00	10	4	8.68	0.00	8.68	68.10	30.30	27.66	53.98	38.07	28.37	3.77	11.86
MLA2280A	86.00	10	5	8.71	0.00	8.71	68.10	30.30	27.66	54.18	38.04	28.44	3.77	11.92
ROU13600	-1.00	3	1	3.41	0.00	3.41	48.48	31.43	27.24	30.97	25.44	24.16	3.69	3.30
ROU13600	-1.00	3	2	3.01	0.00	3.01	48.48	31.43	27.24	31.37	26.84	21.90	3.69	2.82
ROU13600	-1.00	3	3	3.72	0.00	3.72	48.48	31.43	27.24	32.07	30.68	22.25	3.69	3.69
ROU13600	-1.00	3	4	3.76	0.00	3.76	48.48	31.43	27.24	32.21	29.73	22.40	3.69	3.74
ROU13600	-1.00	3	5	4.21	0.00	4.21	48.48	31.43	27.24	32.51	26.56	24.48	3.69	4.31
ROU13600	-1.00	3	6	4.94	0.00	4.94	48.48	31.43	27.24	32.87	27.36	26.29	3.69	5.28
ROU13600	-1.00	7	1	3.44	0.00	3.44	48.48	31.43	27.24	31.02	25.52	24.18	3.69	3.35
ROU13600	-1.00	7	2	3.03	0.00	3.03	48.48	31.43	27.24	31.39	26.92	21.91	3.69	2.84
ROU13600	-1.00	7	3	3.73	0.00	3.73	48.48	31.43	27.24	32.09	30.74	22.26	3.69	3.71
ROU13600	-1.00	7	4	3.78	0.00	3.78	48.48	31.43	27.24	32.24	29.79	22.41	3.69	3.77
ROU13600	-1.00	7	5	4.24	0.00	4.24	48.48	31.43	27.24	32.55	26.65	24.50	3.69	4.35
ROU13600	-1.00	7	6	4.97	0.00	4.97	48.48	31.43	27.24	32.92	27.44	26.31	3.69	5.33
ROU13600	-1.00	11	1	3.43	0.00	3.43	48.48	31.43	27.24	31.02	25.51	24.13	3.69	3.33
ROU13600	-1.00	11	2	2.99	0.00	2.99	48.48	31.43	27.24	31.39	26.90	21.82	3.69	2.79
ROU13600	-1.00	11	3	3.69	0.00	3.69	48.48	31.43	27.24	32.09	30.70	22.17	3.69	3.66
ROU13600	-1.00	11	4	3.73	0.00	3.73	48.48	31.43	27.24	32.24	29.76	22.32	3.69	3.71
ROU13600	-1.00	11	5	4.21	0.00	4.21	48.48	31.43	27.24	32.55	26.63	24.42	3.69	4.32
ROU13600	-1.00	11	6	4.96	0.00	4.96	48.48	31.43	27.24	32.92	27.43	26.25	3.69	5.31
ROU13600	-1.00	15	1	3.50	0.00	3.50	48.48	31.43	27.24	31.09	25.64	24.22	3.69	3.42
ROU13600	-1.00	15	2	3.05	0.00	3.05	48.48	31.43	27.24	31.43	27.02	21.91	3.69	2.87
ROU13600	-1.00	15	3	3.74	0.00	3.74	48.48	31.43	27.24	32.12	30.82	22.25	3.69	3.72
ROU13600	-1.00	15	4	3.79	0.00	3.79	48.48	31.43	27.24	32.27	29.88	22.41	3.69	3.78
ROU13600	-1.00	15	5	4.27	0.00	4.27	48.48	31.43	27.24	32.59	26.76	24.50	3.69	4.39
ROU13600	-1.00	15	6	5.02	0.00	5.02	48.48	31.43	27.24	32.98	27.59	26.33	3.69	5.40
ROU13600	-1.00	19	1	3.50	0.00	3.50	48.48	31.43	27.24	31.13	25.65	24.14	3.69	3.41
ROU13600	-1.00	19	2	3.02	0.00	3.02	48.48	31.43	27.24	31.45	27.02	21.82	3.69	2.83
ROU13600	-1.00	19	3	3.70	0.00	3.70	48.48	31.43	27.24	32.12	30.78	22.17	3.69	3.67
ROU13600	-1.00	19	4	3.75	0.00	3.75	48.48	31.43	27.24	32.28	29.85	22.32	3.69	3.73
ROU13600	-1.00	19	5	4.25	0.00	4.25	48.48	31.43	27.24	32.60	26.74	24.42	3.69	4.36
ROU13600	-1.00	19	6	5.01	0.00	5.01	48.48	31.43	27.24	32.99	27.58	26.25	3.69	5.38
VTN32500	86.00	3	1	6.64	0.00	6.64	49.52	25.63	25.65	38.92	35.78	35.78	0.58	12.74
VTN32500	86.00	3	2	6.97	0.00	6.97	49.52	25.63	25.65	44.83	35.08	35.11	0.58	14.83
VTN32500	86.00	3	3	6.60	0.00	6.60	49.52	25.63	25.65	48.22	31.85	31.88	0.58	12.55
VTN32500	86.00	3	4	3.22	0.00	3.22	49.52	25.63	25.65	43.85	23.32	23.35	0.58	4.21
VTN32500	86.00	3	5	5.22	0.00	5.22	49.52	25.63	25.65	46.01	27.16	27.19	0.58	7.99
VTN32500	86.00	3	6	6.29	0.00	6.29	49.52	25.63	25.65	37.02	34.80	34.89	0.58	11.19
VTN32500	86.00	7	1	6.66	0.00	6.66	49.46	25.64	25.65	38.92	35.76	36.52	0.58	12.87
VTN32500	86.00	7	2	6.97	0.00	6.97	49.46	25.64	25.65	44.83	35.07	35.14	0.58	14.84
VTN32500	86.00	7	3	6.59	0.00	6.59	49.46	25.64	25.65	48.21	31.85	31.80	0.58	12.51
VTN32500	86.00	7	4	3.19	0.00	3.19	49.46	25.64	25.65	43.84	23.32	23.26	0.58	4.16
VTN32500	86.00	7	5	5.20	0.00	5.20	49.46	25.64	25.65	46.00	27.16	27.09	0.58	7.94
VTN32500	86.00	7	6	6.29	0.00	6.29	49.46	25.64	25.65	37.02	34.80	34.91	0.58	11.20
VTN32500	86.00	11	1	7.96	0.00	7.96	49.52	25.63	48.29	38.82	30.83	32.33	3.50	10.50
VTN32500	86.00	11	2	9.76	0.00	9.76	49.52	25.63	48.29	44.74	35.11	53.70	3.50	16.80
VTN32500	86.00	11	3	9.45	0.00	9.45	49.52	25.63	48.29	48.13	31.77	54.10	3.50	15.16
VTN32500	86.00	11	4	6.46	0.00	6.46	49.52	25.63	48.29	43.76	23.95	46.06	3.50	7.65
VTN32500	86.00	11	5	8.19	0.00	8.19	49.52	25.63	48.29	45.92	27.44	49.46	3.50	11.04
VTN32500	86.00	11	6	7.42	0.00	7.42	49.52	25.63	48.29	36.92	28.02	43.78	3.50	9.37
VTN32500	86.00	15	1	7.26	0.00	7.26	47.19	45.16	26.90	40.69	25.09	39.21	4.59	8.26
VTN32500	86.00	15	2	10.95	0.00	10.95	47.19	45.16	26.90	47.55	37.88	41.38	4.59	18.60
VTN32500	86.00	15	3	11.19	0.00	11.19	47.19	45.16	26.90	49.58	52.95	38.70	4.59	20.79
VTN32500	86.00	15	4	5.63	0.00	5.63	47.19	45.16	26.90	44.34	45.76	22.08	4.59	5.90
VTN32500	86.00	15	5	8.61	0.00	8.61	47.19	45.16	26.90	47.41	49.15	26.92	4.59	10.65
VTN32500	86.00	15	6	8.75	0.00	8.75	47.19	45.16	26.90	42.35	28.27	37.65	4.59	10.93
SIRIUS01	5.20	4	1	-4.63	-4.85	0.22	53.59	18.32	18.99	27.44	21.30	20.50	-5.42	-4.45 *
SIRIUS01	5.20	4	2	-3.43	-4.31	0.88	53.59	18.32	18.99	29.19	22.73	21.66	-5.42	-2.80 *
SIRIUS01	5.20	4	3	-4.56	-4.76	0.20	53.59	18.32	18.99	27.06	24.42	23.85	-5.42	-4.35 *
SIRIUS01	5.20	4	4	-4.29	-5.65	1.36	53.59	18.32	18.99	27.54	23.73	22.95	-5.42	-4.00 *
SIRIUS01	5.20	4	5	-2.51	-2.87	0.36	53.59	18.32	18.99	30.00	27.69	27.20	-5.42	-1.38 *
SIRIUS01	5.20	4	6	-3.68	-5.18	1.50	53.59	18.32	18.99	28.31	25.04	24.58	-5.42	-3.15 *

SIRIUS01	5.20	8	1	-4.65	-4.88	0.23	53.59	18.32	18.99	27.42	21.23	20.50	-5.42	-4.47
SIRIUS01	5.20	8	2	-3.44	-4.34	0.90	53.59	18.32	18.99	29.17	22.67	21.65	-5.42	-2.81
SIRIUS01	5.20	8	3	-4.57	-4.79	0.22	53.59	18.32	18.99	27.03	24.36	23.85	-5.42	-4.37
SIRIUS01	5.20	8	4	-4.30	-5.69	1.39	53.59	18.32	18.99	27.52	23.67	22.95	-5.42	-4.02
SIRIUS01	5.20	8	5	-2.53	-2.89	0.36	53.59	18.32	18.99	29.97	27.63	27.19	-5.42	-1.41
SIRIUS01	5.20	8	6	-3.70	-5.23	1.53	53.59	18.32	18.99	28.28	24.97	24.58	-5.42	-3.19
SIRIUS02	5.20	12	1	-5.84	-6.10	0.26	53.59	18.32	18.99	25.92	19.73	18.92	-5.42	-5.98
SIRIUS02	5.20	12	2	-4.53	-5.53	1.00	53.59	18.32	18.99	27.68	21.17	20.08	-5.42	-4.32
SIRIUS02	5.20	12	3	-5.76	-5.99	0.23	53.59	18.32	18.99	25.54	22.86	22.29	-5.42	-5.88
SIRIUS02	5.20	12	4	-5.47	-6.97	1.50	53.59	18.32	18.99	26.03	22.17	21.40	-5.42	-5.52
SIRIUS02	5.20	12	5	-3.51	-3.93	0.42	53.59	18.32	18.99	28.47	26.13	25.63	-5.42	-2.91
SIRIUS02	5.20	12	6	-4.81	-6.49	1.68	53.59	18.32	18.99	26.78	23.47	23.01	-5.42	-4.69
SIRIUS02	5.20	16	1	-5.86	-6.12	0.26	53.59	18.32	18.99	25.90	19.65	18.92	-5.42	-6.00
SIRIUS02	5.20	16	2	-4.54	-5.54	1.00	53.59	18.32	18.99	27.66	21.11	20.08	-5.42	-4.33
SIRIUS02	5.20	16	3	-5.78	-6.01	0.23	53.59	18.32	18.99	25.51	22.81	22.29	-5.42	-5.90
SIRIUS02	5.20	16	4	-5.48	-6.98	1.50	53.59	18.32	18.99	26.01	22.12	21.40	-5.42	-5.54
SIRIUS02	5.20	16	5	-3.52	-3.94	0.42	53.59	18.32	18.99	28.45	26.08	25.63	-5.42	-2.93
SIRIUS02	5.20	16	6	-4.84	-6.50	1.66	53.59	18.32	18.99	26.75	23.41	23.01	-5.42	-4.72
SIRIUS03	5.20	20	1	-5.43	-5.54	0.11	53.59	18.32	23.40	25.95	19.65	21.20	-3.93	-5.77
SIRIUS03	5.20	20	2	-4.02	-4.60	0.58	53.59	18.32	23.40	27.66	21.11	22.95	-3.93	-4.09
SIRIUS03	5.20	20	3	-5.47	-5.56	0.09	53.59	18.32	23.40	25.54	22.81	23.80	-3.93	-5.82
SIRIUS03	5.20	20	4	-5.13	-6.72	1.59	53.59	18.32	23.40	26.01	22.12	23.75	-3.93	-5.42
SIRIUS03	5.20	20	5	-3.06	-3.24	0.18	53.59	18.32	23.40	28.44	26.07	27.97	-3.93	-2.86
SIRIUS03	5.20	20	6	-4.45	-5.90	1.45	53.59	18.32	23.40	26.75	23.41	25.75	-3.93	-4.61
000BS-3N	109.85	1	1	5.83	0.00	5.83	56.63		20.57	48.59		30.07	-0.52	13.14
000BS-3N	109.85	1	2	1.73	0.00	1.73	56.63		20.57	33.63		32.09	-0.52	2.47
000BS-3N	109.85	1	3	2.62	0.00	2.62	56.63		20.57	35.38		28.65	-0.52	3.89
000BS-3N	109.85	1	4	5.69	0.00	5.69	56.63		20.57	45.62		31.01	-0.52	12.25
000BS-3N	109.85	1	5	5.87	0.00	5.87	56.63		20.57	48.80		30.42	-0.52	13.44
000BS-3N	109.85	1	6	5.87	0.00	5.87	56.63		20.57	48.86		30.32	-0.52	13.40
000BS-3N	109.85	3	1	2.28	0.00	2.28	55.49	20.55	20.57	39.25	31.05	35.12	-3.51	7.35
000BS-3N	109.85	3	2	-0.59	-0.59	0.00	55.49	20.55	20.57	31.64	33.06	40.60	-3.51	0.55
000BS-3N	109.85	3	3	2.78	0.00	2.78	55.49	20.55	20.57	43.56	29.62	33.74	-3.51	9.86
000BS-3N	109.85	3	4	3.29	0.00	3.29	55.49	20.55	20.57	51.47	31.98	44.53	-3.51	15.21
000BS-3N	109.85	3	5	2.80	0.00	2.80	55.49	20.55	20.57	42.55	31.39	35.94	-3.51	9.96
000BS-3N	109.85	3	6	2.69	0.00	2.69	55.49	20.55	20.57	41.63	31.29	35.72	-3.51	9.27
000BS-3N	109.85	5	1	3.17	0.00	3.17	56.72	20.55	20.57	49.80	35.09	31.07	-3.49	13.22
000BS-3N	109.85	5	2	-0.44	-0.44	0.00	56.72	20.55	20.57	31.89	40.57	33.08	-3.49	0.79
000BS-3N	109.85	5	3	1.44	0.00	1.44	56.72	20.55	20.57	36.29	33.71	29.64	-3.49	4.64
000BS-3N	109.85	5	4	3.16	0.00	3.16	56.72	20.55	20.57	46.56	44.50	32.01	-3.49	13.12
000BS-3N	109.85	5	5	3.20	0.00	3.20	56.72	20.55	20.57	49.78	35.91	31.42	-3.49	13.55
000BS-3N	109.85	5	6	3.19	0.00	3.19	56.72	20.55	20.57	49.85	35.69	31.32	-3.49	13.48
000BS-3N	109.85	7	1	2.29	0.00	2.29	55.49	20.55	20.57	39.25	31.04	35.21	-3.51	7.35
000BS-3N	109.85	7	2	-0.61	-0.61	0.00	55.49	20.55	20.57	31.59	33.05	47.76	-3.51	0.51
000BS-3N	109.85	7	3	2.81	0.00	2.81	55.49	20.55	20.57	43.56	29.61	35.24	-3.51	10.02
000BS-3N	109.85	7	4	3.29	0.00	3.29	55.49	20.55	20.57	51.47	31.98	44.54	-3.51	15.21
000BS-3N	109.85	7	5	2.80	0.00	2.80	55.49	20.55	20.57	42.55	31.39	35.93	-3.51	9.96
000BS-3N	109.85	7	6	2.69	0.00	2.69	55.49	20.55	20.57	41.63	31.29	35.73	-3.51	9.27
000BS-3N	109.85	9	1	3.12	0.00	3.12	56.70	20.55	20.57	47.74	35.28	31.15	-3.49	12.61
000BS-3N	109.85	9	2	-0.42	-0.42	0.00	56.70	20.55	20.57	31.89	47.84	33.76	-3.49	0.82
000BS-3N	109.85	9	3	1.51	0.00	1.51	56.70	20.55	20.57	36.38	35.31	30.22	-3.49	4.82
000BS-3N	109.85	9	4	3.17	0.00	3.17	56.70	20.55	20.57	46.63	44.61	32.01	-3.49	13.16
000BS-3N	109.85	9	5	3.19	0.00	3.19	56.70	20.55	20.57	49.55	36.00	31.45	-3.49	13.51
000BS-3N	109.85	9	6	3.18	0.00	3.18	56.70	20.55	20.57	49.27	35.80	31.36	-3.49	13.34
000BS-3N	109.85	11	1	2.29	0.00	2.29	55.49	20.55	20.57	39.25	31.12	35.31	-3.51	7.37
000BS-3N	109.85	11	2	-0.58	-0.57	-0.01	55.49	20.55	20.57	31.64	33.74	44.89	-3.51	0.57
000BS-3N	109.85	11	3	2.84	0.00	2.84	55.49	20.55	20.57	43.57	30.19	35.39	-3.51	10.23
000BS-3N	109.85	11	4	3.29	0.00	3.29	55.49	20.55	20.57	51.49	31.98	44.66	-3.51	15.22
000BS-3N	109.85	11	5	2.80	0.00	2.80	55.49	20.55	20.57	42.56	31.42	36.03	-3.51	9.98
000BS-3N	109.85	11	6	2.69	0.00	2.69	55.49	20.55	20.57	41.64	31.33	35.83	-3.51	9.28
000BS-3N	109.85	13	1	4.20	0.00	4.20	57.15	20.55	23.36	49.47	35.29	30.57	-2.33	12.90
000BS-3N	109.85	13	2	1.55	0.00	1.55	57.15	20.55	23.36	34.79	44.86	29.45	-2.33	3.42
000BS-3N	109.85	13	3	2.94	0.00	2.94	57.15	20.55	23.36	38.66	35.36	29.93	-2.33	6.72
000BS-3N	109.85	13	4	4.36	0.00	4.36	57.15	20.55	23.36	49.91	44.64	31.94	-2.33	14.66
000BS-3N	109.85	13	5	4.26	0.00	4.26	57.15	20.55	23.36	49.75	36.00	31.26	-2.33	13.48
000BS-3N	109.85	13	6	4.25	0.00	4.25	57.15	20.55	23.36	49.67	35.80	31.14	-2.33	13.35
000BS-3N	109.85	15	1	5.11	0.00	5.11	55.00	23.34	23.36	43.80	30.64	34.14	-0.78	10.36
000BS-3N	109.85	15	2	5.01	0.00	5.01	55.00	23.34	23.36	44.68	29.52	31.43	-0.78	9.96
000BS-3N	109.85	15	3	4.81	0.00	4.81	55.00	23.34	23.36	42.44	30.00	33.04	-0.78	9.24
000BS-3N	109.85	15	4	5.87	0.00	5.87	55.00	23.34	23.36	51.54	32.01	44.98	-0.78	15.27
000BS-3N	109.85	15	5	5.49	0.00	5.49	55.00	23.34	23.36	46.59	31.34	35.77	-0.78	12.28
000BS-3N	109.85	15	6	5.41	0.00	5.41	55.00	23.34	23.36	45.79	31.21	35.48	-0.78	11.80
F 09306	-7.00	1	1	4.93	0.00	4.93	32.24	25.57	30.00	39.05		27.36	-0.77	9.82
F 09306	-7.00	1	2	4.42	0.00	4.42	32.24	25.57	30.00	35.59		26.66	-0.77	8.09
F 09306	-7.00	1	3	5.34	0.00	5.34	32.24	25.57	30.00	36.18		37.42	-0.77	11.69
F 09306	-7.00	1	4	5.66	0.00	5.66	32.24	25.57	30.00	38.27		39.53	-0.77	13.78
F 09306	-7.00	1	5	5.44	0.00	5.44	32.24	25.57	30.00	36.59		39.05	-0.77	12.22
F 09306	-7.00	1	6	5.81	0.00	5.81	32.24	25.57	30.00	41.44		35.18	-0.77	15.21
F 09306	-7.00	5	1	5.32	0.00	5.32	32.24	28.60	30.00	39.04	32.92	27.35	0.11	9.04
F 09306	-7.00	5	2	4.69	0.00	4.69	32.24	28.60	30.00	35.55	31.76	26.65	0.11	7.38
F 09306	-7.00	5	3	5.52	0.00	5.52	32.24	28.60	30.00	36.12	30.03	37.39	0.11	9.66
F 09306	-7.00	5	4	6.21	0.00	6.21	32.24	28.60	30.00	38.26	34.33	39.50	0.11	12.47
F 09306	-7.00	5	5	5.89	0.00	5.89	32.24	28.60	30.00	36.59	33.13	39.05	0.11	11.00
F 09306	-7.00	5	6	6.39	0.00	6.39	32.24	28.60	30.00	41.43	34.50	35.17	0.11	13.53
F 09306	-7.00	9	1	5.32	0.00	5.32	32.24	28.60	30.00	39.04	32.83	27.35	0.11	9.02
F 09306	-7.00	9	2	4.69	0.00	4.69	32.24	28.60	30.00	35.55	31.68	26.65	0.11	7.37
F 09306	-7.00	9	3	5.51	0.00	5.51	32.24	28.60	30.00	36.12	29.93	37.35	0.11	9.62
F 09306	-7.00	9	4	6.21	0.00	6.21	32.24	28.60	30.00	38.26	34.27	39.48	0.11	12.45
F 09306	-7.00	9	5	5.89	0.00	5.89	32.24	28.60	30.00	36.59	33.06	39.03	0.11	10.98
F 09306	-7.00	9	6	6.39	0.00	6.39	32.24	28.60	30.00	41.43	34.40	35.16	0.11	13.50

F	09306	-7.00	13	1	5.30	0.00	5.30	32.24	28.60	29.99	39.02	32.78	27.27	0.11	8.96
F	09306	-7.00	13	2	4.68	0.00	4.68	32.24	28.60	29.99	35.51	31.85	26.61	0.11	7.36
F	09306	-7.00	13	3	5.50	0.00	5.50	32.24	28.60	29.99	36.07	29.93	37.30	0.11	9.59
F	09306	-7.00	13	4	6.20	0.00	6.20	32.24	28.60	29.99	38.25	34.24	39.44	0.11	12.43
F	09306	-7.00	13	5	5.89	0.00	5.89	32.24	28.60	29.99	36.59	33.04	39.01	0.11	10.98
F	09306	-7.00	13	6	6.38	0.00	6.38	32.24	28.60	29.99	41.42	34.40	35.13	0.11	13.49
F	09306	-7.00	17	1	5.29	0.00	5.29	32.24	28.60	29.99	39.05	32.69	27.27	0.11	8.95
F	09306	-7.00	17	2	4.68	0.00	4.68	32.24	28.60	29.99	35.52	31.76	26.61	0.11	7.35
F	09306	-7.00	17	3	5.48	0.00	5.48	32.24	28.60	29.99	36.03	29.84	37.28	0.11	9.53
F	09306	-7.00	17	4	6.20	0.00	6.20	32.24	28.60	29.99	38.25	34.18	39.43	0.11	12.42
F	09306	-7.00	17	5	5.88	0.00	5.88	32.24	28.60	29.99	36.60	32.97	39.01	0.11	10.97
F	09306	-7.00	17	6	6.38	0.00	6.38	32.24	28.60	29.99	41.46	34.31	35.12	0.11	13.47
F2_A2722		-7.00	2	1	6.01	0.00	6.01	53.24	39.04	54.58	29.36	36.51	36.51	16.01	5.10
F2_A2722		-7.00	2	2	2.94	0.00	2.94	53.24	39.04	54.58	26.45	29.74	32.56	16.01	1.98
F2_A2722		-7.00	2	3	9.38	0.00	9.38	53.24	39.04	54.58	33.25	35.06	37.18	16.01	8.57
F2_A2722		-7.00	2	4	12.31	0.00	12.31	53.24	39.04	54.58	36.90	37.34	36.40	16.01	11.69
F2_A2722		-7.00	2	5	11.95	0.00	11.95	53.24	39.04	54.58	37.41	34.59	34.35	16.01	11.30
F2_A2722		-7.00	2	6	12.50	0.00	12.50	53.24	39.04	54.58	36.70	38.66	38.69	16.01	11.90
F2_A2722		-7.00	6	1	5.95	0.00	5.95	53.24	39.04	54.58	29.29	36.47	36.47	16.01	5.03
F2_A2722		-7.00	6	2	2.86	0.00	2.86	53.24	39.04	54.58	26.37	29.66	32.50	16.01	1.91
F2_A2722		-7.00	6	3	9.32	0.00	9.32	53.24	39.04	54.58	33.19	35.01	37.16	16.01	8.51
F2_A2722		-7.00	6	4	12.26	0.00	12.26	53.24	39.04	54.58	36.84	37.33	36.37	16.01	11.64
F2_A2722		-7.00	6	5	11.94	0.00	11.94	53.24	39.04	54.58	37.39	34.58	34.34	16.01	11.29
F2_A2722		-7.00	6	6	12.46	0.00	12.46	53.24	39.04	54.58	36.65	38.65	38.68	16.01	11.87
F2_A2722		-7.00	10	1	5.95	0.00	5.95	53.24	39.04	54.58	29.29	36.47	36.47	16.01	5.03
F2_A2722		-7.00	10	2	2.86	0.00	2.86	53.24	39.04	54.58	26.37	29.66	32.50	16.01	1.91
F2_A2722		-7.00	10	3	9.30	0.00	9.30	53.24	39.04	54.58	33.16	35.01	37.16	16.01	8.49
F2_A2722		-7.00	10	4	12.25	0.00	12.25	53.24	39.04	54.58	36.83	37.33	36.37	16.01	11.63
F2_A2722		-7.00	10	5	11.93	0.00	11.93	53.24	39.04	54.58	37.37	34.58	34.34	16.01	11.28
F2_A2722		-7.00	10	6	12.44	0.00	12.44	53.24	39.04	54.58	36.63	38.65	38.68	16.01	11.84
F2_A2722		-7.00	14	1	5.08	0.00	5.08	53.24	39.04	54.58	28.37	36.13	36.13	16.01	4.15
F2_A2722		-7.00	14	2	2.37	0.00	2.37	53.24	39.04	54.58	25.86	29.28	32.13	16.01	1.41
F2_A2722		-7.00	14	3	8.96	0.00	8.96	53.24	39.04	54.58	32.81	34.66	36.83	16.01	8.14
F2_A2722		-7.00	14	4	11.94	0.00	11.94	53.24	39.04	54.58	36.48	37.02	36.04	16.01	11.29
F2_A2722		-7.00	14	5	11.65	0.00	11.65	53.24	39.04	54.58	37.08	34.28	34.04	16.01	10.98
F2_A2722		-7.00	14	6	11.94	0.00	11.94	53.24	39.04	54.58	36.03	38.35	38.39	16.01	11.29
F2_A2722		-7.00	18	1	4.58	0.00	4.58	53.24	39.04	54.58	27.87	35.65	35.63	16.01	3.65
F2_A2722		-7.00	18	2	1.87	0.00	1.87	53.24	39.04	54.58	25.36	28.78	31.63	16.01	0.91
F2_A2722		-7.00	18	3	8.46	0.00	8.46	53.24	39.04	54.58	32.29	34.12	36.31	16.01	7.62
F2_A2722		-7.00	18	4	11.47	0.00	11.47	53.24	39.04	54.58	35.97	36.52	35.53	16.01	10.78
F2_A2722		-7.00	18	5	11.19	0.00	11.19	53.24	39.04	54.58	36.58	33.80	33.53	16.01	10.48
F2_A2722		-7.00	18	6	11.46	0.00	11.46	53.24	39.04	54.58	35.50	37.88	37.88	16.01	10.77
F2_A2733		-7.00	3	1	7.14	-2.41	9.55	54.70	53.31	37.33	33.18	26.49	32.10	14.76	6.30
F2_A2733		-7.00	3	2	4.92	-2.85	7.77	54.70	53.31	37.33	29.84	25.80	30.96	14.76	4.01
F2_A2733		-7.00	3	3	10.62	-2.12	12.74	54.70	53.31	37.33	37.53	36.56	29.22	14.76	9.97
F2_A2733		-7.00	3	4	11.33	-2.08	13.41	54.70	53.31	37.33	36.15	38.63	33.49	14.76	10.74
F2_A2733		-7.00	3	5	10.53	-2.12	12.65	54.70	53.31	37.33	35.33	38.19	32.32	14.76	9.87
F2_A2733		-7.00	3	6	13.06	-2.01	15.07	54.70	53.31	37.33	40.63	34.27	33.64	14.76	12.69
F2_A2733		-7.00	7	1	7.09	-2.42	9.51	54.70	53.31	37.33	33.11	26.48	32.02	14.76	6.25
F2_A2733		-7.00	7	2	4.85	-2.87	7.72	54.70	53.31	37.33	29.75	25.79	30.88	14.76	3.94
F2_A2733		-7.00	7	3	10.57	-2.12	12.69	54.70	53.31	37.33	37.50	36.53	29.13	14.76	9.91
F2_A2733		-7.00	7	4	11.29	-2.08	13.37	54.70	53.31	37.33	36.11	38.61	33.43	14.76	10.70
F2_A2733		-7.00	7	5	10.51	-2.12	12.63	54.70	53.31	37.33	35.32	38.18	32.25	14.76	9.85
F2_A2733		-7.00	7	6	13.03	-2.02	15.05	54.70	53.31	37.33	40.63	34.26	33.55	14.76	12.65
F2_A2733		-7.00	11	1	7.09	-2.42	9.51	54.70	53.31	37.33	33.11	26.48	31.96	14.76	6.24
F2_A2733		-7.00	11	2	4.87	-2.87	7.74	54.70	53.31	37.33	29.75	25.79	31.04	14.76	3.96
F2_A2733		-7.00	11	3	10.56	-2.12	12.68	54.70	53.31	37.33	37.50	36.49	29.13	14.76	9.91
F2_A2733		-7.00	11	4	11.29	-2.08	13.37	54.70	53.31	37.33	36.11	38.59	33.41	14.76	10.70
F2_A2733		-7.00	11	5	10.50	-2.12	12.62	54.70	53.31	37.33	35.32	38.16	32.23	14.76	9.84
F2_A2733		-7.00	11	6	13.03	-2.02	15.05	54.70	53.31	37.33	40.63	34.25	33.55	14.76	12.65
F2_A2733		-7.00	15	1	6.73	-2.46	9.19	54.70	53.31	37.33	32.74	26.10	31.57	14.76	5.86
F2_A2733		-7.00	15	2	4.50	-2.95	7.45	54.70	53.31	37.33	29.37	25.45	30.66	14.76	3.58
F2_A2733		-7.00	15	3	10.23	-2.14	12.37	54.70	53.31	37.33	37.17	36.14	28.74	14.76	9.54
F2_A2733		-7.00	15	4	10.97	-2.10	13.07	54.70	53.31	37.33	35.78	38.24	33.04	14.76	10.35
F2_A2733		-7.00	15	5	10.20	-2.14	12.34	54.70	53.31	37.33	35.01	37.85	31.86	14.76	9.52
F2_A2733		-7.00	15	6	12.73	-2.02	14.75	54.70	53.31	37.33	40.33	33.91	33.15	14.76	12.31
F2_A2733		-7.00	19	1	6.24	-2.53	8.77	54.70	53.31	37.33	32.24	25.60	31.07	14.76	5.36
F2_A2733		-7.00	19	2	4.01	-3.06	7.07	54.70	53.31	37.33	28.87	24.95	30.15	14.76	3.08
F2_A2733		-7.00	19	3	9.75	-2.17	11.92	54.70	53.31	37.33	36.66	35.62	28.23	14.76	9.03
F2_A2733		-7.00	19	4	10.50	-2.12	12.62	54.70	53.31	37.33	35.27	37.73	32.51	14.76	9.84
F2_A2733		-7.00	19	5	9.73	-2.17	11.90	54.70	53.31	37.33	34.51	37.35	31.34	14.76	9.01
F2_A2733		-7.00	19	6	12.29	-2.04	14.33	54.70	53.31	37.33	39.83	33.41	32.65	14.76	11.81
F2_A2744		-7.00	4	1	1.75	0.00	1.75	32.28	54.56	39.06	25.74	36.48	36.50	2.13	1.63
F2_A2744		-7.00	4	2	0.00	-0.42	0.42	32.28	54.56	39.06	23.83	32.53	29.68	2.13	-0.43
F2_A2744		-7.00	4	3	1.01	0.00	1.01	32.28	54.56	39.06	24.84	37.15	35.04	2.13	0.74
F2_A2744		-7.00	4	4	2.91	0.00	2.91	32.28	54.56	39.06	27.24	36.37	37.36	2.13	3.09
F2_A2744		-7.00	4	5	1.02	0.00	1.02	32.28	54.56	39.06	24.90	34.32	34.61	2.13	0.75
F2_A2744		-7.00	4	6	1.71	0.00	1.71	32.28	54.56	39.06	25.65	38.66	38.68	2.13	1.58
F2_A2744		-7.00	8	1	1.67	0.00	1.67	32.28	54.56	39.06	25.65	36.44	36.50	2.13	1.53
F2_A2744		-7.00	8	2	-0.08	-0.50	0.42	32.28	54.56	39.06	23.74	32.47	29.68	2.13	-0.52
F2_A2744		-7.00	8	3	0.93	0.00	0.93	32.28	54.56	39.06	24.74	37.13	35.04	2.13	0.64
F2_A2744		-7.00	8	4	2.84	0.00	2.84	32.28	54.56	39.06	27.15	36.34	37.36	2.13	3.00
F2_A2744		-7.00	8	5	0.95	0.00	0.95	32.28	54.56	39.06	24.81	34.32	34.61	2.13	0.66
F2_A2744		-7.00	8	6	1.63	0.00	1.63	32.28	54.56	39.06	25.55	38.66	38.68	2.13	1.49
F2_A2744		-7.00	12	1	1.63	0.00	1.63	32.28	54.56	39.06	25.59	36.44	36.46	2.13	1.48
F2_A2744		-7.00	12	2	0.04	-0.39	0.43	32.28	54.56	39.06	23.88	32.47	29.61	2.13	-0.39
F2_A2744		-7.00	12	3	0.93	0.00	0.93	32.28	54.56	39.06	24.74	37.13	34.99	2.13	0.64
F2_A2744		-7.00	12	4	2.84	0.00	2.84	32.28	54.56	39.06	27.14	36.34	37.35	2.13	3.00
F2_A2744		-7.00	12	5	0.94	0.00	0.94	32.28	54.56	39.06	24.80	34.32	34.61	2.13	0.66
F2_A2744		-7.00	12	6	1.64	0.00	1.64	32.28	54.56	39.06	25.55	38.65	38.67	2.13	1.49
F2_A2744		-7.00	16	1	1.55	0.00	1.55	32.28	54.56	39.06	25.50	36.40	36.48	2.13	1.39

F2_A2744	-7.00	16	2	-0.04	-0.47	0.43	32.28	54.56	39.06	23.79	32.40	29.61	2.13	-0.48
F2_A2744	-7.00	16	3	0.85	0.00	0.85	32.28	54.56	39.06	24.65	37.10	34.95	2.13	0.54
F2_A2744	-7.00	16	4	2.77	0.00	2.77	32.28	54.56	39.06	27.05	36.31	37.35	2.13	2.91
F2_A2744	-7.00	16	5	0.87	0.00	0.87	32.28	54.56	39.06	24.71	34.31	34.62	2.13	0.57
F2_A2744	-7.00	16	6	1.56	0.00	1.56	32.28	54.56	39.06	25.45	38.66	38.71	2.13	1.39
F2_A2744	-7.00	20	1	1.49	0.00	1.49	32.28	54.56	38.95	25.50	36.40	32.82	2.13	1.32
F2_A2744	-7.00	20	2	-0.46	-1.30	0.84	32.28	54.56	38.95	23.78	32.40	23.62	2.13	-0.96
F2_A2744	-7.00	20	3	0.87	0.00	0.87	32.28	54.56	38.95	24.65	37.08	37.35	2.13	0.57
F2_A2744	-7.00	20	4	2.76	0.00	2.76	32.28	54.56	38.95	27.04	36.30	36.93	2.13	2.89
F2_A2744	-7.00	20	5	0.88	0.00	0.88	32.28	54.56	38.95	24.71	34.31	36.40	2.13	0.59
F2_A2744	-7.00	20	6	1.56	0.00	1.56	32.28	54.56	38.95	25.45	38.66	40.38	2.13	1.40
F2_A2788	-7.00	24	1	3.01	0.00	3.01	35.31	37.16	38.95	28.56	23.64	32.87	4.62	2.65
F2_A2788	-7.00	24	2	1.30	0.00	1.30	35.31	37.16	38.95	27.35	22.41	24.07	4.62	0.72
F2_A2788	-7.00	24	3	3.37	0.00	3.37	35.31	37.16	38.95	29.06	23.57	37.86	4.62	3.07
F2_A2788	-7.00	24	4	5.99	0.00	5.99	35.31	37.16	38.95	32.79	26.46	36.94	4.62	6.38
F2_A2788	-7.00	24	5	5.84	0.00	5.84	35.31	37.16	38.95	33.26	25.38	37.53	4.62	6.18
F2_A2788	-7.00	24	6	6.96	0.00	6.96	35.31	37.16	38.95	34.44	27.30	42.27	4.62	7.78
F2_A2788	-7.00	28	1	3.13	0.00	3.13	35.31	37.16	38.95	28.79	23.61	33.13	4.62	2.80
F2_A2788	-7.00	28	2	1.38	0.00	1.38	35.31	37.16	38.95	27.49	22.44	24.09	4.62	0.81
F2_A2788	-7.00	28	3	3.29	0.00	3.29	35.31	37.16	38.95	29.00	23.43	37.83	4.62	2.98
F2_A2788	-7.00	28	4	5.99	0.00	5.99	35.31	37.16	38.95	32.76	26.49	36.93	4.62	6.37
F2_A2788	-7.00	28	5	5.82	0.00	5.82	35.31	37.16	38.95	33.26	25.30	37.51	4.62	6.14
F2_A2788	-7.00	28	6	6.97	0.00	6.97	35.31	37.16	38.95	34.51	27.23	42.39	4.62	7.79
F2_A2788	-7.00	32	1	1.61	0.00	1.61	35.31	37.16	38.95	26.30	23.61	32.91	4.62	1.06
F2_A2788	-7.00	32	2	0.36	-0.65	1.01	35.31	37.16	38.95	25.63	22.44	23.98	4.62	-0.31
F2_A2788	-7.00	32	3	3.26	0.00	3.26	35.31	37.16	38.95	28.95	23.42	37.79	4.62	2.95
F2_A2788	-7.00	32	4	5.92	0.00	5.92	35.31	37.16	38.95	32.61	26.49	36.87	4.62	6.28
F2_A2788	-7.00	32	5	5.74	0.00	5.74	35.31	37.16	38.95	33.05	25.30	37.47	4.62	6.04
F2_A2788	-7.00	32	6	6.57	0.00	6.57	35.31	37.16	38.95	33.48	27.23	42.26	4.62	7.20
F2_A2788	-7.00	36	1	2.80	0.00	2.80	35.31	37.16	38.95	28.24	23.56	32.68	4.62	2.42
F2_A2788	-7.00	36	2	1.14	-0.04	1.18	35.31	37.16	38.95	27.08	22.40	23.96	4.62	0.55
F2_A2788	-7.00	36	3	3.21	0.00	3.21	35.31	37.16	38.95	28.90	23.36	37.75	4.62	2.89
F2_A2788	-7.00	36	4	5.91	0.00	5.91	35.31	37.16	38.95	32.65	26.39	36.83	4.62	6.27
F2_A2788	-7.00	36	5	5.75	0.00	5.75	35.31	37.16	38.95	33.16	25.21	37.41	4.62	6.05
F2_A2788	-7.00	36	6	6.86	0.00	6.86	35.31	37.16	38.95	34.28	27.15	42.13	4.62	7.62
F2_A2788	-7.00	40	1	1.11	0.00	1.11	35.31	37.16	38.95	25.44	23.55		4.88	0.49
F2_A2788	-7.00	40	2	0.50	0.00	0.50	35.31	37.16	38.95	24.91	22.39		4.88	-0.17
F2_A2788	-7.00	40	3	3.27	0.00	3.27	35.31	37.16	38.95	28.85	23.35		4.88	2.91
F2_A2788	-7.00	40	4	6.01	0.00	6.01	35.31	37.16	38.95	32.48	26.38		4.88	6.32
F2_A2788	-7.00	40	5	5.81	0.00	5.81	35.31	37.16	38.95	32.90	25.20		4.88	6.04
F2_A2788	-7.00	40	6	6.47	0.00	6.47	35.31	37.16	38.95	33.02	27.15		4.88	6.95
F2aA2722	-7.00	2	1	5.64	0.00	5.64	45.84	31.64	47.18	29.36	36.51	36.51	8.61	5.10
F2aA2722	-7.00	2	2	2.75	0.00	2.75	45.84	31.64	47.18	26.45	29.74	32.56	8.61	1.98
F2aA2722	-7.00	2	3	8.61	0.00	8.61	45.84	31.64	47.18	33.25	35.06	37.18	8.61	8.57
F2aA2722	-7.00	2	4	10.90	0.00	10.90	45.84	31.64	47.18	36.90	37.34	36.40	8.61	11.69
F2aA2722	-7.00	2	5	10.64	0.00	10.64	45.84	31.64	47.18	37.41	34.59	34.35	8.61	11.30
F2aA2722	-7.00	2	6	11.04	0.00	11.04	45.84	31.64	47.18	36.70	38.66	38.69	8.61	11.90
F2aA2722	-7.00	6	1	5.58	0.00	5.58	45.84	31.64	47.18	29.29	36.47	36.47	8.61	5.03
F2aA2722	-7.00	6	2	2.68	0.00	2.68	45.84	31.64	47.18	26.37	29.66	32.50	8.61	1.91
F2aA2722	-7.00	6	3	8.56	0.00	8.56	45.84	31.64	47.18	33.19	35.01	37.16	8.61	8.51
F2aA2722	-7.00	6	4	10.87	0.00	10.87	45.84	31.64	47.18	36.84	37.33	36.37	8.61	11.64
F2aA2722	-7.00	6	5	10.63	0.00	10.63	45.84	31.64	47.18	37.39	34.58	34.34	8.61	11.29
F2aA2722	-7.00	6	6	11.01	0.00	11.01	45.84	31.64	47.18	36.65	38.65	38.68	8.61	11.87
F2aA2722	-7.00	10	1	5.58	0.00	5.58	45.84	31.64	47.18	29.29	36.47	36.47	8.61	5.03
F2aA2722	-7.00	10	2	2.68	0.00	2.68	45.84	31.64	47.18	26.37	29.66	32.50	8.61	1.91
F2aA2722	-7.00	10	3	8.54	0.00	8.54	45.84	31.64	47.18	33.16	35.01	37.16	8.61	8.49
F2aA2722	-7.00	10	4	10.86	0.00	10.86	45.84	31.64	47.18	36.83	37.33	36.37	8.61	11.63
F2aA2722	-7.00	10	5	10.62	0.00	10.62	45.84	31.64	47.18	37.37	34.58	34.34	8.61	11.28
F2aA2722	-7.00	10	6	11.00	0.00	11.00	45.84	31.64	47.18	36.63	38.65	38.68	8.61	11.84
F2aA2722	-7.00	14	1	4.77	0.00	4.77	45.84	31.64	47.18	28.37	36.13	36.13	8.61	4.15
F2aA2722	-7.00	14	2	2.20	0.00	2.20	45.84	31.64	47.18	25.86	29.28	32.13	8.61	1.41
F2aA2722	-7.00	14	3	8.25	0.00	8.25	45.84	31.64	47.18	32.81	34.66	36.83	8.61	8.14
F2aA2722	-7.00	14	4	10.63	0.00	10.63	45.84	31.64	47.18	36.48	37.02	36.04	8.61	11.29
F2aA2722	-7.00	14	5	10.42	0.00	10.42	45.84	31.64	47.18	37.08	34.28	34.04	8.61	10.98
F2aA2722	-7.00	14	6	10.63	0.00	10.63	45.84	31.64	47.18	36.03	38.35	38.39	8.61	11.29
F2aA2722	-7.00	18	1	4.31	0.00	4.31	45.84	31.64	47.18	27.87	35.65	35.63	8.61	3.65
F2aA2722	-7.00	18	2	1.72	0.00	1.72	45.84	31.64	47.18	25.36	28.78	31.63	8.61	0.91
F2aA2722	-7.00	18	3	7.83	0.00	7.83	45.84	31.64	47.18	32.29	34.12	36.31	8.61	7.62
F2aA2722	-7.00	18	4	10.28	0.00	10.28	45.84	31.64	47.18	35.97	36.52	35.53	8.61	10.78
F2aA2722	-7.00	18	5	10.06	0.00	10.06	45.84	31.64	47.18	36.58	33.80	33.53	8.61	10.48
F2aA2722	-7.00	18	6	10.27	0.00	10.27	45.84	31.64	47.18	35.50	37.88	37.88	8.61	10.77
F2aA2728	-7.00	24	1	3.38	0.00	3.38	45.84	31.64	47.18	28.56	23.64	32.87	8.61	2.65
F2aA2728	-7.00	24	2	1.55	-0.41	1.96	45.84	31.64	47.18	27.35	22.41	24.07	8.61	0.72
F2aA2728	-7.00	24	3	3.78	0.00	3.78	45.84	31.64	47.18	29.06	23.57	37.86	8.61	3.07
F2aA2728	-7.00	24	4	6.77	0.00	6.77	45.84	31.64	47.18	32.79	26.46	36.94	8.61	6.38
F2aA2728	-7.00	24	5	6.60	0.00	6.60	45.84	31.64	47.18	33.26	25.38	37.53	8.61	6.18
F2aA2728	-7.00	24	6	7.96	0.00	7.96	45.84	31.64	47.18	34.44	27.30	42.27	8.61	7.78
F2aA2728	-7.00	28	1	3.52	0.00	3.52	45.84	31.64	47.18	28.79	23.61	33.13	8.61	2.80
F2aA2728	-7.00	28	2	1.63	-0.38	2.01	45.84	31.64	47.18	27.49	22.44	24.09	8.61	0.81
F2aA2728	-7.00	28	3	3.69	0.00	3.69	45.84	31.64	47.18	29.00	23.43	37.83	8.61	2.98
F2aA2728	-7.00	28	4	6.76	0.00	6.76	45.84	31.64	47.18	32.76	26.49	36.93	8.61	6.37
F2aA2728	-7.00	28	5	6.57	0.00	6.57	45.84	31.64	47.18	33.26	25.30	37.51	8.61	6.14
F2aA2728	-7.00	28	6	7.97	0.00	7.97	45.84	31.64	47.18	34.51	27.23	42.39	8.61	7.79
F2aA2728	-7.00	32	1	1.88	0.00	1.88	45.84	31.64	47.18	26.30	23.61	32.91	8.61	1.06
F2aA2728	-7.00	32	2	0.56	-1.10	1.66	45.84	31.64	47.18	25.63	22.44	23.98	8.61	-0.31
F2aA2728	-7.00	32	3	3.66	0.00	3.66	45.84	31.64	47.18	28.95	23.42	37.79	8.61	2.95
F2aA2728	-7.00	32	4	6.69	0.00	6.69	45.84	31.64	47.18	32.61	26.49	36.87	8.61	6.28
F2aA2728	-7.00	32	5	6.47	0.00	6.47	45.84	31.64	47.18	33.05	25.30	37.47	8.61	6.04
F2aA2728	-7.00	32	6	7.48	0.00	7.48	45.84	31.64	47.18	33.48	27.23	42.26	8.61	7.20
F2aA2728	-7.00	36	1	3.16	0.00	3.16	45.84	31.64	47.18	28.24	23.56	32.68	8.61	2.42
F2aA2728	-7.00	36	2	1.38	-0.56	1.94	45.84	31.64	47.18	27.08	22.40	23.96	8.61	0.55

F2aA2728	-7.00	36	3	3.61	0.00	3.61	45.84	31.64	47.18	28.90	23.36	37.75	8.61	2.89
F2aA2728	-7.00	36	4	6.68	0.00	6.68	45.84	31.64	47.18	32.65	26.39	36.83	8.61	6.27
F2aA2728	-7.00	36	5	6.48	0.00	6.48	45.84	31.64	47.18	33.16	25.21	37.41	8.61	6.05
F2aA2728	-7.00	36	6	7.83	0.00	7.83	45.84	31.64	47.18	34.28	27.15	42.13	8.61	7.62
F2aA2728	-7.00	40	1	1.32	0.00	1.32	45.84	31.64	47.18	25.44	23.55		8.61	0.49
F2aA2728	-7.00	40	2	0.69	-0.53	1.22	45.84	31.64	47.18	24.91	22.39		8.61	-0.17
F2aA2728	-7.00	40	3	3.63	0.00	3.63	45.84	31.64	47.18	28.85	23.35		8.61	2.91
F2aA2728	-7.00	40	4	6.72	0.00	6.72	45.84	31.64	47.18	32.48	26.38		8.61	6.32
F2aA2728	-7.00	40	5	6.47	0.00	6.47	45.84	31.64	47.18	32.90	25.20		8.61	6.04
F2aA2728	-7.00	40	6	7.26	0.00	7.26	45.84	31.64	47.18	33.02	27.15		8.61	6.95
F2aA2762	-7.00	2	1	1.14	0.00	1.14	29.83	20.47	29.93	29.36	36.51	36.51	-4.19	5.10
F2aA2762	-7.00	2	2	-0.11	-0.43	0.32	29.83	20.47	29.93	26.45	29.74	32.56	-4.19	1.98
F2aA2762	-7.00	2	3	1.98	0.00	1.98	29.83	20.47	29.93	33.25	35.06	37.18	-4.19	8.57
F2aA2762	-7.00	2	4	2.39	0.00	2.39	29.83	20.47	29.93	36.90	37.34	36.40	-4.19	11.69
F2aA2762	-7.00	2	5	2.35	0.00	2.35	29.83	20.47	29.93	37.41	34.59	34.35	-4.19	11.30
F2aA2762	-7.00	2	6	2.41	0.00	2.41	29.83	20.47	29.93	36.70	38.66	38.69	-4.19	11.90
F2aA2762	-7.00	6	1	1.12	0.00	1.12	29.83	20.47	29.93	29.29	36.47	36.47	-4.19	5.03
F2aA2762	-7.00	6	2	-0.15	-0.48	0.33	29.83	20.47	29.93	26.37	29.66	32.50	-4.19	1.91
F2aA2762	-7.00	6	3	1.97	0.00	1.97	29.83	20.47	29.93	33.19	35.01	37.16	-4.19	8.51
F2aA2762	-7.00	6	4	2.38	0.00	2.38	29.83	20.47	29.93	36.84	37.33	36.37	-4.19	11.64
F2aA2762	-7.00	6	5	2.35	0.00	2.35	29.83	20.47	29.93	37.39	34.58	34.34	-4.19	11.29
F2aA2762	-7.00	6	6	2.40	0.00	2.40	29.83	20.47	29.93	36.65	38.65	38.68	-4.19	11.87
F2aA2762	-7.00	10	1	1.12	0.00	1.12	29.83	20.47	29.93	29.29	36.47	36.47	-4.19	5.03
F2aA2762	-7.00	10	2	-0.15	-0.48	0.33	29.83	20.47	29.93	26.37	29.66	32.50	-4.19	1.91
F2aA2762	-7.00	10	3	1.97	0.00	1.97	29.83	20.47	29.93	33.16	35.01	37.16	-4.19	8.49
F2aA2762	-7.00	10	4	2.38	0.00	2.38	29.83	20.47	29.93	36.83	37.33	36.37	-4.19	11.63
F2aA2762	-7.00	10	5	2.35	0.00	2.35	29.83	20.47	29.93	37.37	34.58	34.34	-4.19	11.28
F2aA2762	-7.00	10	6	2.40	0.00	2.40	29.83	20.47	29.93	36.63	38.65	38.68	-4.19	11.84
F2aA2762	-7.00	14	1	0.81	0.00	0.81	29.83	20.47	29.93	28.37	36.13	36.13	-4.19	4.15
F2aA2762	-7.00	14	2	-0.40	-0.74	0.34	29.83	20.47	29.93	25.86	29.28	32.13	-4.19	1.41
F2aA2762	-7.00	14	3	1.90	0.00	1.90	29.83	20.47	29.93	32.81	34.66	36.83	-4.19	8.14
F2aA2762	-7.00	14	4	2.35	0.00	2.35	29.83	20.47	29.93	36.48	37.02	36.04	-4.19	11.29
F2aA2762	-7.00	14	5	2.32	0.00	2.32	29.83	20.47	29.93	37.08	34.28	34.04	-4.19	10.98
F2aA2762	-7.00	14	6	2.35	0.00	2.35	29.83	20.47	29.93	36.03	38.35	38.39	-4.19	11.29
F2aA2762	-7.00	18	1	0.62	0.00	0.62	29.83	20.47	29.93	27.87	35.65	35.63	-4.19	3.65
F2aA2762	-7.00	18	2	-0.67	-1.03	0.36	29.83	20.47	29.93	25.36	28.78	31.63	-4.19	0.91
F2aA2762	-7.00	18	3	1.80	0.00	1.80	29.83	20.47	29.93	32.29	34.12	36.31	-4.19	7.62
F2aA2762	-7.00	18	4	2.29	0.00	2.29	29.83	20.47	29.93	35.97	36.52	35.53	-4.19	10.78
F2aA2762	-7.00	18	5	2.26	0.00	2.26	29.83	20.47	29.93	36.58	33.80	33.53	-4.19	10.48
F2aA2762	-7.00	18	6	2.29	0.00	2.29	29.83	20.47	29.93	35.50	37.88	37.88	-4.19	10.77
F2aA2773	-7.00	3	1	3.14	0.00	3.14	29.77	29.28	27.92	33.18	26.49	32.10	-1.75	6.30
F2aA2773	-7.00	3	2	2.12	0.00	2.12	29.77	29.28	27.92	29.84	25.80	30.96	-1.75	4.01
F2aA2773	-7.00	3	3	4.22	0.00	4.22	29.77	29.28	27.92	37.53	36.56	29.22	-1.75	9.97
F2aA2773	-7.00	3	4	4.37	0.00	4.37	29.77	29.28	27.92	36.15	38.63	33.49	-1.75	10.74
F2aA2773	-7.00	3	5	4.20	0.00	4.20	29.77	29.28	27.92	35.33	38.19	32.32	-1.75	9.87
F2aA2773	-7.00	3	6	4.67	0.00	4.67	29.77	29.28	27.92	40.63	34.27	33.64	-1.75	12.69
F2aA2773	-7.00	7	1	3.12	0.00	3.12	29.77	29.28	27.92	33.11	26.48	32.02	-1.75	6.25
F2aA2773	-7.00	7	2	2.08	0.00	2.08	29.77	29.28	27.92	29.75	25.79	30.88	-1.75	3.94
F2aA2773	-7.00	7	3	4.20	0.00	4.20	29.77	29.28	27.92	37.50	36.53	29.13	-1.75	9.91
F2aA2773	-7.00	7	4	4.36	0.00	4.36	29.77	29.28	27.92	36.11	38.61	33.43	-1.75	10.70
F2aA2773	-7.00	7	5	4.19	0.00	4.19	29.77	29.28	27.92	35.32	38.18	32.25	-1.75	9.85
F2aA2773	-7.00	7	6	4.66	0.00	4.66	29.77	29.28	27.92	40.63	34.26	33.55	-1.75	12.65
F2aA2773	-7.00	11	1	3.12	0.00	3.12	29.77	29.28	27.92	33.11	26.48	31.96	-1.75	6.24
F2aA2773	-7.00	11	2	2.09	0.00	2.09	29.77	29.28	27.92	29.75	25.79	31.04	-1.75	3.96
F2aA2773	-7.00	11	3	4.20	0.00	4.20	29.77	29.28	27.92	37.50	36.49	29.13	-1.75	9.91
F2aA2773	-7.00	11	4	4.36	0.00	4.36	29.77	29.28	27.92	36.11	38.59	33.41	-1.75	10.70
F2aA2773	-7.00	11	5	4.19	0.00	4.19	29.77	29.28	27.92	35.32	38.16	32.23	-1.75	9.84
F2aA2773	-7.00	11	6	4.66	0.00	4.66	29.77	29.28	27.92	40.63	34.25	33.55	-1.75	12.65
F2aA2773	-7.00	15	1	2.97	0.00	2.97	29.77	29.28	27.92	32.74	26.10	31.57	-1.75	5.86
F2aA2773	-7.00	15	2	1.89	0.00	1.89	29.77	29.28	27.92	29.37	25.45	30.66	-1.75	3.58
F2aA2773	-7.00	15	3	4.12	0.00	4.12	29.77	29.28	27.92	37.17	36.14	28.74	-1.75	9.54
F2aA2773	-7.00	15	4	4.30	0.00	4.30	29.77	29.28	27.92	35.78	38.24	33.04	-1.75	10.35
F2aA2773	-7.00	15	5	4.12	0.00	4.12	29.77	29.28	27.92	35.01	37.85	31.86	-1.75	9.52
F2aA2773	-7.00	15	6	4.62	0.00	4.62	29.77	29.28	27.92	40.33	33.91	33.15	-1.75	12.31
F2aA2773	-7.00	19	1	2.76	0.00	2.76	29.77	29.28	27.92	32.24	25.60	31.07	-1.75	5.36
F2aA2773	-7.00	19	2	1.62	0.00	1.62	29.77	29.28	27.92	28.87	24.95	30.15	-1.75	3.08
F2aA2773	-7.00	19	3	4.00	0.00	4.00	29.77	29.28	27.92	36.66	35.62	28.23	-1.75	9.03
F2aA2773	-7.00	19	4	4.19	0.00	4.19	29.77	29.28	27.92	35.27	37.73	32.51	-1.75	9.84
F2aA2773	-7.00	19	5	4.00	0.00	4.00	29.77	29.28	27.92	34.51	37.35	31.34	-1.75	9.01
F2aA2773	-7.00	19	6	4.55	0.00	4.55	29.77	29.28	27.92	39.83	33.41	32.65	-1.75	11.81
F2aA2784	-7.00	4	1	-0.29	-0.33	0.04	29.82	29.91	20.49	25.74	36.48	36.50	-4.18	1.63
F2aA2784	-7.00	4	2	-1.46	-1.68	0.22	29.82	29.91	20.49	23.83	32.53	29.68	-4.18	-0.43
F2aA2784	-7.00	4	3	-0.77	-0.77	0.00	29.82	29.91	20.49	24.84	37.15	35.04	-4.18	0.74
F2aA2784	-7.00	4	4	0.40	0.00	0.40	29.82	29.91	20.49	27.24	36.37	37.36	-4.18	3.09
F2aA2784	-7.00	4	5	-0.76	-0.76	0.00	29.82	29.91	20.49	24.90	34.32	34.61	-4.18	0.75
F2aA2784	-7.00	4	6	-0.31	-0.31	0.00	29.82	29.91	20.49	25.65	38.66	38.68	-4.18	1.58
F2aA2784	-7.00	8	1	-0.34	-0.38	0.04	29.82	29.91	20.49	25.65	36.44	36.50	-4.18	1.53
F2aA2784	-7.00	8	2	-1.52	-1.74	0.22	29.82	29.91	20.49	23.74	32.47	29.68	-4.18	-0.52
F2aA2784	-7.00	8	3	-0.82	-0.82	0.00	29.82	29.91	20.49	24.74	37.13	35.04	-4.18	0.64
F2aA2784	-7.00	8	4	0.36	0.00	0.36	29.82	29.91	20.49	27.15	36.34	37.36	-4.18	3.00
F2aA2784	-7.00	8	5	-0.81	-0.81	0.00	29.82	29.91	20.49	24.81	34.32	34.61	-4.18	0.66
F2aA2784	-7.00	8	6	-0.36	-0.36	0.00	29.82	29.91	20.49	25.55	38.66	38.68	-4.18	1.49
F2aA2784	-7.00	12	1	-0.36	-0.41	0.05	29.81	29.91	20.49	25.59	36.44	36.46	-4.19	1.48
F2aA2784	-7.00	12	2	-1.44	-1.66	0.22	29.81	29.91	20.49	23.88	32.47	29.61	-4.19	-0.39
F2aA2784	-7.00	12	3	-0.82	-0.82	0.00	29.81	29.91	20.49	24.74	37.13	34.99	-4.19	0.64
F2aA2784	-7.00	12	4	0.35	0.00	0.35	29.81	29.91	20.49	27.14	36.34	37.35	-4.19	3.00
F2aA2784	-7.00	12	5	-0.81	-0.81	0.00	29.81	29.91	20.49	24.80	34.32	34.61	-4.19	0.66
F2aA2784	-7.00	12	6	-0.36	-0.36	0.00	29.81	29.91	20.49	25.55	38.65	38.67	-4.19	1.49
F2aA2784	-7.00	16	1	-0.41	-0.46	0.05	29.82	29.91	20.49	25.50	36.40	36.48	-4.18	1.39
F2aA2784	-7.00	16	2	-1.49	-1.72	0.23	29.82	29.91	20.49	23.79	32.40	29.61	-4.18	-0.48
F2aA2784	-7.00	16	3	-0.88	-0.88	0.00	29.82	29.91	20.49	24.65	37.10	34.95	-4.18	0.54

F2aA2784	-7.00	16	4	0.32	0.00	0.32	29.82	29.91	20.49	27.05	36.31	37.35	-4.18	2.91
F2aA2784	-7.00	16	5	-0.86	-0.86	0.00	29.82	29.91	20.49	24.71	34.31	34.62	-4.18	0.57
F2aA2784	-7.00	16	6	-0.41	-0.41	0.00	29.82	29.91	20.49	25.45	38.66	38.71	-4.18	1.39
F2aA2784	-7.00	20	1	0.82	0.00	0.82	29.81	29.91	20.49	25.50	36.40	32.82	-0.81	1.32
F2aA2784	-7.00	20	2	-0.90	-1.62	0.72	29.81	29.91	20.49	23.78	32.40	23.62	-0.81	-0.96
F2aA2784	-7.00	20	3	0.28	-0.19	0.47	29.81	29.91	20.49	24.65	37.08	37.35	-0.81	0.57
F2aA2784	-7.00	20	4	1.88	0.00	1.88	29.81	29.91	20.49	27.04	36.30	36.93	-0.81	2.89
F2aA2784	-7.00	20	5	0.29	0.00	0.29	29.81	29.91	20.49	24.71	34.31	36.40	-0.81	0.59
F2aA2784	-7.00	20	6	0.88	0.00	0.88	29.81	29.91	20.49	25.45	38.66	40.38	-0.81	1.40
F2aA2788	-7.00	24	1	0.20	-0.34	0.54	29.82	29.91	20.49	28.56	23.64	32.87	-4.18	2.65
F2aA2788	-7.00	24	2	-0.78	-1.54	0.76	29.82	29.91	20.49	27.35	22.41	24.07	-4.18	0.72
F2aA2788	-7.00	24	3	0.39	-0.28	0.67	29.82	29.91	20.49	29.06	23.57	37.86	-4.18	3.07
F2aA2788	-7.00	24	4	1.51	0.00	1.51	29.82	29.91	20.49	32.79	26.46	36.94	-4.18	6.38
F2aA2788	-7.00	24	5	1.46	0.00	1.46	29.82	29.91	20.49	33.26	25.38	37.53	-4.18	6.18
F2aA2788	-7.00	24	6	1.83	0.00	1.83	29.82	29.91	20.49	34.44	27.30	42.27	-4.18	7.78
F2aA2788	-7.00	28	1	0.27	-0.29	0.56	29.82	29.91	20.49	28.79	23.61	33.13	-4.18	2.80
F2aA2788	-7.00	28	2	-0.73	-1.51	0.78	29.82	29.91	20.49	27.49	22.44	24.09	-4.18	0.81
F2aA2788	-7.00	28	3	0.35	-0.32	0.67	29.82	29.91	20.49	29.00	23.43	37.83	-4.18	2.98
F2aA2788	-7.00	28	4	1.51	0.00	1.51	29.82	29.91	20.49	32.76	26.49	36.93	-4.18	6.37
F2aA2788	-7.00	28	5	1.45	0.00	1.45	29.82	29.91	20.49	33.26	25.30	37.51	-4.18	6.14
F2aA2788	-7.00	28	6	1.84	0.00	1.84	29.82	29.91	20.49	34.51	27.23	42.39	-4.18	7.79
F2aA2788	-7.00	32	1	-0.59	-1.07	0.48	29.81	29.91	20.49	26.30	23.61	32.91	-4.19	1.06
F2aA2788	-7.00	32	2	-1.38	-2.08	0.70	29.81	29.91	20.49	25.63	22.44	23.98	-4.19	-0.31
F2aA2788	-7.00	32	3	0.33	-0.35	0.68	29.81	29.91	20.49	28.95	23.42	37.79	-4.19	2.95
F2aA2788	-7.00	32	4	1.49	0.00	1.49	29.81	29.91	20.49	32.61	26.49	36.87	-4.19	6.28
F2aA2788	-7.00	32	5	1.42	0.00	1.42	29.81	29.91	20.49	33.05	25.30	37.47	-4.19	6.04
F2aA2788	-7.00	32	6	1.71	0.00	1.71	29.81	29.91	20.49	33.48	27.23	42.26	-4.19	7.20
F2aA2788	-7.00	36	1	0.10	-0.46	0.56	29.82	29.91	20.49	28.24	23.56	32.68	-4.18	2.42
F2aA2788	-7.00	36	2	-0.87	-1.65	0.78	29.82	29.91	20.49	27.08	22.40	23.96	-4.18	0.55
F2aA2788	-7.00	36	3	0.31	-0.37	0.68	29.82	29.91	20.49	28.90	23.36	37.75	-4.18	2.89
F2aA2788	-7.00	36	4	1.48	0.00	1.48	29.82	29.91	20.49	32.65	26.39	36.83	-4.18	6.27
F2aA2788	-7.00	36	5	1.42	0.00	1.42	29.82	29.91	20.49	33.16	25.21	37.41	-4.18	6.05
F2aA2788	-7.00	36	6	1.80	0.00	1.80	29.82	29.91	20.49	34.28	27.15	42.13	-4.18	7.62
F2aA2788	-7.00	40	1	0.22	-0.08	0.30	29.81	29.91	20.49	25.44	23.55		-0.81	0.49
F2aA2788	-7.00	40	2	-0.28	-0.70	0.42	29.81	29.91	20.49	24.91	22.39		-0.81	-0.17
F2aA2788	-7.00	40	3	1.89	0.00	1.89	29.81	29.91	20.49	28.85	23.35		-0.81	2.91
F2aA2788	-7.00	40	4	3.70	0.00	3.70	29.81	29.91	20.49	32.48	26.38		-0.81	6.32
F2aA2788	-7.00	40	5	3.58	0.00	3.58	29.81	29.91	20.49	32.90	25.20		-0.81	6.04
F2aA2788	-7.00	40	6	3.97	0.00	3.97	29.81	29.91	20.49	33.02	27.15		-0.81	6.95
F3_A2751	-7.00	1	1	4.11	0.00	4.11	32.24	25.57	30.00	35.11		25.53	-0.77	7.24
F3_A2751	-7.00	1	2	2.28	0.00	2.28	32.24	25.57	30.00	29.49		23.90	-0.77	3.52
F3_A2751	-7.00	1	3	4.57	0.00	4.57	32.24	25.57	30.00	33.27		32.77	-0.77	8.56
F3_A2751	-7.00	1	4	5.17	0.00	5.17	32.24	25.57	30.00	35.41		35.74	-0.77	10.81
F3_A2751	-7.00	1	5	4.76	0.00	4.76	32.24	25.57	30.00	33.54		36.17	-0.77	9.18
F3_A2751	-7.00	1	6	5.54	0.00	5.54	32.24	25.57	30.00	38.54		33.92	-0.77	12.90
F3_A2751	-7.00	5	1	3.65	0.00	3.65	32.24	28.60	30.00	35.08	25.67	25.50	0.11	5.26
F3_A2751	-7.00	5	2	1.69	0.00	1.69	32.24	28.60	30.00	29.43	24.02	23.86	0.11	2.16
F3_A2751	-7.00	5	3	3.83	0.00	3.83	32.24	28.60	30.00	33.22	24.66	32.72	0.11	5.58
F3_A2751	-7.00	5	4	4.97	0.00	4.97	32.24	28.60	30.00	35.40	27.36	35.69	0.11	8.06
F3_A2751	-7.00	5	5	4.30	0.00	4.30	32.24	28.60	30.00	33.53	25.90	36.16	0.11	6.51
F3_A2751	-7.00	5	6	5.37	0.00	5.37	32.24	28.60	30.00	38.54	27.55	33.91	0.11	9.16
F3_A2751	-7.00	9	1	3.63	0.00	3.63	32.24	28.60	30.00	35.08	25.58	25.50	0.11	5.22
F3_A2751	-7.00	9	2	1.68	0.00	1.68	32.24	28.60	30.00	29.42	23.93	23.86	0.11	2.14
F3_A2751	-7.00	9	3	3.80	0.00	3.80	32.24	28.60	30.00	33.22	24.57	32.69	0.11	5.52
F3_A2751	-7.00	9	4	4.95	0.00	4.95	32.24	28.60	30.00	35.40	27.27	35.68	0.11	8.02
F3_A2751	-7.00	9	5	4.28	0.00	4.28	32.24	28.60	30.00	33.53	25.81	36.14	0.11	6.47
F3_A2751	-7.00	9	6	5.35	0.00	5.35	32.24	28.60	30.00	38.53	27.46	33.89	0.11	9.10
F3_A2751	-7.00	13	1	3.56	0.00	3.56	32.24	28.60	29.99	35.05	25.52	25.23	0.11	5.09
F3_A2751	-7.00	13	2	1.66	0.00	1.66	32.24	28.60	29.99	29.36	24.08	23.75	0.11	2.11
F3_A2751	-7.00	13	3	3.79	0.00	3.79	32.24	28.60	29.99	33.17	24.57	32.63	0.11	5.50
F3_A2751	-7.00	13	4	4.95	0.00	4.95	32.24	28.60	29.99	35.39	27.26	35.63	0.11	8.01
F3_A2751	-7.00	13	5	4.28	0.00	4.28	32.24	28.60	29.99	33.53	25.81	36.14	0.11	6.46
F3_A2751	-7.00	13	6	5.34	0.00	5.34	32.24	28.60	29.99	38.53	27.46	33.78	0.11	9.09
F3_A2751	-7.00	17	1	3.55	0.00	3.55	32.24	28.60	29.99	35.07	25.43	25.23	0.11	5.06
F3_A2751	-7.00	17	2	1.64	0.00	1.64	32.24	28.60	29.99	29.36	23.99	23.74	0.11	2.09
F3_A2751	-7.00	17	3	3.75	0.00	3.75	32.24	28.60	29.99	33.13	24.47	32.62	0.11	5.43
F3_A2751	-7.00	17	4	4.93	0.00	4.93	32.24	28.60	29.99	35.39	27.18	35.62	0.11	7.96
F3_A2751	-7.00	17	5	4.26	0.00	4.26	32.24	28.60	29.99	33.54	25.72	36.14	0.11	6.43
F3_A2751	-7.00	17	6	5.32	0.00	5.32	32.24	28.60	29.99	38.56	27.36	33.77	0.11	9.04
F3_A2762	-7.00	2	1	-0.54	-0.57	0.03	29.83	20.47	29.93	25.37	34.96	32.22	-4.19	1.16
F3_A2762	-7.00	2	2	-1.84	-2.05	0.21	29.83	20.47	29.93	23.38	28.98	28.20	-4.19	-1.01
F3_A2762	-7.00	2	3	1.53	0.00	1.53	29.83	20.47	29.93	31.36	31.86	34.03	-4.19	6.47
F3_A2762	-7.00	2	4	2.23	0.00	2.23	29.83	20.47	29.93	35.66	35.33	34.25	-4.19	10.23
F3_A2762	-7.00	2	5	1.94	0.00	1.94	29.83	20.47	29.93	34.38	31.74	31.43	-4.19	8.33
F3_A2762	-7.00	2	6	1.53	0.00	1.53	29.83	20.47	29.93	30.90	35.52	35.59	-4.19	6.45
F3_A2762	-7.00	6	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_A2762	-7.00	6	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_A2762	-7.00	6	3	1.52	0.00	1.52	29.83	20.47	29.93	31.31	31.81	34.00	-4.19	6.42
F3_A2762	-7.00	6	4	2.22	0.00	2.22	29.83	20.47	29.93	35.62	35.32	34.21	-4.19	10.19
F3_A2762	-7.00	6	5	1.94	0.00	1.94	29.83	20.47	29.93	34.37	31.74	31.41	-4.19	8.32
F3_A2762	-7.00	6	6	1.53	0.00	1.53	29.83	20.47	29.93	30.88	35.51	35.58	-4.19	6.44
F3_A2762	-7.00	10	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_A2762	-7.00	10	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_A2762	-7.00	10	3	1.52	0.00	1.52	29.83	20.47	29.93	31.28	31.81	34.00	-4.19	6.40
F3_A2762	-7.00	10	4	2.22	0.00	2.22	29.83	20.47	29.93	35.60	35.32	34.21	-4.19	10.18
F3_A2762	-7.00	10	5	1.93	0.00	1.93	29.83	20.47	29.93	34.35	31.74	31.41	-4.19	8.31
F3_A2762	-7.00	10	6	1.52	0.00	1.52	29.83	20.47	29.93	30.87	35.51	35.58	-4.19	6.42
F3_A2762	-7.00	14	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.89	32.09	-4.19	0.87
F3_A2762	-7.00	14	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.23	28.84	28.05	-4.19	-1.17
F3_A2762	-7.00	14	3	1.50	0.00	1.50	29.83	20.47	29.93	31.22	31.76	33.97	-4.19	6.34
F3_A2762	-7.00	14	4	2.22	0.00	2.22	29.83	20.47	29.93	35.55	35.31	34.18	-4.19	10.14

F3_A2762	-7.00	14	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.73	31.41	-4.19	8.30
F3_A2762	-7.00	14	6	1.50	0.00	1.50	29.83	20.47	29.93	30.76	35.51	35.59	-4.19	6.33
F3_A2762	-7.00	18	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.92	32.09	-4.19	0.87
F3_A2762	-7.00	18	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.22	28.84	28.04	-4.19	-1.17
F3_A2762	-7.00	18	3	1.50	0.00	1.50	29.83	20.47	29.93	31.21	31.72	33.95	-4.19	6.32
F3_A2762	-7.00	18	4	2.22	0.00	2.22	29.83	20.47	29.93	35.54	35.31	34.17	-4.19	10.13
F3_A2762	-7.00	18	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.75	31.40	-4.19	8.30
F3_A2762	-7.00	18	6	1.50	0.00	1.50	29.83	20.47	29.93	30.75	35.54	35.58	-4.19	6.32
F3_A2773	-7.00	3	1	2.30	0.00	2.30	29.77	29.28	27.92	32.34	25.50	25.70	-1.75	4.37
F3_A2773	-7.00	3	2	0.85	-1.06	1.91	29.77	29.28	27.92	28.69	23.88	24.05	-1.75	1.81
F3_A2773	-7.00	3	3	3.19	0.00	3.19	29.77	29.28	27.92	35.41	32.74	24.69	-1.75	6.41
F3_A2773	-7.00	3	4	3.57	0.00	3.57	29.77	29.28	27.92	34.29	35.71	27.38	-1.75	7.52
F3_A2773	-7.00	3	5	3.16	0.00	3.16	29.77	29.28	27.92	33.19	36.15	25.93	-1.75	6.35
F3_A2773	-7.00	3	6	4.04	0.00	4.04	29.77	29.28	27.92	38.58	33.90	27.58	-1.75	9.19
F3_A2773	-7.00	7	1	2.27	0.00	2.27	29.77	29.28	27.92	32.28	25.47	25.60	-1.75	4.31
F3_A2773	-7.00	7	2	0.80	-1.13	1.93	29.77	29.28	27.92	28.61	23.83	23.96	-1.75	1.74
F3_A2773	-7.00	7	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.69	24.60	-1.75	6.34
F3_A2773	-7.00	7	4	3.56	0.00	3.56	29.77	29.28	27.92	34.26	35.66	27.30	-1.75	7.47
F3_A2773	-7.00	7	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.13	25.84	-1.75	6.30
F3_A2773	-7.00	7	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.88	27.49	-1.75	9.13
F3_A2773	-7.00	11	1	2.26	0.00	2.26	29.77	29.28	27.92	32.28	25.47	25.55	-1.75	4.29
F3_A2773	-7.00	11	2	0.83	-1.11	1.94	29.77	29.28	27.92	28.61	23.83	24.11	-1.75	1.77
F3_A2773	-7.00	11	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.66	24.60	-1.75	6.34
F3_A2773	-7.00	11	4	3.55	0.00	3.55	29.77	29.28	27.92	34.26	35.65	27.29	-1.75	7.46
F3_A2773	-7.00	11	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.11	25.84	-1.75	6.30
F3_A2773	-7.00	11	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.86	27.49	-1.75	9.13
F3_A2773	-7.00	15	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.46	-1.75	4.15
F3_A2773	-7.00	15	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.54	23.72	24.02	-1.75	1.68
F3_A2773	-7.00	15	3	3.13	0.00	3.13	29.77	29.28	27.92	35.35	32.60	24.50	-1.75	6.27
F3_A2773	-7.00	15	4	3.54	0.00	3.54	29.77	29.28	27.92	34.23	35.60	27.20	-1.75	7.41
F3_A2773	-7.00	15	5	3.13	0.00	3.13	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.26
F3_A2773	-7.00	15	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.76	27.39	-1.75	9.06
F3_A2773	-7.00	19	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.45	-1.75	4.15
F3_A2773	-7.00	19	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.53	23.72	24.01	-1.75	1.68
F3_A2773	-7.00	19	3	3.13	0.00	3.13	29.77	29.28	27.92	35.34	32.59	24.50	-1.75	6.26
F3_A2773	-7.00	19	4	3.53	0.00	3.53	29.77	29.28	27.92	34.22	35.59	27.19	-1.75	7.40
F3_A2773	-7.00	19	5	3.12	0.00	3.12	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.25
F3_A2773	-7.00	19	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.74	27.39	-1.75	9.05
F3_A2784	-7.00	4	1	-0.45	-0.49	0.04	29.82	29.91	20.49	25.54	32.19	34.95	-4.18	1.32
F3_A2784	-7.00	4	2	-1.75	-1.93	0.18	29.82	29.91	20.49	23.53	28.17	28.94	-4.18	-0.88
F3_A2784	-7.00	4	3	-1.74	-1.74	0.00	29.82	29.91	20.49	23.28	34.00	31.84	-4.18	-0.87
F3_A2784	-7.00	4	4	0.39	0.00	0.39	29.82	29.91	20.49	27.31	34.22	35.35	-4.18	3.07
F3_A2784	-7.00	4	5	-1.26	-1.26	0.00	29.82	29.91	20.49	24.13	31.40	31.77	-4.18	-0.11
F3_A2784	-7.00	4	6	-0.93	-0.93	0.00	29.82	29.91	20.49	24.56	35.56	35.54	-4.18	0.45
F3_A2784	-7.00	8	1	-0.50	-0.54	0.04	29.82	29.91	20.49	25.45	32.13	34.95	-4.18	1.23
F3_A2784	-7.00	8	2	-1.81	-1.99	0.18	29.82	29.91	20.49	23.44	28.10	28.93	-4.18	-0.97
F3_A2784	-7.00	8	3	-1.80	-1.80	0.00	29.82	29.91	20.49	23.19	33.97	31.83	-4.18	-0.96
F3_A2784	-7.00	8	4	0.35	0.00	0.35	29.82	29.91	20.49	27.22	34.19	35.35	-4.18	2.99
F3_A2784	-7.00	8	5	-1.31	-1.31	0.00	29.82	29.91	20.49	24.05	31.39	31.77	-4.18	-0.19
F3_A2784	-7.00	8	6	-0.99	-0.99	0.00	29.82	29.91	20.49	24.46	35.55	35.54	-4.18	0.36
F3_A2784	-7.00	12	1	-0.52	-0.56	0.04	29.81	29.91	20.49	25.40	32.13	34.92	-4.19	1.18
F3_A2784	-7.00	12	2	-1.72	-1.91	0.19	29.81	29.91	20.49	23.59	28.10	28.87	-4.19	-0.83
F3_A2784	-7.00	12	3	-1.80	-1.80	0.00	29.81	29.91	20.49	23.19	33.97	31.78	-4.19	-0.96
F3_A2784	-7.00	12	4	0.35	0.00	0.35	29.81	29.91	20.49	27.22	34.19	35.34	-4.19	2.98
F3_A2784	-7.00	12	5	-1.32	-1.32	0.00	29.81	29.91	20.49	24.04	31.39	31.76	-4.19	-0.19
F3_A2784	-7.00	12	6	-0.99	-0.99	0.00	29.81	29.91	20.49	24.46	35.55	35.53	-4.19	0.36
F3_A2784	-7.00	16	1	-0.57	-0.61	0.04	29.82	29.91	20.49	25.30	32.07	34.95	-4.18	1.09
F3_A2784	-7.00	16	2	-1.78	-1.97	0.19	29.82	29.91	20.49	23.50	28.02	28.87	-4.18	-0.92
F3_A2784	-7.00	16	3	-1.86	-1.87	0.01	29.82	29.91	20.49	23.09	33.94	31.74	-4.18	-1.06
F3_A2784	-7.00	16	4	0.31	0.00	0.31	29.82	29.91	20.49	27.13	34.15	35.34	-4.18	2.89
F3_A2784	-7.00	16	5	-1.37	-1.37	0.00	29.82	29.91	20.49	23.95	31.38	31.78	-4.18	-0.28
F3_A2784	-7.00	16	6	-1.04	-1.04	0.00	29.82	29.91	20.49	24.37	35.56	35.57	-4.18	0.26
F3_A2784	-7.00	20	1	0.49	-4.18	4.67	29.81	29.91	20.49	25.30	32.06	28.60	-0.81	0.86
F3_A2784	-7.00	20	2	-1.29	-13.42	12.13	29.81	29.91	20.49	23.49	28.01	22.86	-0.81	-1.44
F3_A2784	-7.00	20	3	-0.95	-12.06	11.11	29.81	29.91	20.49	23.09	33.93	34.60	-0.81	-1.01
F3_A2784	-7.00	20	4	1.87	0.00	1.87	29.81	29.91	20.49	27.12	34.14	34.98	-0.81	2.88
F3_A2784	-7.00	20	5	-0.34	-0.99	0.65	29.81	29.91	20.49	23.95	31.38	33.44	-0.81	-0.25
F3_A2784	-7.00	20	6	0.05	-0.61	0.66	29.81	29.91	20.49	24.36	35.55	35.87	-0.81	0.27
F3_A2728	-7.00	24	1	-1.08	-6.76	5.68	45.84	31.64	47.18	23.09	21.33	28.80	8.61	-1.98
F3_A2728	-7.00	24	2	-2.24	-15.89	13.65	45.84	31.64	47.18	22.15	20.47	23.31	8.61	-3.17
F3_A2728	-7.00	24	3	0.16	-13.57	13.73	45.84	31.64	47.18	25.13	20.02	35.96	8.61	-0.71
F3_A2728	-7.00	24	4	2.84	-1.06	3.90	45.84	31.64	47.18	27.36	24.34	35.01	8.61	2.07
F3_A2728	-7.00	24	5	1.65	-0.06	1.71	45.84	31.64	47.18	26.15	22.89	35.22	8.61	0.83
F3_A2728	-7.00	24	6	3.15	0.00	3.15	45.84	31.64	47.18	27.48	25.17	38.93	8.61	2.40
F3_A2728	-7.00	28	1	-1.01	-6.78	5.77	45.84	31.64	47.18	23.16	21.32	29.25	8.61	-1.92
F3_A2728	-7.00	28	2	-2.19	-15.94	13.75	45.84	31.64	47.18	22.20	20.52	23.40	8.61	-3.12
F3_A2728	-7.00	28	3	0.12	-13.62	13.74	45.84	31.64	47.18	25.10	19.94	35.93	8.61	-0.76
F3_A2728	-7.00	28	4	2.85	-1.08	3.93	45.84	31.64	47.18	27.35	24.41	35.01	8.61	2.08
F3_A2728	-7.00	28	5	1.65	-0.08	1.73	45.84	31.64	47.18	26.15	22.85	35.25	8.61	0.82
F3_A2728	-7.00	28	6	3.15	0.00	3.15	45.84	31.64	47.18	27.49	25.13	39.20	8.61	2.41
F3_A2728	-7.00	32	1	-1.72	-7.05	5.33	45.84	31.64	47.18	22.27	21.30	28.93	8.61	-2.64
F3_A2728	-7.00	32	2	-2.74	-16.06	13.32	45.84	31.64	47.18	21.47	20.51	23.26	8.61	-3.68
F3_A2728	-7.00	32	3	0.07	-13.72	13.79	45.84	31.64	47.18	25.02	19.93	35.89	8.61	-0.81
F3_A2728	-7.00	32	4	2.77	-1.16	3.93	45.84	31.64	47.18	27.24	24.41	34.94	8.61	2.00
F3_A2728	-7.00	32	5	1.56	-0.16	1.72	45.84	31.64	47.18	26.03	22.85	35.19	8.61	0.73
F3_A2728	-7.00	32	6	2.94	0.00	2.94	45.84	31.64	47.18	27.21	25.12	38.99	8.61	2.18
F3_A2728	-7.00	36	1	-1.19	-6.90	5.71	45.84	31.64	47.18	22.96	21.27	28.55	8.61	-2.10
F3_A2728	-7.00	36	2	-2.34	-16.04	13.70	45.84	31.64	47.18	22.03	20.49	23.17	8.61	-3.27
F3_A2728	-7.00	36	3	0.04	-13.72	13.76	45.84	31.64	47.18	25.00	19.91	35.86	8.61	-0.83
F3_A2728	-7.00	36	4	2.76	-1.17	3.93	45.84	31.64	47.18	27.25	24.36	34.89	8.61	1.99
F3_A2728	-7.00	36	5	1.56	-0.16	1.72	45.84	31.64	47.18	26.06	22.80	35.10	8.61	0.74

F3_A2728	-7.00	36	6	3.06	0.00	3.06	45.84	31.64	47.18	27.38	25.08	38.74	8.61	2.31
F3_A2728	-7.00	40	1	-1.94	-5.38	3.44	45.84	31.64	47.18	21.87	21.26		8.61	-2.86
F3_A2728	-7.00	40	2	-2.67	-13.35	10.68	45.84	31.64	47.18	21.13	20.48		8.61	-3.61
F3_A2728	-7.00	40	3	0.03	-10.98	11.01	45.84	31.64	47.18	24.92	19.90		8.61	-0.85
F3_A2728	-7.00	40	4	2.76	0.00	2.76	45.84	31.64	47.18	27.13	24.35		8.61	1.99
F3_A2728	-7.00	40	5	1.53	0.00	1.53	45.84	31.64	47.18	25.92	22.79		8.61	0.70
F3_A2728	-7.00	40	6	2.83	0.00	2.83	45.84	31.64	47.18	27.03	25.07		8.61	2.07
F3_A2722	-7.00	2	1	1.97	0.00	1.97	45.84	31.64	47.18	25.37	34.96	32.22	8.61	1.16
F3_A2722	-7.00	2	2	-0.13	-1.07	0.94	45.84	31.64	47.18	23.38	28.98	28.20	8.61	-1.01
F3_A2722	-7.00	2	3	6.85	0.00	6.85	45.84	31.64	47.18	31.36	31.86	34.03	8.61	6.47
F3_A2722	-7.00	2	4	9.88	0.00	9.88	45.84	31.64	47.18	35.66	35.33	34.25	8.61	10.23
F3_A2722	-7.00	2	5	8.41	0.00	8.41	45.84	31.64	47.18	34.38	31.74	31.43	8.61	8.33
F3_A2722	-7.00	2	6	6.84	0.00	6.84	45.84	31.64	47.18	30.90	35.52	35.59	8.61	6.45
F3_A2722	-7.00	6	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_A2722	-7.00	6	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_A2722	-7.00	6	3	6.81	0.00	6.81	45.84	31.64	47.18	31.31	31.81	34.00	8.61	6.42
F3_A2722	-7.00	6	4	9.85	0.00	9.85	45.84	31.64	47.18	35.62	35.32	34.21	8.61	10.19
F3_A2722	-7.00	6	5	8.40	0.00	8.40	45.84	31.64	47.18	34.37	31.74	31.41	8.61	8.32
F3_A2722	-7.00	6	6	6.82	0.00	6.82	45.84	31.64	47.18	30.88	35.51	35.58	8.61	6.44
F3_A2722	-7.00	10	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_A2722	-7.00	10	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_A2722	-7.00	10	3	6.79	0.00	6.79	45.84	31.64	47.18	31.28	31.81	34.00	8.61	6.40
F3_A2722	-7.00	10	4	9.84	0.00	9.84	45.84	31.64	47.18	35.60	35.32	34.21	8.61	10.18
F3_A2722	-7.00	10	5	8.39	0.00	8.39	45.84	31.64	47.18	34.35	31.74	31.41	8.61	8.31
F3_A2722	-7.00	10	6	6.81	0.00	6.81	45.84	31.64	47.18	30.87	35.51	35.58	8.61	6.42
F3_A2722	-7.00	14	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.89	32.09	8.61	0.87
F3_A2722	-7.00	14	2	-0.28	-1.20	0.92	45.84	31.64	47.18	23.23	28.84	28.05	8.61	-1.17
F3_A2722	-7.00	14	3	6.74	0.00	6.74	45.84	31.64	47.18	31.22	31.76	33.97	8.61	6.34
F3_A2722	-7.00	14	4	9.81	0.00	9.81	45.84	31.64	47.18	35.55	35.31	34.18	8.61	10.14
F3_A2722	-7.00	14	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.73	31.41	8.61	8.30
F3_A2722	-7.00	14	6	6.73	0.00	6.73	45.84	31.64	47.18	30.76	35.51	35.59	8.61	6.33
F3_A2722	-7.00	18	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.92	32.09	8.61	0.87
F3_A2722	-7.00	18	2	-0.29	-1.20	0.91	45.84	31.64	47.18	23.22	28.84	28.04	8.61	-1.17
F3_A2722	-7.00	18	3	6.72	0.00	6.72	45.84	31.64	47.18	31.21	31.72	33.95	8.61	6.32
F3_A2722	-7.00	18	4	9.81	0.00	9.81	45.84	31.64	47.18	35.54	35.31	34.17	8.61	10.13
F3_A2722	-7.00	18	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.75	31.40	8.61	8.30
F3_A2722	-7.00	18	6	6.72	0.00	6.72	45.84	31.64	47.18	30.75	35.54	35.58	8.61	6.32
F3_A2788	-7.00	24	1	-2.50	-7.05	4.55	29.82	29.91	20.49	23.09	21.33	28.80	-4.18	-1.98
F3_A2788	-7.00	24	2	-3.36	-15.93	12.57	29.82	29.91	20.49	22.15	20.47	23.31	-4.18	-3.17
F3_A2788	-7.00	24	3	-1.64	-13.63	11.99	29.82	29.91	20.49	25.13	20.02	35.96	-4.18	-0.71
F3_A2788	-7.00	24	4	-0.07	-2.05	1.98	29.82	29.91	20.49	27.36	24.34	35.01	-4.18	2.07
F3_A2788	-7.00	24	5	-0.72	-1.27	0.55	29.82	29.91	20.49	26.15	22.89	35.22	-4.18	0.83
F3_A2788	-7.00	24	6	0.09	-0.44	0.53	29.82	29.91	20.49	27.48	25.17	38.93	-4.18	2.40
F3_A2788	-7.00	28	1	-2.45	-7.07	4.62	29.82	29.91	20.49	23.16	21.32	29.25	-4.18	-1.92
F3_A2788	-7.00	28	2	-3.33	-15.98	12.65	29.82	29.91	20.49	22.20	20.52	23.40	-4.18	-3.12
F3_A2788	-7.00	28	3	-1.67	-13.68	12.01	29.82	29.91	20.49	25.10	19.94	35.93	-4.18	-0.76
F3_A2788	-7.00	28	4	-0.06	-2.06	2.00	29.82	29.91	20.49	27.35	24.41	35.01	-4.18	2.08
F3_A2788	-7.00	28	5	-0.72	-1.29	0.57	29.82	29.91	20.49	26.15	22.85	35.25	-4.18	0.82
F3_A2788	-7.00	28	6	0.09	-0.44	0.53	29.82	29.91	20.49	27.49	25.13	39.20	-4.18	2.41
F3_A2788	-7.00	32	1	-2.97	-7.32	4.35	29.81	29.91	20.49	22.27	21.30	28.93	-4.19	-2.64
F3_A2788	-7.00	32	2	-3.76	-16.09	12.33	29.81	29.91	20.49	21.47	20.51	23.26	-4.19	-3.68
F3_A2788	-7.00	32	3	-1.70	-13.77	12.07	29.81	29.91	20.49	25.02	19.93	35.89	-4.19	-0.81
F3_A2788	-7.00	32	4	-0.11	-2.13	2.02	29.81	29.91	20.49	27.24	24.41	34.94	-4.19	2.00
F3_A2788	-7.00	32	5	-0.77	-1.35	0.58	29.81	29.91	20.49	26.03	22.85	35.19	-4.19	0.73
F3_A2788	-7.00	32	6	-0.02	-0.55	0.53	29.81	29.91	20.49	27.21	25.12	38.99	-4.19	2.18
F3_A2788	-7.00	36	1	-2.58	-7.18	4.60	29.82	29.91	20.49	22.96	21.27	28.55	-4.18	-2.10
F3_A2788	-7.00	36	2	-3.44	-16.08	12.64	29.82	29.91	20.49	22.03	20.49	23.17	-4.18	-3.27
F3_A2788	-7.00	36	3	-1.72	-13.78	12.06	29.82	29.91	20.49	25.00	19.91	35.86	-4.18	-0.83
F3_A2788	-7.00	36	4	-0.11	-2.13	2.02	29.82	29.91	20.49	27.25	24.36	34.89	-4.18	1.99
F3_A2788	-7.00	36	5	-0.77	-1.35	0.58	29.82	29.91	20.49	26.06	22.80	35.10	-4.18	0.74
F3_A2788	-7.00	36	6	0.04	-0.50	0.54	29.82	29.91	20.49	27.38	25.08	38.74	-4.18	2.31
F3_A2788	-7.00	40	1	-2.49	-5.43	2.94	29.81	29.91	20.49	21.87	21.26		-0.81	-2.86
F3_A2788	-7.00	40	2	-3.15	-13.36	10.21	29.81	29.91	20.49	21.13	20.48		-0.81	-3.61
F3_A2788	-7.00	40	3	-0.82	-11.00	10.18	29.81	29.91	20.49	24.92	19.90		-0.81	-0.85
F3_A2788	-7.00	40	4	1.29	-0.14	1.43	29.81	29.91	20.49	27.13	24.35		-0.81	1.99
F3_A2788	-7.00	40	5	0.38	0.00	0.38	29.81	29.91	20.49	25.92	22.79		-0.81	0.70
F3_A2788	-7.00	40	6	1.34	0.00	1.34	29.81	29.91	20.49	27.03	25.07		-0.81	2.07
F3_A3351	-7.00	1	1	4.11	0.00	4.11	32.24	25.57	30.00	35.11		25.53	-0.77	7.24
F3_A3351	-7.00	1	2	2.28	0.00	2.28	32.24	25.57	30.00	29.49		23.90	-0.77	3.52
F3_A3351	-7.00	1	3	4.57	0.00	4.57	32.24	25.57	30.00	33.27		32.77	-0.77	8.56
F3_A3351	-7.00	1	4	5.17	0.00	5.17	32.24	25.57	30.00	35.41		35.74	-0.77	10.81
F3_A3351	-7.00	1	5	4.76	0.00	4.76	32.24	25.57	30.00	33.54		36.17	-0.77	9.18
F3_A3351	-7.00	1	6	5.54	0.00	5.54	32.24	25.57	30.00	38.54		33.92	-0.77	12.90
F3_A3351	-7.00	5	1	3.65	0.00	3.65	32.24	28.60	30.00	35.08	25.67	25.50	0.11	5.26
F3_A3351	-7.00	5	2	1.69	0.00	1.69	32.24	28.60	30.00	29.43	24.02	23.86	0.11	2.16
F3_A3351	-7.00	5	3	3.83	0.00	3.83	32.24	28.60	30.00	33.22	24.66	32.72	0.11	5.58
F3_A3351	-7.00	5	4	4.97	0.00	4.97	32.24	28.60	30.00	35.40	27.36	35.69	0.11	8.06
F3_A3351	-7.00	5	5	4.30	0.00	4.30	32.24	28.60	30.00	33.53	25.90	36.16	0.11	6.51
F3_A3351	-7.00	5	6	5.37	0.00	5.37	32.24	28.60	30.00	38.54	27.55	33.91	0.11	9.16
F3_A3351	-7.00	9	1	3.63	0.00	3.63	32.24	28.60	30.00	35.08	25.58	25.50	0.11	5.22
F3_A3351	-7.00	9	2	1.68	0.00	1.68	32.24	28.60	30.00	29.42	23.93	23.86	0.11	2.14
F3_A3351	-7.00	9	3	3.80	0.00	3.80	32.24	28.60	30.00	33.22	24.57	32.69	0.11	5.52
F3_A3351	-7.00	9	4	4.95	0.00	4.95	32.24	28.60	30.00	35.40	27.27	35.68	0.11	8.02
F3_A3351	-7.00	9	5	4.28	0.00	4.28	32.24	28.60	30.00	33.53	25.81	36.14	0.11	6.47
F3_A3351	-7.00	9	6	5.35	0.00	5.35	32.24	28.60	30.00	38.53	27.46	33.89	0.11	9.10
F3_A3351	-7.00	13	1	3.56	0.00	3.56	32.24	28.60	29.99	35.05	25.52	25.23	0.11	5.09
F3_A3351	-7.00	13	2	1.66	0.00	1.66	32.24	28.60	29.99	29.36	24.08	23.75	0.11	2.11
F3_A3351	-7.00	13	3	3.79	0.00	3.79	32.24	28.60	29.99	33.17	24.57	32.63	0.11	5.50
F3_A3351	-7.00	13	4	4.95	0.00	4.95	32.24	28.60	29.99	35.39	27.26	35.63	0.11	8.01
F3_A3351	-7.00	13	5	4.28	0.00	4.28	32.24	28.60	29.99	33.53	25.81	36.14	0.11	6.46
F3_A3351	-7.00	13	6	5.34	0.00	5.34	32.24	28.60	29.99	38.53	27.46	33.78	0.11	9.09

F3_A3351	-7.00	17	1	3.55	0.00	3.55	32.24	28.60	29.99	35.07	25.43	25.23	0.11	5.06
F3_A3351	-7.00	17	2	1.64	0.00	1.64	32.24	28.60	29.99	29.36	23.99	23.74	0.11	2.09
F3_A3351	-7.00	17	3	3.75	0.00	3.75	32.24	28.60	29.99	33.13	24.47	32.62	0.11	5.43
F3_A3351	-7.00	17	4	4.93	0.00	4.93	32.24	28.60	29.99	35.39	27.18	35.62	0.11	7.96
F3_A3351	-7.00	17	5	4.26	0.00	4.26	32.24	28.60	29.99	33.54	25.72	36.14	0.11	6.43
F3_A3351	-7.00	17	6	5.32	0.00	5.32	32.24	28.60	29.99	38.56	27.36	33.77	0.11	9.04
F3_A3362	-7.00	2	1	-0.54	-0.57	0.03	29.83	20.47	29.93	25.37	34.96	32.22	-4.19	1.16
F3_A3362	-7.00	2	2	-1.84	-2.05	0.21	29.83	20.47	29.93	23.38	28.98	28.20	-4.19	-1.01
F3_A3362	-7.00	2	3	1.53	0.00	1.53	29.83	20.47	29.93	31.36	31.86	34.03	-4.19	6.47
F3_A3362	-7.00	2	4	2.23	0.00	2.23	29.83	20.47	29.93	35.66	35.33	34.25	-4.19	10.23
F3_A3362	-7.00	2	5	1.94	0.00	1.94	29.83	20.47	29.93	34.38	31.74	31.43	-4.19	8.33
F3_A3362	-7.00	2	6	1.53	0.00	1.53	29.83	20.47	29.93	30.90	35.52	35.59	-4.19	6.45
F3_A3362	-7.00	6	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_A3362	-7.00	6	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_A3362	-7.00	6	3	1.52	0.00	1.52	29.83	20.47	29.93	31.31	31.81	34.00	-4.19	6.42
F3_A3362	-7.00	6	4	2.22	0.00	2.22	29.83	20.47	29.93	35.62	35.32	34.21	-4.19	10.19
F3_A3362	-7.00	6	5	1.94	0.00	1.94	29.83	20.47	29.93	34.37	31.74	31.41	-4.19	8.32
F3_A3362	-7.00	6	6	1.53	0.00	1.53	29.83	20.47	29.93	30.88	35.51	35.58	-4.19	6.44
F3_A3362	-7.00	10	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_A3362	-7.00	10	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_A3362	-7.00	10	3	1.52	0.00	1.52	29.83	20.47	29.93	31.28	31.81	34.00	-4.19	6.40
F3_A3362	-7.00	10	4	2.22	0.00	2.22	29.83	20.47	29.93	35.60	35.32	34.21	-4.19	10.18
F3_A3362	-7.00	10	5	1.93	0.00	1.93	29.83	20.47	29.93	34.35	31.74	31.41	-4.19	8.31
F3_A3362	-7.00	10	6	1.52	0.00	1.52	29.83	20.47	29.93	30.87	35.51	35.58	-4.19	6.42
F3_A3362	-7.00	14	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.89	32.09	-4.19	0.87
F3_A3362	-7.00	14	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.23	28.84	28.05	-4.19	-1.17
F3_A3362	-7.00	14	3	1.50	0.00	1.50	29.83	20.47	29.93	31.22	31.76	33.97	-4.19	6.34
F3_A3362	-7.00	14	4	2.22	0.00	2.22	29.83	20.47	29.93	35.55	35.31	34.18	-4.19	10.14
F3_A3362	-7.00	14	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.73	31.41	-4.19	8.30
F3_A3362	-7.00	14	6	1.50	0.00	1.50	29.83	20.47	29.93	30.76	35.51	35.59	-4.19	6.33
F3_A3362	-7.00	18	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.92	32.09	-4.19	0.87
F3_A3362	-7.00	18	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.22	28.84	28.04	-4.19	-1.17
F3_A3362	-7.00	18	3	1.50	0.00	1.50	29.83	20.47	29.93	31.21	31.72	33.95	-4.19	6.32
F3_A3362	-7.00	18	4	2.22	0.00	2.22	29.83	20.47	29.93	35.54	35.31	34.17	-4.19	10.13
F3_A3362	-7.00	18	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.75	31.40	-4.19	8.30
F3_A3362	-7.00	18	6	1.50	0.00	1.50	29.83	20.47	29.93	30.75	35.54	35.58	-4.19	6.32
F3_A3373	-7.00	3	1	2.30	0.00	2.30	29.77	29.28	27.92	32.34	25.50	25.70	-1.75	4.37
F3_A3373	-7.00	3	2	0.85	-1.06	1.91	29.77	29.28	27.92	28.69	23.88	24.05	-1.75	1.81
F3_A3373	-7.00	3	3	3.19	0.00	3.19	29.77	29.28	27.92	35.41	32.74	24.69	-1.75	6.41
F3_A3373	-7.00	3	4	3.57	0.00	3.57	29.77	29.28	27.92	34.29	35.71	27.38	-1.75	7.52
F3_A3373	-7.00	3	5	3.16	0.00	3.16	29.77	29.28	27.92	33.19	36.15	25.93	-1.75	6.35
F3_A3373	-7.00	3	6	4.04	0.00	4.04	29.77	29.28	27.92	38.58	33.90	27.58	-1.75	9.19
F3_A3373	-7.00	7	1	2.27	0.00	2.27	29.77	29.28	27.92	32.28	25.47	25.60	-1.75	4.31
F3_A3373	-7.00	7	2	0.80	-1.13	1.93	29.77	29.28	27.92	28.61	23.83	23.96	-1.75	1.74
F3_A3373	-7.00	7	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.69	24.60	-1.75	6.34
F3_A3373	-7.00	7	4	3.56	0.00	3.56	29.77	29.28	27.92	34.26	35.66	27.30	-1.75	7.47
F3_A3373	-7.00	7	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.13	25.84	-1.75	6.30
F3_A3373	-7.00	7	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.88	27.49	-1.75	9.13
F3_A3373	-7.00	11	1	2.26	0.00	2.26	29.77	29.28	27.92	32.28	25.47	25.55	-1.75	4.29
F3_A3373	-7.00	11	2	0.83	-1.11	1.94	29.77	29.28	27.92	28.61	23.83	24.11	-1.75	1.77
F3_A3373	-7.00	11	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.66	24.60	-1.75	6.34
F3_A3373	-7.00	11	4	3.55	0.00	3.55	29.77	29.28	27.92	34.26	35.65	27.29	-1.75	7.46
F3_A3373	-7.00	11	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.11	25.84	-1.75	6.30
F3_A3373	-7.00	11	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.86	27.49	-1.75	9.13
F3_A3373	-7.00	15	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.46	-1.75	4.15
F3_A3373	-7.00	15	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.54	23.72	24.02	-1.75	1.68
F3_A3373	-7.00	15	3	3.13	0.00	3.13	29.77	29.28	27.92	35.35	32.60	24.50	-1.75	6.27
F3_A3373	-7.00	15	4	3.54	0.00	3.54	29.77	29.28	27.92	34.23	35.60	27.20	-1.75	7.41
F3_A3373	-7.00	15	5	3.13	0.00	3.13	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.26
F3_A3373	-7.00	15	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.76	27.39	-1.75	9.06
F3_A3373	-7.00	19	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.45	-1.75	4.15
F3_A3373	-7.00	19	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.53	23.72	24.01	-1.75	1.68
F3_A3373	-7.00	19	3	3.13	0.00	3.13	29.77	29.28	27.92	35.34	32.59	24.50	-1.75	6.26
F3_A3373	-7.00	19	4	3.53	0.00	3.53	29.77	29.28	27.92	34.22	35.59	27.19	-1.75	7.40
F3_A3373	-7.00	19	5	3.12	0.00	3.12	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.25
F3_A3373	-7.00	19	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.74	27.39	-1.75	9.05
F3_A3384	-7.00	4	1	-0.45	-0.49	0.04	29.82	29.91	20.49	25.54	32.19	34.95	-4.18	1.32
F3_A3384	-7.00	4	2	-1.75	-1.93	0.18	29.82	29.91	20.49	23.53	28.17	28.94	-4.18	-0.88
F3_A3384	-7.00	4	3	-1.74	-1.74	0.00	29.82	29.91	20.49	23.28	34.00	31.84	-4.18	-0.87
F3_A3384	-7.00	4	4	0.39	0.00	0.39	29.82	29.91	20.49	27.31	34.22	35.35	-4.18	3.07
F3_A3384	-7.00	4	5	-1.26	-1.26	0.00	29.82	29.91	20.49	24.13	31.40	31.77	-4.18	-0.11
F3_A3384	-7.00	4	6	-0.93	-0.93	0.00	29.82	29.91	20.49	24.56	35.56	35.54	-4.18	0.45
F3_A3384	-7.00	8	1	-0.50	-0.54	0.04	29.82	29.91	20.49	25.45	32.13	34.95	-4.18	1.23
F3_A3384	-7.00	8	2	-1.81	-1.99	0.18	29.82	29.91	20.49	23.44	28.10	28.93	-4.18	-0.97
F3_A3384	-7.00	8	3	-1.80	-1.80	0.00	29.82	29.91	20.49	23.19	33.97	31.83	-4.18	-0.96
F3_A3384	-7.00	8	4	0.35	0.00	0.35	29.82	29.91	20.49	27.22	34.19	35.35	-4.18	2.99
F3_A3384	-7.00	8	5	-1.31	-1.31	0.00	29.82	29.91	20.49	24.05	31.39	31.77	-4.18	-0.19
F3_A3384	-7.00	8	6	-0.99	-0.99	0.00	29.82	29.91	20.49	24.46	35.55	35.54	-4.18	0.36
F3_A3384	-7.00	12	1	-0.52	-0.56	0.04	29.81	29.91	20.49	25.40	32.13	34.92	-4.19	1.18
F3_A3384	-7.00	12	2	-1.72	-1.91	0.19	29.81	29.91	20.49	23.59	28.10	28.87	-4.19	-0.83
F3_A3384	-7.00	12	3	-1.80	-1.80	0.00	29.81	29.91	20.49	23.19	33.97	31.78	-4.19	-0.96
F3_A3384	-7.00	12	4	0.35	0.00	0.35	29.81	29.91	20.49	27.22	34.19	35.34	-4.19	2.98
F3_A3384	-7.00	12	5	-1.32	-1.32	0.00	29.81	29.91	20.49	24.04	31.39	31.76	-4.19	-0.19
F3_A3384	-7.00	12	6	-0.99	-0.99	0.00	29.81	29.91	20.49	24.46	35.55	35.53	-4.19	0.36
F3_A3384	-7.00	16	1	-0.57	-0.61	0.04	29.82	29.91	20.49	25.30	32.07	34.95	-4.18	1.09
F3_A3384	-7.00	16	2	-1.78	-1.97	0.19	29.82	29.91	20.49	23.50	28.02	28.87	-4.18	-0.92
F3_A3384	-7.00	16	3	-1.86	-1.87	0.01	29.82	29.91	20.49	23.09	33.94	31.74	-4.18	-1.06
F3_A3384	-7.00	16	4	0.31	0.00	0.31	29.82	29.91	20.49	27.13	34.15	35.34	-4.18	2.89
F3_A3384	-7.00	16	5	-1.37	-1.37	0.00	29.82	29.91	20.49	23.95	31.38	31.78	-4.18	-0.28
F3_A3384	-7.00	16	6	-1.04	-1.04	0.00	29.82	29.91	20.49	24.37	35.56	35.57	-4.18	0.26
F3_A3384	-7.00	20	1	0.49	-4.18	4.67	29.81	29.91	20.49	25.30	32.06	28.60	-0.81	0.86

F3_A3384	-7.00	20	2	-1.29	-13.42	12.13	29.81	29.91	20.49	23.49	28.01	22.86	-0.81	-1.44
F3_A3384	-7.00	20	3	-0.95	-12.06	11.11	29.81	29.91	20.49	23.09	33.93	34.60	-0.81	-1.01
F3_A3384	-7.00	20	4	1.87	0.00	1.87	29.81	29.91	20.49	27.12	34.14	34.98	-0.81	2.88
F3_A3384	-7.00	20	5	-0.34	-0.99	0.65	29.81	29.91	20.49	23.95	31.38	33.44	-0.81	-0.25
F3_A3384	-7.00	20	6	0.05	-0.61	0.66	29.81	29.91	20.49	24.36	35.55	35.87	-0.81	0.27
F3_A3328	-7.00	24	1	-1.08	-6.76	5.68	45.84	31.64	47.18	23.09	21.33	28.80	8.61	-1.98
F3_A3328	-7.00	24	2	-2.24	-15.89	13.65	45.84	31.64	47.18	22.15	20.47	23.31	8.61	-3.17
F3_A3328	-7.00	24	3	0.16	-13.57	13.73	45.84	31.64	47.18	25.13	20.02	35.96	8.61	-0.71
F3_A3328	-7.00	24	4	2.84	-1.06	3.90	45.84	31.64	47.18	27.36	24.34	35.01	8.61	2.07
F3_A3328	-7.00	24	5	1.65	-0.06	1.71	45.84	31.64	47.18	26.15	22.89	35.22	8.61	0.83
F3_A3328	-7.00	24	6	3.15	0.00	3.15	45.84	31.64	47.18	27.48	25.17	38.93	8.61	2.40
F3_A3328	-7.00	28	1	-1.01	-6.78	5.77	45.84	31.64	47.18	23.16	21.32	29.25	8.61	-1.92
F3_A3328	-7.00	28	2	-2.19	-15.94	13.75	45.84	31.64	47.18	22.20	20.52	23.40	8.61	-3.12
F3_A3328	-7.00	28	3	0.12	-13.62	13.74	45.84	31.64	47.18	25.10	19.94	35.93	8.61	-0.76
F3_A3328	-7.00	28	4	2.85	-1.08	3.93	45.84	31.64	47.18	27.35	24.41	35.01	8.61	2.08
F3_A3328	-7.00	28	5	1.65	-0.08	1.73	45.84	31.64	47.18	26.15	22.85	35.25	8.61	0.82
F3_A3328	-7.00	28	6	3.15	0.00	3.15	45.84	31.64	47.18	27.49	25.13	39.20	8.61	2.41
F3_A3328	-7.00	32	1	-1.72	-7.05	5.33	45.84	31.64	47.18	22.27	21.30	28.93	8.61	-2.64
F3_A3328	-7.00	32	2	-2.74	-16.06	13.32	45.84	31.64	47.18	21.47	20.51	23.26	8.61	-3.68
F3_A3328	-7.00	32	3	0.07	-13.72	13.79	45.84	31.64	47.18	25.02	19.93	35.89	8.61	-0.81
F3_A3328	-7.00	32	4	2.76	-1.16	3.92	45.84	31.64	47.18	27.24	24.41	34.94	8.61	2.00
F3_A3328	-7.00	32	5	1.56	-0.16	1.72	45.84	31.64	47.18	26.03	22.85	35.19	8.61	0.73
F3_A3328	-7.00	32	6	2.94	0.00	2.94	45.84	31.64	47.18	27.21	25.12	38.99	8.61	2.18
F3_A3328	-7.00	36	1	-1.19	-6.90	5.71	45.84	31.64	47.18	22.96	21.27	28.55	8.61	-2.10
F3_A3328	-7.00	36	2	-2.34	-16.04	13.70	45.84	31.64	47.18	22.03	20.49	23.17	8.61	-3.27
F3_A3328	-7.00	36	3	0.04	-13.72	13.76	45.84	31.64	47.18	25.00	19.91	35.86	8.61	-0.83
F3_A3328	-7.00	36	4	2.76	-1.17	3.93	45.84	31.64	47.18	27.25	24.36	34.89	8.61	1.99
F3_A3328	-7.00	36	5	1.56	-0.16	1.72	45.84	31.64	47.18	26.06	22.80	35.10	8.61	0.74
F3_A3328	-7.00	36	6	3.06	0.00	3.06	45.84	31.64	47.18	27.38	25.08	38.74	8.61	2.31
F3_A3328	-7.00	40	1	-1.94	-5.38	3.44	45.84	31.64	47.18	21.87	21.26		8.61	-2.86
F3_A3328	-7.00	40	2	-2.67	-13.35	10.68	45.84	31.64	47.18	21.13	20.48		8.61	-3.61
F3_A3328	-7.00	40	3	0.03	-10.98	11.01	45.84	31.64	47.18	24.92	19.90		8.61	-0.85
F3_A3328	-7.00	40	4	2.76	0.00	2.76	45.84	31.64	47.18	27.13	24.35		8.61	1.99
F3_A3328	-7.00	40	5	1.53	0.00	1.53	45.84	31.64	47.18	25.92	22.79		8.61	0.70
F3_A3328	-7.00	40	6	2.83	0.00	2.83	45.84	31.64	47.18	27.03	25.07		8.61	2.07
F3_A3322	-7.00	2	1	1.97	0.00	1.97	45.84	31.64	47.18	25.37	34.96	32.22	8.61	1.16
F3_A3322	-7.00	2	2	-0.13	-1.07	0.94	45.84	31.64	47.18	23.38	28.98	28.20	8.61	-1.01
F3_A3322	-7.00	2	3	6.85	0.00	6.85	45.84	31.64	47.18	31.36	31.86	34.03	8.61	6.47
F3_A3322	-7.00	2	4	9.88	0.00	9.88	45.84	31.64	47.18	35.66	35.33	34.25	8.61	10.23
F3_A3322	-7.00	2	5	8.41	0.00	8.41	45.84	31.64	47.18	34.38	31.74	31.43	8.61	8.33
F3_A3322	-7.00	2	6	6.84	0.00	6.84	45.84	31.64	47.18	30.90	35.52	35.59	8.61	6.45
F3_A3322	-7.00	6	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_A3322	-7.00	6	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_A3322	-7.00	6	3	6.81	0.00	6.81	45.84	31.64	47.18	31.31	31.81	34.00	8.61	6.42
F3_A3322	-7.00	6	4	9.85	0.00	9.85	45.84	31.64	47.18	35.62	35.32	34.21	8.61	10.19
F3_A3322	-7.00	6	5	8.40	0.00	8.40	45.84	31.64	47.18	34.37	31.74	31.41	8.61	8.32
F3_A3322	-7.00	6	6	6.82	0.00	6.82	45.84	31.64	47.18	30.88	35.51	35.58	8.61	6.44
F3_A3322	-7.00	10	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_A3322	-7.00	10	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_A3322	-7.00	10	3	6.79	0.00	6.79	45.84	31.64	47.18	31.28	31.81	34.00	8.61	6.40
F3_A3322	-7.00	10	4	9.84	0.00	9.84	45.84	31.64	47.18	35.60	35.32	34.21	8.61	10.18
F3_A3322	-7.00	10	5	8.39	0.00	8.39	45.84	31.64	47.18	34.35	31.74	31.41	8.61	8.31
F3_A3322	-7.00	10	6	6.81	0.00	6.81	45.84	31.64	47.18	30.87	35.51	35.58	8.61	6.42
F3_A3322	-7.00	14	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.89	32.09	8.61	0.87
F3_A3322	-7.00	14	2	-0.28	-1.20	0.92	45.84	31.64	47.18	23.23	28.84	28.05	8.61	-1.17
F3_A3322	-7.00	14	3	6.74	0.00	6.74	45.84	31.64	47.18	31.22	31.76	33.97	8.61	6.34
F3_A3322	-7.00	14	4	9.81	0.00	9.81	45.84	31.64	47.18	35.55	35.31	34.18	8.61	10.14
F3_A3322	-7.00	14	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.73	31.41	8.61	8.30
F3_A3322	-7.00	14	6	6.73	0.00	6.73	45.84	31.64	47.18	30.76	35.51	35.59	8.61	6.33
F3_A3322	-7.00	18	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.92	32.09	8.61	0.87
F3_A3322	-7.00	18	2	-0.29	-1.20	0.91	45.84	31.64	47.18	23.22	28.84	28.04	8.61	-1.17
F3_A3322	-7.00	18	3	6.72	0.00	6.72	45.84	31.64	47.18	31.21	31.72	33.95	8.61	6.32
F3_A3322	-7.00	18	4	9.81	0.00	9.81	45.84	31.64	47.18	35.54	35.31	34.17	8.61	10.13
F3_A3322	-7.00	18	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.75	31.40	8.61	8.30
F3_A3322	-7.00	18	6	6.72	0.00	6.72	45.84	31.64	47.18	30.75	35.54	35.58	8.61	6.32
F3_A3388	-7.00	24	1	-2.50	-7.05	4.55	29.82	29.91	20.49	23.09	21.33	28.80	-4.18	-1.98
F3_A3388	-7.00	24	2	-3.36	-15.93	12.57	29.82	29.91	20.49	22.15	20.47	23.31	-4.18	-3.17
F3_A3388	-7.00	24	3	-1.64	-13.63	11.99	29.82	29.91	20.49	25.13	20.02	35.96	-4.18	-0.71
F3_A3388	-7.00	24	4	-0.07	-2.05	1.98	29.82	29.91	20.49	27.36	24.34	35.01	-4.18	2.07
F3_A3388	-7.00	24	5	-0.72	-1.27	0.55	29.82	29.91	20.49	26.15	22.89	35.22	-4.18	0.83
F3_A3388	-7.00	24	6	0.09	-0.44	0.53	29.82	29.91	20.49	27.48	25.17	38.93	-4.18	2.40
F3_A3388	-7.00	28	1	-2.45	-7.07	4.62	29.82	29.91	20.49	23.16	21.32	29.25	-4.18	-1.92
F3_A3388	-7.00	28	2	-3.33	-15.98	12.65	29.82	29.91	20.49	22.20	20.52	23.40	-4.18	-3.12
F3_A3388	-7.00	28	3	-1.67	-13.68	12.01	29.82	29.91	20.49	25.10	19.94	35.93	-4.18	-0.76
F3_A3388	-7.00	28	4	-0.06	-2.06	2.00	29.82	29.91	20.49	27.35	24.41	35.01	-4.18	2.08
F3_A3388	-7.00	28	5	-0.72	-1.29	0.57	29.82	29.91	20.49	26.15	22.85	35.25	-4.18	0.82
F3_A3388	-7.00	28	6	0.09	-0.44	0.53	29.82	29.91	20.49	27.49	25.13	39.20	-4.18	2.41
F3_A3388	-7.00	32	1	-2.97	-7.32	4.35	29.81	29.91	20.49	22.27	21.30	28.93	-4.19	-2.64
F3_A3388	-7.00	32	2	-3.76	-16.09	12.33	29.81	29.91	20.49	21.47	20.51	23.26	-4.19	-3.68
F3_A3388	-7.00	32	3	-1.70	-13.77	12.07	29.81	29.91	20.49	25.02	19.93	35.89	-4.19	-0.81
F3_A3388	-7.00	32	4	-0.11	-2.13	2.02	29.81	29.91	20.49	27.24	24.41	34.94	-4.19	2.00
F3_A3388	-7.00	32	5	-0.77	-1.35	0.58	29.81	29.91	20.49	26.03	22.85	35.19	-4.19	0.73
F3_A3388	-7.00	32	6	-0.02	-0.55	0.53	29.81	29.91	20.49	27.21	25.12	38.99	-4.19	2.18
F3_A3388	-7.00	36	1	-2.58	-7.18	4.60	29.82	29.91	20.49	22.96	21.27	28.55	-4.18	-2.10
F3_A3388	-7.00	36	2	-3.44	-16.08	12.64	29.82	29.91	20.49	22.03	20.49	23.17	-4.18	-3.27
F3_A3388	-7.00	36	3	-1.72	-13.78	12.06	29.82	29.91	20.49	25.00	19.91	35.86	-4.18	-0.83
F3_A3388	-7.00	36	4	-0.11	-2.13	2.02	29.82	29.91	20.49	27.25	24.36	34.89	-4.18	1.99
F3_A3388	-7.00	36	5	-0.77	-1.35	0.58	29.82	29.91	20.49	26.06	22.80	35.10	-4.18	0.74
F3_A3388	-7.00	36	6	0.04	-0.50	0.54	29.82	29.91	20.49	27.38	25.08	38.74	-4.18	2.31
F3_A3388	-7.00	40	1	-2.49	-5.43	2.94	29.81	29.91	20.49	21.87	21.26		-0.81	-2.86
F3_A3388	-7.00	40	2	-3.15	-13.36	10.21	29.81	29.91	20.49	21.13	20.48		-0.81	-3.61

F3_A3388	-7.00	40	3	-0.82	-11.00	10.18	29.81	29.91	20.49	24.92	19.90		-0.81	-0.85
F3_A3388	-7.00	40	4	1.29	-0.14	1.43	29.81	29.91	20.49	27.13	24.35		-0.81	1.99
F3_A3388	-7.00	40	5	0.38	0.00	0.38	29.81	29.91	20.49	25.92	22.79		-0.81	0.70
F3_A3388	-7.00	40	6	1.34	0.00	1.34	29.81	29.91	20.49	27.03	25.07		-0.81	2.07
F3_D2751	-7.00	1	1	-2.10	-2.09	-0.01	24.34	17.67	22.10	35.11		25.53	-8.67	7.24
F3_D2751	-7.00	1	2	-2.61	-2.58	-0.03	24.34	17.67	22.10	29.49		23.90	-8.67	3.52
F3_D2751	-7.00	1	3	-1.99	-1.98	-0.01	24.34	17.67	22.10	33.27		32.77	-8.67	8.56
F3_D2751	-7.00	1	4	-1.86	-1.86	0.00	24.34	17.67	22.10	35.41		35.74	-8.67	10.81
F3_D2751	-7.00	1	5	-1.95	-1.95	0.00	24.34	17.67	22.10	33.54		36.17	-8.67	9.18
F3_D2751	-7.00	1	6	-1.79	-1.79	0.00	24.34	17.67	22.10	38.54		33.92	-8.67	12.90
F3_D2751	-7.00	5	1	3.65	0.00	3.65	32.24	28.60	30.00	35.08	25.67	25.50	0.11	5.26
F3_D2751	-7.00	5	2	1.69	0.00	1.69	32.24	28.60	30.00	29.43	24.02	23.86	0.11	2.16
F3_D2751	-7.00	5	3	3.83	0.00	3.83	32.24	28.60	30.00	33.22	24.66	32.72	0.11	5.58
F3_D2751	-7.00	5	4	4.97	0.00	4.97	32.24	28.60	30.00	35.40	27.36	35.69	0.11	8.06
F3_D2751	-7.00	5	5	4.30	0.00	4.30	32.24	28.60	30.00	33.53	25.90	36.16	0.11	6.51
F3_D2751	-7.00	5	6	5.37	0.00	5.37	32.24	28.60	30.00	38.54	27.55	33.91	0.11	9.16
F3_D2751	-7.00	9	1	3.63	0.00	3.63	32.24	28.60	30.00	35.08	25.58	25.50	0.11	5.22
F3_D2751	-7.00	9	2	1.68	0.00	1.68	32.24	28.60	30.00	29.42	23.93	23.86	0.11	2.14
F3_D2751	-7.00	9	3	3.80	0.00	3.80	32.24	28.60	30.00	33.22	24.57	32.69	0.11	5.52
F3_D2751	-7.00	9	4	4.95	0.00	4.95	32.24	28.60	30.00	35.40	27.27	35.68	0.11	8.02
F3_D2751	-7.00	9	5	4.28	0.00	4.28	32.24	28.60	30.00	33.53	25.81	36.14	0.11	6.47
F3_D2751	-7.00	9	6	5.35	0.00	5.35	32.24	28.60	30.00	38.53	27.46	33.89	0.11	9.10
F3_D2751	-7.00	13	1	3.56	0.00	3.56	32.24	28.60	29.99	35.05	25.52	25.23	0.11	5.09
F3_D2751	-7.00	13	2	1.66	0.00	1.66	32.24	28.60	29.99	29.36	24.08	23.75	0.11	2.11
F3_D2751	-7.00	13	3	3.79	0.00	3.79	32.24	28.60	29.99	33.17	24.57	32.63	0.11	5.50
F3_D2751	-7.00	13	4	4.95	0.00	4.95	32.24	28.60	29.99	35.39	27.26	35.63	0.11	8.01
F3_D2751	-7.00	13	5	4.28	0.00	4.28	32.24	28.60	29.99	33.53	25.81	36.14	0.11	6.46
F3_D2751	-7.00	13	6	5.34	0.00	5.34	32.24	28.60	29.99	38.53	27.46	33.78	0.11	9.09
F3_D2751	-7.00	17	1	3.55	0.00	3.55	32.24	28.60	29.99	35.07	25.43	25.23	0.11	5.06
F3_D2751	-7.00	17	2	1.64	0.00	1.64	32.24	28.60	29.99	29.36	23.99	23.74	0.11	2.09
F3_D2751	-7.00	17	3	3.75	0.00	3.75	32.24	28.60	29.99	33.13	24.47	32.62	0.11	5.43
F3_D2751	-7.00	17	4	4.93	0.00	4.93	32.24	28.60	29.99	35.39	27.18	35.62	0.11	7.96
F3_D2751	-7.00	17	5	4.26	0.00	4.26	32.24	28.60	29.99	33.54	25.72	36.14	0.11	6.43
F3_D2751	-7.00	17	6	5.32	0.00	5.32	32.24	28.60	29.99	38.56	27.36	33.77	0.11	9.04
F3_D2762	-7.00	2	1	-0.54	-0.57	0.03	29.83	20.47	29.93	25.37	34.96	32.22	-4.19	1.16
F3_D2762	-7.00	2	2	-1.84	-2.05	0.21	29.83	20.47	29.93	23.38	28.98	28.20	-4.19	-1.01
F3_D2762	-7.00	2	3	1.53	0.00	1.53	29.83	20.47	29.93	31.36	31.86	34.03	-4.19	6.47
F3_D2762	-7.00	2	4	2.23	0.00	2.23	29.83	20.47	29.93	35.66	35.33	34.25	-4.19	10.23
F3_D2762	-7.00	2	5	1.94	0.00	1.94	29.83	20.47	29.93	34.38	31.74	31.43	-4.19	8.33
F3_D2762	-7.00	2	6	1.53	0.00	1.53	29.83	20.47	29.93	30.90	35.52	35.59	-4.19	6.45
F3_D2762	-7.00	6	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_D2762	-7.00	6	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_D2762	-7.00	6	3	1.52	0.00	1.52	29.83	20.47	29.93	31.31	31.81	34.00	-4.19	6.42
F3_D2762	-7.00	6	4	2.22	0.00	2.22	29.83	20.47	29.93	35.62	35.32	34.21	-4.19	10.19
F3_D2762	-7.00	6	5	1.94	0.00	1.94	29.83	20.47	29.93	34.37	31.74	31.41	-4.19	8.32
F3_D2762	-7.00	6	6	1.53	0.00	1.53	29.83	20.47	29.93	30.88	35.51	35.58	-4.19	6.44
F3_D2762	-7.00	10	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_D2762	-7.00	10	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_D2762	-7.00	10	3	1.52	0.00	1.52	29.83	20.47	29.93	31.28	31.81	34.00	-4.19	6.40
F3_D2762	-7.00	10	4	2.22	0.00	2.22	29.83	20.47	29.93	35.60	35.32	34.21	-4.19	10.18
F3_D2762	-7.00	10	5	1.93	0.00	1.93	29.83	20.47	29.93	34.35	31.74	31.41	-4.19	8.31
F3_D2762	-7.00	10	6	1.52	0.00	1.52	29.83	20.47	29.93	30.87	35.51	35.58	-4.19	6.42
F3_D2762	-7.00	14	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.89	32.09	-4.19	0.87
F3_D2762	-7.00	14	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.23	28.84	28.05	-4.19	-1.17
F3_D2762	-7.00	14	3	1.50	0.00	1.50	29.83	20.47	29.93	31.22	31.76	33.97	-4.19	6.34
F3_D2762	-7.00	14	4	2.22	0.00	2.22	29.83	20.47	29.93	35.55	35.31	34.18	-4.19	10.14
F3_D2762	-7.00	14	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.73	31.41	-4.19	8.30
F3_D2762	-7.00	14	6	1.50	0.00	1.50	29.83	20.47	29.93	30.76	35.51	35.59	-4.19	6.33
F3_D2762	-7.00	18	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.92	32.09	-4.19	0.87
F3_D2762	-7.00	18	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.22	28.84	28.04	-4.19	-1.17
F3_D2762	-7.00	18	3	1.50	0.00	1.50	29.83	20.47	29.93	31.21	31.72	33.95	-4.19	6.32
F3_D2762	-7.00	18	4	2.22	0.00	2.22	29.83	20.47	29.93	35.54	35.31	34.17	-4.19	10.13
F3_D2762	-7.00	18	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.75	31.40	-4.19	8.30
F3_D2762	-7.00	18	6	1.50	0.00	1.50	29.83	20.47	29.93	30.75	35.54	35.58	-4.19	6.32
F3_D2773	-7.00	3	1	2.30	0.00	2.30	29.77	29.28	27.92	32.34	25.50	25.70	-1.75	4.37
F3_D2773	-7.00	3	2	0.85	-1.06	1.91	29.77	29.28	27.92	28.69	23.88	24.05	-1.75	1.81
F3_D2773	-7.00	3	3	3.19	0.00	3.19	29.77	29.28	27.92	35.41	32.74	24.69	-1.75	6.41
F3_D2773	-7.00	3	4	3.57	0.00	3.57	29.77	29.28	27.92	34.29	35.71	27.38	-1.75	7.52
F3_D2773	-7.00	3	5	3.16	0.00	3.16	29.77	29.28	27.92	33.19	36.15	25.93	-1.75	6.35
F3_D2773	-7.00	3	6	4.04	0.00	4.04	29.77	29.28	27.92	38.58	33.90	27.58	-1.75	9.19
F3_D2773	-7.00	7	1	2.27	0.00	2.27	29.77	29.28	27.92	32.28	25.47	25.60	-1.75	4.31
F3_D2773	-7.00	7	2	0.80	-1.13	1.93	29.77	29.28	27.92	28.61	23.83	23.96	-1.75	1.74
F3_D2773	-7.00	7	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.69	24.60	-1.75	6.34
F3_D2773	-7.00	7	4	3.56	0.00	3.56	29.77	29.28	27.92	34.26	35.66	27.30	-1.75	7.47
F3_D2773	-7.00	7	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.13	25.84	-1.75	6.30
F3_D2773	-7.00	7	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.88	27.49	-1.75	9.13
F3_D2773	-7.00	11	1	2.26	0.00	2.26	29.77	29.28	27.92	32.28	25.47	25.55	-1.75	4.29
F3_D2773	-7.00	11	2	0.83	-1.11	1.94	29.77	29.28	27.92	28.61	23.83	24.11	-1.75	1.77
F3_D2773	-7.00	11	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.66	24.60	-1.75	6.34
F3_D2773	-7.00	11	4	3.55	0.00	3.55	29.77	29.28	27.92	34.26	35.65	27.29	-1.75	7.46
F3_D2773	-7.00	11	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.11	25.84	-1.75	6.30
F3_D2773	-7.00	11	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.86	27.49	-1.75	9.13
F3_D2773	-7.00	15	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.46	-1.75	4.15
F3_D2773	-7.00	15	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.54	23.72	24.02	-1.75	1.68
F3_D2773	-7.00	15	3	3.13	0.00	3.13	29.77	29.28	27.92	35.35	32.60	24.50	-1.75	6.27
F3_D2773	-7.00	15	4	3.54	0.00	3.54	29.77	29.28	27.92	34.23	35.60	27.20	-1.75	7.41
F3_D2773	-7.00	15	5	3.13	0.00	3.13	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.26
F3_D2773	-7.00	15	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.76	27.39	-1.75	9.06
F3_D2773	-7.00	19	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.45	-1.75	4.15
F3_D2773	-7.00	19	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.53	23.72	24.01	-1.75	1.68
F3_D2773	-7.00	19	3	3.13	0.00	3.13	29.77	29.28	27.92	35.34	32.59	24.50	-1.75	6.26

F3_D2773	-7.00	19	4	3.53	0.00	3.53	29.77	29.28	27.92	34.22	35.59	27.19	-1.75	7.40
F3_D2773	-7.00	19	5	3.12	0.00	3.12	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.25
F3_D2773	-7.00	19	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.74	27.39	-1.75	9.05
F3_D2784	-7.00	4	1	-0.45	-0.49	0.04	29.82	29.91	20.49	25.54	32.19	34.95	-4.18	1.32
F3_D2784	-7.00	4	2	-1.75	-1.93	0.18	29.82	29.91	20.49	23.53	28.17	28.94	-4.18	-0.88
F3_D2784	-7.00	4	3	-1.74	-1.74	0.00	29.82	29.91	20.49	23.28	34.00	31.84	-4.18	-0.87
F3_D2784	-7.00	4	4	0.39	0.00	0.39	29.82	29.91	20.49	27.31	34.22	35.35	-4.18	3.07
F3_D2784	-7.00	4	5	-1.26	-1.26	0.00	29.82	29.91	20.49	24.13	31.40	31.77	-4.18	-0.11
F3_D2784	-7.00	4	6	-0.93	-0.93	0.00	29.82	29.91	20.49	24.56	35.56	35.54	-4.18	0.45
F3_D2784	-7.00	8	1	-0.50	-0.54	0.04	29.82	29.91	20.49	25.45	32.13	34.95	-4.18	1.23
F3_D2784	-7.00	8	2	-1.81	-1.99	0.18	29.82	29.91	20.49	23.44	28.10	28.93	-4.18	-0.97
F3_D2784	-7.00	8	3	-1.80	-1.80	0.00	29.82	29.91	20.49	23.19	33.97	31.83	-4.18	-0.96
F3_D2784	-7.00	8	4	0.35	0.00	0.35	29.82	29.91	20.49	27.22	34.19	35.35	-4.18	2.99
F3_D2784	-7.00	8	5	-1.31	-1.31	0.00	29.82	29.91	20.49	24.05	31.39	31.77	-4.18	-0.19
F3_D2784	-7.00	8	6	-0.99	-0.99	0.00	29.82	29.91	20.49	24.46	35.55	35.54	-4.18	0.36
F3_D2784	-7.00	12	1	-0.52	-0.56	0.04	29.81	29.91	20.49	25.40	32.13	34.92	-4.19	1.18
F3_D2784	-7.00	12	2	-1.72	-1.91	0.19	29.81	29.91	20.49	23.59	28.10	28.87	-4.19	-0.83
F3_D2784	-7.00	12	3	-1.80	-1.80	0.00	29.81	29.91	20.49	23.19	33.97	31.78	-4.19	-0.96
F3_D2784	-7.00	12	4	0.35	0.00	0.35	29.81	29.91	20.49	27.22	34.19	35.34	-4.19	2.98
F3_D2784	-7.00	12	5	-1.32	-1.32	0.00	29.81	29.91	20.49	24.04	31.39	31.76	-4.19	-0.19
F3_D2784	-7.00	12	6	-0.99	-0.99	0.00	29.81	29.91	20.49	24.46	35.55	35.53	-4.19	0.36
F3_D2784	-7.00	16	1	-0.57	-0.61	0.04	29.82	29.91	20.49	25.30	32.07	34.95	-4.18	1.09
F3_D2784	-7.00	16	2	-1.78	-1.97	0.19	29.82	29.91	20.49	23.50	28.02	28.87	-4.18	-0.92
F3_D2784	-7.00	16	3	-1.86	-1.87	0.01	29.82	29.91	20.49	23.09	33.94	31.74	-4.18	-1.06
F3_D2784	-7.00	16	4	0.31	0.00	0.31	29.82	29.91	20.49	27.13	34.15	35.34	-4.18	2.89
F3_D2784	-7.00	16	5	-1.37	-1.37	0.00	29.82	29.91	20.49	23.95	31.38	31.78	-4.18	-0.28
F3_D2784	-7.00	16	6	-1.04	-1.04	0.00	29.82	29.91	20.49	24.37	35.56	35.57	-4.18	0.26
F3_D2784	-7.00	20	1	-0.11	-4.91	4.80	29.81	29.91	20.49	24.50	31.26	27.80	-0.81	0.06
F3_D2784	-7.00	20	2	-1.96	-14.21	12.25	29.81	29.91	20.49	22.69	27.21	22.06	-0.81	-2.24
F3_D2784	-7.00	20	3	-1.60	-12.85	11.25	29.81	29.91	20.49	22.29	33.13	33.80	-0.81	-1.81
F3_D2784	-7.00	20	4	1.35	-0.47	1.82	29.81	29.91	20.49	26.32	33.34	34.18	-0.81	2.08
F3_D2784	-7.00	20	5	-0.98	-1.64	0.66	29.81	29.91	20.49	23.15	30.58	32.64	-0.81	-1.05
F3_D2784	-7.00	20	6	-0.57	-1.26	0.69	29.81	29.91	20.49	23.56	34.75	35.07	-0.81	-0.53
F3_D2728	-7.00	24	1	-1.57	-7.24	5.67	45.84	31.64	47.18	22.59	20.83	28.30	8.61	-2.48
F3_D2728	-7.00	24	2	-2.73	-16.39	13.66	45.84	31.64	47.18	21.65	19.97	22.81	8.61	-3.67
F3_D2728	-7.00	24	3	-0.32	-14.06	13.74	45.84	31.64	47.18	24.63	19.52	35.46	8.61	-1.21
F3_D2728	-7.00	24	4	2.36	-1.49	3.85	45.84	31.64	47.18	26.86	23.84	34.51	8.61	1.57
F3_D2728	-7.00	24	5	1.17	-0.47	1.64	45.84	31.64	47.18	25.65	22.39	34.72	8.61	0.33
F3_D2728	-7.00	24	6	2.67	0.00	2.67	45.84	31.64	47.18	26.98	24.67	38.43	8.61	1.90
F3_D2728	-7.00	28	1	-1.60	-7.36	5.76	45.84	31.64	47.18	22.56	20.72	28.65	8.61	-2.52
F3_D2728	-7.00	28	2	-2.78	-16.54	13.76	45.84	31.64	47.18	21.60	19.92	22.80	8.61	-3.72
F3_D2728	-7.00	28	3	-0.47	-14.21	13.74	45.84	31.64	47.18	24.50	19.34	35.33	8.61	-1.36
F3_D2728	-7.00	28	4	2.28	-1.59	3.87	45.84	31.64	47.18	26.75	23.81	34.41	8.61	1.48
F3_D2728	-7.00	28	5	1.07	-0.57	1.64	45.84	31.64	47.18	25.55	22.25	34.65	8.61	0.22
F3_D2728	-7.00	28	6	2.59	0.00	2.59	45.84	31.64	47.18	26.89	24.53	38.60	8.61	1.81
F3_D2728	-7.00	32	1	-2.41	-7.72	5.31	45.84	31.64	47.18	21.57	20.60	28.23	8.61	-3.34
F3_D2728	-7.00	32	2	-3.43	-16.76	13.33	45.84	31.64	47.18	20.77	19.81	22.56	8.61	-4.38
F3_D2728	-7.00	32	3	-0.61	-14.41	13.80	45.84	31.64	47.18	24.32	19.23	35.19	8.61	-1.51
F3_D2728	-7.00	32	4	2.10	-1.77	3.87	45.84	31.64	47.18	26.54	23.71	34.24	8.61	1.30
F3_D2728	-7.00	32	5	0.88	-0.74	1.62	45.84	31.64	47.18	25.33	22.15	34.49	8.61	0.03
F3_D2728	-7.00	32	6	2.27	0.00	2.27	45.84	31.64	47.18	26.51	24.42	38.29	8.61	1.48
F3_D2728	-7.00	36	1	-1.78	-7.48	5.70	45.84	31.64	47.18	22.36	20.67	27.95	8.61	-2.70
F3_D2728	-7.00	36	2	-2.93	-16.64	13.71	45.84	31.64	47.18	21.43	19.89	22.57	8.61	-3.87
F3_D2728	-7.00	36	3	-0.54	-14.31	13.77	45.84	31.64	47.18	24.40	19.31	35.26	8.61	-1.43
F3_D2728	-7.00	36	4	2.19	-1.68	3.87	45.84	31.64	47.18	26.65	23.76	34.29	8.61	1.39
F3_D2728	-7.00	36	5	0.98	-0.65	1.63	45.84	31.64	47.18	25.46	22.20	34.50	8.61	0.14
F3_D2728	-7.00	36	6	2.49	0.00	2.49	45.84	31.64	47.18	26.78	24.48	38.14	8.61	1.71
F3_D2728	-7.00	40	1	-1.94	-5.38	3.44	45.84	31.64	47.18	21.87	21.26		8.61	-2.86
F3_D2728	-7.00	40	2	-2.67	-13.35	10.68	45.84	31.64	47.18	21.13	20.48		8.61	-3.61
F3_D2728	-7.00	40	3	0.03	-10.98	11.01	45.84	31.64	47.18	24.92	19.90		8.61	-0.85
F3_D2728	-7.00	40	4	2.76	0.00	2.76	45.84	31.64	47.18	27.13	24.35		8.61	1.99
F3_D2728	-7.00	40	5	1.53	0.00	1.53	45.84	31.64	47.18	25.92	22.79		8.61	0.70
F3_D2728	-7.00	40	6	2.83	0.00	2.83	45.84	31.64	47.18	27.03	25.07		8.61	2.07
F3_D2722	-7.00	2	1	1.97	0.00	1.97	45.84	31.64	47.18	25.37	34.96	32.22	8.61	1.16
F3_D2722	-7.00	2	2	-0.13	-1.07	0.94	45.84	31.64	47.18	23.38	28.98	28.20	8.61	-1.01
F3_D2722	-7.00	2	3	6.85	0.00	6.85	45.84	31.64	47.18	31.36	31.86	34.03	8.61	6.47
F3_D2722	-7.00	2	4	9.88	0.00	9.88	45.84	31.64	47.18	35.66	35.33	34.25	8.61	10.23
F3_D2722	-7.00	2	5	8.41	0.00	8.41	45.84	31.64	47.18	34.38	31.74	31.43	8.61	8.33
F3_D2722	-7.00	2	6	6.84	0.00	6.84	45.84	31.64	47.18	30.90	35.52	35.59	8.61	6.45
F3_D2722	-7.00	6	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_D2722	-7.00	6	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_D2722	-7.00	6	3	6.81	0.00	6.81	45.84	31.64	47.18	31.31	31.81	34.00	8.61	6.42
F3_D2722	-7.00	6	4	9.85	0.00	9.85	45.84	31.64	47.18	35.62	35.32	34.21	8.61	10.19
F3_D2722	-7.00	6	5	8.40	0.00	8.40	45.84	31.64	47.18	34.37	31.74	31.41	8.61	8.32
F3_D2722	-7.00	6	6	6.82	0.00	6.82	45.84	31.64	47.18	30.88	35.51	35.58	8.61	6.44
F3_D2722	-7.00	10	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_D2722	-7.00	10	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_D2722	-7.00	10	3	6.79	0.00	6.79	45.84	31.64	47.18	31.28	31.81	34.00	8.61	6.40
F3_D2722	-7.00	10	4	9.84	0.00	9.84	45.84	31.64	47.18	35.60	35.32	34.21	8.61	10.18
F3_D2722	-7.00	10	5	8.39	0.00	8.39	45.84	31.64	47.18	34.35	31.74	31.41	8.61	8.31
F3_D2722	-7.00	10	6	6.81	0.00	6.81	45.84	31.64	47.18	30.87	35.51	35.58	8.61	6.42
F3_D2722	-7.00	14	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.89	32.09	8.61	0.87
F3_D2722	-7.00	14	2	-0.28	-1.20	0.92	45.84	31.64	47.18	23.23	28.84	28.05	8.61	-1.17
F3_D2722	-7.00	14	3	6.74	0.00	6.74	45.84	31.64	47.18	31.22	31.76	33.97	8.61	6.34
F3_D2722	-7.00	14	4	9.81	0.00	9.81	45.84	31.64	47.18	35.55	35.31	34.18	8.61	10.14
F3_D2722	-7.00	14	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.73	31.41	8.61	8.30
F3_D2722	-7.00	14	6	6.73	0.00	6.73	45.84	31.64	47.18	30.76	35.51	35.59	8.61	6.33
F3_D2722	-7.00	18	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.92	32.09	8.61	0.87
F3_D2722	-7.00	18	2	-0.29	-1.20	0.91	45.84	31.64	47.18	23.22	28.84	28.04	8.61	-1.17
F3_D2722	-7.00	18	3	6.72	0.00	6.72	45.84	31.64	47.18	31.21	31.72	33.95	8.61	6.32
F3_D2722	-7.00	18	4	9.81	0.00	9.81	45.84	31.64	47.18	35.54	35.31	34.17	8.61	10.13

F3_D2722	-7.00	18	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.75	31.40	8.61	8.30
F3_D2722	-7.00	18	6	6.72	0.00	6.72	45.84	31.64	47.18	30.75	35.54	35.58	8.61	6.32
F3_D2788	-7.00	24	1	-2.85	-7.50	4.65	29.82	29.91	20.49	22.59	20.83	28.30	-4.18	-2.48
F3_D2788	-7.00	24	2	-3.75	-16.42	12.67	29.82	29.91	20.49	21.65	19.97	22.81	-4.18	-3.67
F3_D2788	-7.00	24	3	-1.97	-14.12	12.15	29.82	29.91	20.49	24.63	19.52	35.46	-4.18	-1.21
F3_D2788	-7.00	24	4	-0.32	-2.39	2.07	29.82	29.91	20.49	26.86	23.84	34.51	-4.18	1.57
F3_D2788	-7.00	24	5	-1.00	-1.58	0.58	29.82	29.91	20.49	25.65	22.39	34.72	-4.18	0.33
F3_D2788	-7.00	24	6	-0.15	-0.71	0.56	29.82	29.91	20.49	26.98	24.67	38.43	-4.18	1.90
F3_D2788	-7.00	28	1	-2.88	-7.61	4.73	29.82	29.91	20.49	22.56	20.72	28.65	-4.18	-2.52
F3_D2788	-7.00	28	2	-3.79	-16.57	12.78	29.82	29.91	20.49	21.60	19.92	22.80	-4.18	-3.72
F3_D2788	-7.00	28	3	-2.06	-14.27	12.21	29.82	29.91	20.49	24.50	19.34	35.33	-4.18	-1.36
F3_D2788	-7.00	28	4	-0.36	-2.48	2.12	29.82	29.91	20.49	26.75	23.81	34.41	-4.18	1.48
F3_D2788	-7.00	28	5	-1.06	-1.66	0.60	29.82	29.91	20.49	25.55	22.25	34.65	-4.18	0.22
F3_D2788	-7.00	28	6	-0.20	-0.77	0.57	29.82	29.91	20.49	26.89	24.53	38.60	-4.18	1.81
F3_D2788	-7.00	32	1	-3.49	-7.96	4.47	29.81	29.91	20.49	21.57	20.60	28.23	-4.19	-3.34
F3_D2788	-7.00	32	2	-4.31	-16.79	12.48	29.81	29.91	20.49	20.77	19.81	22.56	-4.19	-4.38
F3_D2788	-7.00	32	3	-2.17	-14.46	12.29	29.81	29.91	20.49	24.32	19.23	35.19	-4.19	-1.51
F3_D2788	-7.00	32	4	-0.46	-2.62	2.16	29.81	29.91	20.49	26.54	23.71	34.24	-4.19	1.30
F3_D2788	-7.00	32	5	-1.18	-1.79	0.61	29.81	29.91	20.49	25.33	22.15	34.49	-4.19	0.03
F3_D2788	-7.00	32	6	-0.37	-0.94	0.57	29.81	29.91	20.49	26.51	24.42	38.29	-4.19	1.48
F3_D2788	-7.00	36	1	-3.02	-7.72	4.70	29.82	29.91	20.49	22.36	20.67	27.95	-4.18	-2.70
F3_D2788	-7.00	36	2	-3.91	-16.67	12.76	29.82	29.91	20.49	21.43	19.89	22.57	-4.18	-3.87
F3_D2788	-7.00	36	3	-2.12	-14.36	12.24	29.82	29.91	20.49	24.40	19.31	35.26	-4.18	-1.43
F3_D2788	-7.00	36	4	-0.41	-2.55	2.14	29.82	29.91	20.49	26.65	23.76	34.29	-4.18	1.39
F3_D2788	-7.00	36	5	-1.11	-1.72	0.61	29.82	29.91	20.49	25.46	22.20	34.50	-4.18	0.14
F3_D2788	-7.00	36	6	-0.25	-0.83	0.58	29.82	29.91	20.49	26.78	24.48	38.14	-4.18	1.71
F3_D2788	-7.00	40	1	-2.49	-5.43	2.94	29.81	29.91	20.49	21.87	21.26		-0.81	-2.86
F3_D2788	-7.00	40	2	-3.15	-13.36	10.21	29.81	29.91	20.49	21.13	20.48		-0.81	-3.61
F3_D2788	-7.00	40	3	-0.82	-11.00	10.18	29.81	29.91	20.49	24.92	19.90		-0.81	-0.85
F3_D2788	-7.00	40	4	1.29	-0.14	1.43	29.81	29.91	20.49	27.13	24.35		-0.81	1.99
F3_D2788	-7.00	40	5	0.38	0.00	0.38	29.81	29.91	20.49	25.92	22.79		-0.81	0.70
F3_D2788	-7.00	40	6	1.34	0.00	1.34	29.81	29.91	20.49	27.03	25.07		-0.81	2.07
F3_D3351	-7.00	1	1	-2.10	-2.09	-0.01	24.34	17.67	22.10	35.11		25.53	-8.67	7.24
F3_D3351	-7.00	1	2	-2.61	-2.58	-0.03	24.34	17.67	22.10	29.49		23.90	-8.67	3.52
F3_D3351	-7.00	1	3	-1.99	-1.98	-0.01	24.34	17.67	22.10	33.27		32.77	-8.67	8.56
F3_D3351	-7.00	1	4	-1.86	-1.86	0.00	24.34	17.67	22.10	35.41		35.74	-8.67	10.81
F3_D3351	-7.00	1	5	-1.95	-1.95	0.00	24.34	17.67	22.10	33.54		36.17	-8.67	9.18
F3_D3351	-7.00	1	6	-1.79	-1.79	0.00	24.34	17.67	22.10	38.54		33.92	-8.67	12.90
F3_D3351	-7.00	5	1	3.65	0.00	3.65	32.24	28.60	30.00	35.08	25.67	25.50	0.11	5.26
F3_D3351	-7.00	5	2	1.69	0.00	1.69	32.24	28.60	30.00	29.43	24.02	23.86	0.11	2.16
F3_D3351	-7.00	5	3	3.83	0.00	3.83	32.24	28.60	30.00	33.22	24.66	32.72	0.11	5.58
F3_D3351	-7.00	5	4	4.97	0.00	4.97	32.24	28.60	30.00	35.40	27.36	35.69	0.11	8.06
F3_D3351	-7.00	5	5	4.30	0.00	4.30	32.24	28.60	30.00	33.53	25.90	36.16	0.11	6.51
F3_D3351	-7.00	5	6	5.37	0.00	5.37	32.24	28.60	30.00	38.54	27.55	33.91	0.11	9.16
F3_D3351	-7.00	9	1	3.63	0.00	3.63	32.24	28.60	30.00	35.08	25.58	25.50	0.11	5.22
F3_D3351	-7.00	9	2	1.68	0.00	1.68	32.24	28.60	30.00	29.42	23.93	23.86	0.11	2.14
F3_D3351	-7.00	9	3	3.80	0.00	3.80	32.24	28.60	30.00	33.22	24.57	32.69	0.11	5.52
F3_D3351	-7.00	9	4	4.95	0.00	4.95	32.24	28.60	30.00	35.40	27.27	35.68	0.11	8.02
F3_D3351	-7.00	9	5	4.28	0.00	4.28	32.24	28.60	30.00	33.53	25.81	36.14	0.11	6.47
F3_D3351	-7.00	9	6	5.35	0.00	5.35	32.24	28.60	30.00	38.53	27.46	33.89	0.11	9.10
F3_D3351	-7.00	13	1	3.56	0.00	3.56	32.24	28.60	29.99	35.05	25.52	25.23	0.11	5.09
F3_D3351	-7.00	13	2	1.66	0.00	1.66	32.24	28.60	29.99	29.36	24.08	23.75	0.11	2.11
F3_D3351	-7.00	13	3	3.79	0.00	3.79	32.24	28.60	29.99	33.17	24.57	32.63	0.11	5.50
F3_D3351	-7.00	13	4	4.95	0.00	4.95	32.24	28.60	29.99	35.39	27.26	35.63	0.11	8.01
F3_D3351	-7.00	13	5	4.28	0.00	4.28	32.24	28.60	29.99	33.53	25.81	36.14	0.11	6.46
F3_D3351	-7.00	13	6	5.34	0.00	5.34	32.24	28.60	29.99	38.53	27.46	33.78	0.11	9.09
F3_D3351	-7.00	17	1	3.55	0.00	3.55	32.24	28.60	29.99	35.07	25.43	25.23	0.11	5.06
F3_D3351	-7.00	17	2	1.64	0.00	1.64	32.24	28.60	29.99	29.36	23.99	23.74	0.11	2.09
F3_D3351	-7.00	17	3	3.75	0.00	3.75	32.24	28.60	29.99	33.13	24.47	32.62	0.11	5.43
F3_D3351	-7.00	17	4	4.93	0.00	4.93	32.24	28.60	29.99	35.39	27.18	35.62	0.11	7.96
F3_D3351	-7.00	17	5	4.26	0.00	4.26	32.24	28.60	29.99	33.54	25.72	36.14	0.11	6.43
F3_D3351	-7.00	17	6	5.32	0.00	5.32	32.24	28.60	29.99	38.56	27.36	33.77	0.11	9.04
F3_D3362	-7.00	2	1	-0.54	-0.57	0.03	29.83	20.47	29.93	25.37	34.96	32.22	-4.19	1.16
F3_D3362	-7.00	2	2	-1.84	-2.05	0.21	29.83	20.47	29.93	23.38	28.98	28.20	-4.19	-1.01
F3_D3362	-7.00	2	3	1.53	0.00	1.53	29.83	20.47	29.93	31.36	31.86	34.03	-4.19	6.47
F3_D3362	-7.00	2	4	2.23	0.00	2.23	29.83	20.47	29.93	35.66	35.33	34.25	-4.19	10.23
F3_D3362	-7.00	2	5	1.94	0.00	1.94	29.83	20.47	29.93	34.38	31.74	31.43	-4.19	8.33
F3_D3362	-7.00	2	6	1.53	0.00	1.53	29.83	20.47	29.93	30.90	35.52	35.59	-4.19	6.45
F3_D3362	-7.00	6	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_D3362	-7.00	6	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_D3362	-7.00	6	3	1.52	0.00	1.52	29.83	20.47	29.93	31.31	31.81	34.00	-4.19	6.42
F3_D3362	-7.00	6	4	2.22	0.00	2.22	29.83	20.47	29.93	35.62	35.32	34.21	-4.19	10.19
F3_D3362	-7.00	6	5	1.94	0.00	1.94	29.83	20.47	29.93	34.37	31.74	31.41	-4.19	8.32
F3_D3362	-7.00	6	6	1.53	0.00	1.53	29.83	20.47	29.93	30.88	35.51	35.58	-4.19	6.44
F3_D3362	-7.00	10	1	-0.55	-0.59	0.04	29.83	20.47	29.93	25.34	34.93	32.15	-4.19	1.13
F3_D3362	-7.00	10	2	-1.87	-2.09	0.22	29.83	20.47	29.93	23.34	28.91	28.12	-4.19	-1.06
F3_D3362	-7.00	10	3	1.52	0.00	1.52	29.83	20.47	29.93	31.28	31.81	34.00	-4.19	6.40
F3_D3362	-7.00	10	4	2.22	0.00	2.22	29.83	20.47	29.93	35.60	35.32	34.21	-4.19	10.18
F3_D3362	-7.00	10	5	1.93	0.00	1.93	29.83	20.47	29.93	34.35	31.74	31.41	-4.19	8.31
F3_D3362	-7.00	10	6	1.52	0.00	1.52	29.83	20.47	29.93	30.87	35.51	35.58	-4.19	6.42
F3_D3362	-7.00	14	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.89	32.09	-4.19	0.87
F3_D3362	-7.00	14	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.23	28.84	28.05	-4.19	-1.17
F3_D3362	-7.00	14	3	1.50	0.00	1.50	29.83	20.47	29.93	31.22	31.76	33.97	-4.19	6.34
F3_D3362	-7.00	14	4	2.22	0.00	2.22	29.83	20.47	29.93	35.55	35.31	34.18	-4.19	10.14
F3_D3362	-7.00	14	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.73	31.41	-4.19	8.30
F3_D3362	-7.00	14	6	1.50	0.00	1.50	29.83	20.47	29.93	30.76	35.51	35.59	-4.19	6.33
F3_D3362	-7.00	18	1	-0.70	-0.73	0.03	29.83	20.47	29.93	25.07	34.92	32.09	-4.19	0.87
F3_D3362	-7.00	18	2	-1.94	-2.16	0.22	29.83	20.47	29.93	23.22	28.84	28.04	-4.19	-1.17
F3_D3362	-7.00	18	3	1.50	0.00	1.50	29.83	20.47	29.93	31.21	31.72	33.95	-4.19	6.32
F3_D3362	-7.00	18	4	2.22	0.00	2.22	29.83	20.47	29.93	35.54	35.31	34.17	-4.19	10.13
F3_D3362	-7.00	18	5	1.93	0.00	1.93	29.83	20.47	29.93	34.34	31.75	31.40	-4.19	8.30

F3_D3362	-7.00	18	6	1.50	0.00	1.50	29.83	20.47	29.93	30.75	35.54	35.58	-4.19	6.32
F3_D3373	-7.00	3	1	2.30	0.00	2.30	29.77	29.28	27.92	32.34	25.50	25.70	-1.75	4.37
F3_D3373	-7.00	3	2	0.85	-1.06	1.91	29.77	29.28	27.92	28.69	23.88	24.05	-1.75	1.81
F3_D3373	-7.00	3	3	3.19	0.00	3.19	29.77	29.28	27.92	35.41	32.74	24.69	-1.75	6.41
F3_D3373	-7.00	3	4	3.57	0.00	3.57	29.77	29.28	27.92	34.29	35.71	27.38	-1.75	7.52
F3_D3373	-7.00	3	5	3.16	0.00	3.16	29.77	29.28	27.92	33.19	36.15	25.93	-1.75	6.35
F3_D3373	-7.00	3	6	4.04	0.00	4.04	29.77	29.28	27.92	38.58	33.90	27.58	-1.75	9.19
F3_D3373	-7.00	7	1	2.27	0.00	2.27	29.77	29.28	27.92	32.28	25.47	25.60	-1.75	4.31
F3_D3373	-7.00	7	2	0.80	-1.13	1.93	29.77	29.28	27.92	28.61	23.83	23.96	-1.75	1.74
F3_D3373	-7.00	7	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.69	24.60	-1.75	6.34
F3_D3373	-7.00	7	4	3.56	0.00	3.56	29.77	29.28	27.92	34.26	35.66	27.30	-1.75	7.47
F3_D3373	-7.00	7	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.13	25.84	-1.75	6.30
F3_D3373	-7.00	7	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.88	27.49	-1.75	9.13
F3_D3373	-7.00	11	1	2.26	0.00	2.26	29.77	29.28	27.92	32.28	25.47	25.55	-1.75	4.29
F3_D3373	-7.00	11	2	0.83	-1.11	1.94	29.77	29.28	27.92	28.61	23.83	24.11	-1.75	1.77
F3_D3373	-7.00	11	3	3.16	0.00	3.16	29.77	29.28	27.92	35.38	32.66	24.60	-1.75	6.34
F3_D3373	-7.00	11	4	3.55	0.00	3.55	29.77	29.28	27.92	34.26	35.65	27.29	-1.75	7.46
F3_D3373	-7.00	11	5	3.14	0.00	3.14	29.77	29.28	27.92	33.18	36.11	25.84	-1.75	6.30
F3_D3373	-7.00	11	6	4.03	0.00	4.03	29.77	29.28	27.92	38.58	33.86	27.49	-1.75	9.13
F3_D3373	-7.00	15	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.46	-1.75	4.15
F3_D3373	-7.00	15	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.54	23.72	24.02	-1.75	1.68
F3_D3373	-7.00	15	3	3.13	0.00	3.13	29.77	29.28	27.92	35.35	32.60	24.50	-1.75	6.27
F3_D3373	-7.00	15	4	3.54	0.00	3.54	29.77	29.28	27.92	34.23	35.60	27.20	-1.75	7.41
F3_D3373	-7.00	15	5	3.13	0.00	3.13	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.26
F3_D3373	-7.00	15	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.76	27.39	-1.75	9.06
F3_D3373	-7.00	19	1	2.19	0.00	2.19	29.77	29.28	27.92	32.22	25.20	25.45	-1.75	4.15
F3_D3373	-7.00	19	2	0.77	-1.19	1.96	29.77	29.28	27.92	28.53	23.72	24.01	-1.75	1.68
F3_D3373	-7.00	19	3	3.13	0.00	3.13	29.77	29.28	27.92	35.34	32.59	24.50	-1.75	6.26
F3_D3373	-7.00	19	4	3.53	0.00	3.53	29.77	29.28	27.92	34.22	35.59	27.19	-1.75	7.40
F3_D3373	-7.00	19	5	3.12	0.00	3.12	29.77	29.28	27.92	33.17	36.11	25.74	-1.75	6.25
F3_D3373	-7.00	19	6	4.01	0.00	4.01	29.77	29.28	27.92	38.58	33.74	27.39	-1.75	9.05
F3_D3384	-7.00	4	1	-0.45	-0.49	0.04	29.82	29.91	20.49	25.54	32.19	34.95	-4.18	1.32
F3_D3384	-7.00	4	2	-1.75	-1.93	0.18	29.82	29.91	20.49	23.53	28.17	28.94	-4.18	-0.88
F3_D3384	-7.00	4	3	-1.74	-1.74	0.00	29.82	29.91	20.49	23.28	34.00	31.84	-4.18	-0.87
F3_D3384	-7.00	4	4	0.39	0.00	0.39	29.82	29.91	20.49	27.31	34.22	35.35	-4.18	3.07
F3_D3384	-7.00	4	5	-1.26	-1.26	0.00	29.82	29.91	20.49	24.13	31.40	31.77	-4.18	-0.11
F3_D3384	-7.00	4	6	-0.93	-0.93	0.00	29.82	29.91	20.49	24.56	35.56	35.54	-4.18	0.45
F3_D3384	-7.00	8	1	-0.50	-0.54	0.04	29.82	29.91	20.49	25.45	32.13	34.95	-4.18	1.23
F3_D3384	-7.00	8	2	-1.81	-1.99	0.18	29.82	29.91	20.49	23.44	28.10	28.93	-4.18	-0.97
F3_D3384	-7.00	8	3	-1.80	-1.80	0.00	29.82	29.91	20.49	23.19	33.97	31.83	-4.18	-0.96
F3_D3384	-7.00	8	4	0.35	0.00	0.35	29.82	29.91	20.49	27.22	34.19	35.35	-4.18	2.99
F3_D3384	-7.00	8	5	-1.31	-1.31	0.00	29.82	29.91	20.49	24.05	31.39	31.77	-4.18	-0.19
F3_D3384	-7.00	8	6	-0.99	-0.99	0.00	29.82	29.91	20.49	24.46	35.55	35.54	-4.18	0.36
F3_D3384	-7.00	12	1	-0.52	-0.56	0.04	29.81	29.91	20.49	25.40	32.13	34.92	-4.19	1.18
F3_D3384	-7.00	12	2	-1.72	-1.91	0.19	29.81	29.91	20.49	23.59	28.10	28.87	-4.19	-0.83
F3_D3384	-7.00	12	3	-1.80	-1.80	0.00	29.81	29.91	20.49	23.19	33.97	31.78	-4.19	-0.96
F3_D3384	-7.00	12	4	0.35	0.00	0.35	29.81	29.91	20.49	27.22	34.19	35.34	-4.19	2.98
F3_D3384	-7.00	12	5	-1.32	-1.32	0.00	29.81	29.91	20.49	24.04	31.39	31.76	-4.19	-0.19
F3_D3384	-7.00	12	6	-0.99	-0.99	0.00	29.81	29.91	20.49	24.46	35.55	35.53	-4.19	0.36
F3_D3384	-7.00	16	1	-0.57	-0.61	0.04	29.82	29.91	20.49	25.30	32.07	34.95	-4.18	1.09
F3_D3384	-7.00	16	2	-1.78	-1.97	0.19	29.82	29.91	20.49	23.50	28.02	28.87	-4.18	-0.92
F3_D3384	-7.00	16	3	-1.86	-1.87	0.01	29.82	29.91	20.49	23.09	33.94	31.74	-4.18	-1.06
F3_D3384	-7.00	16	4	0.31	0.00	0.31	29.82	29.91	20.49	27.13	34.15	35.34	-4.18	2.89
F3_D3384	-7.00	16	5	-1.37	-1.37	0.00	29.82	29.91	20.49	23.95	31.38	31.78	-4.18	-0.28
F3_D3384	-7.00	16	6	-1.04	-1.04	0.00	29.82	29.91	20.49	24.37	35.56	35.57	-4.18	0.26
F3_D3384	-7.00	20	1	-0.49	-5.37	4.88	29.81	29.91	20.49	24.00	30.76	27.30	-0.81	-0.44
F3_D3384	-7.00	20	2	-2.39	-14.70	12.31	29.81	29.91	20.49	22.19	26.71	21.56	-0.81	-2.74
F3_D3384	-7.00	20	3	-2.03	-13.34	11.31	29.81	29.91	20.49	21.79	32.63	33.30	-0.81	-2.31
F3_D3384	-7.00	20	4	1.01	-0.87	1.88	29.81	29.91	20.49	25.82	32.84	33.68	-0.81	1.58
F3_D3384	-7.00	20	5	-1.39	-2.07	0.68	29.81	29.91	20.49	22.65	30.08	32.14	-0.81	-1.55
F3_D3384	-7.00	20	6	-0.96	-1.67	0.71	29.81	29.91	20.49	23.06	34.25	34.57	-0.81	-1.03
F3_D3328	-7.00	24	1	-2.06	-7.73	5.67	45.84	31.64	47.18	22.09	20.33	27.80	8.61	-2.98
F3_D3328	-7.00	24	2	-3.22	-16.89	13.67	45.84	31.64	47.18	21.15	19.47	22.31	8.61	-4.17
F3_D3328	-7.00	24	3	-0.81	-14.56	13.75	45.84	31.64	47.18	24.13	19.02	34.96	8.61	-1.71
F3_D3328	-7.00	24	4	1.89	-1.92	3.81	45.84	31.64	47.18	26.36	23.34	34.01	8.61	1.07
F3_D3328	-7.00	24	5	0.69	-0.89	1.58	45.84	31.64	47.18	25.15	21.89	34.22	8.61	-0.17
F3_D3328	-7.00	24	6	2.20	0.00	2.20	45.84	31.64	47.18	26.48	24.17	37.93	8.61	1.40
F3_D3328	-7.00	28	1	-2.19	-7.94	5.75	45.84	31.64	47.18	21.96	20.12	28.05	8.61	-3.12
F3_D3328	-7.00	28	2	-3.37	-17.13	13.76	45.84	31.64	47.18	21.00	19.32	22.20	8.61	-4.32
F3_D3328	-7.00	28	3	-1.05	-14.81	13.76	45.84	31.64	47.18	23.90	18.74	34.73	8.61	-1.96
F3_D3328	-7.00	28	4	1.70	-2.12	3.82	45.84	31.64	47.18	26.15	23.21	33.81	8.61	0.88
F3_D3328	-7.00	28	5	0.49	-1.07	1.56	45.84	31.64	47.18	24.95	21.65	34.05	8.61	-0.38
F3_D3328	-7.00	28	6	2.01	0.00	2.01	45.84	31.64	47.18	26.29	23.93	38.00	8.61	1.21
F3_D3328	-7.00	32	1	-2.90	-8.21	5.31	45.84	31.64	47.18	21.07	20.10	27.73	8.61	-3.84
F3_D3328	-7.00	32	2	-3.92	-17.25	13.33	45.84	31.64	47.18	20.27	19.31	22.06	8.61	-4.88
F3_D3328	-7.00	32	3	-1.10	-14.91	13.81	45.84	31.64	47.18	23.82	18.73	34.69	8.61	-2.01
F3_D3328	-7.00	32	4	1.62	-2.20	3.82	45.84	31.64	47.18	26.04	23.21	33.74	8.61	0.80
F3_D3328	-7.00	32	5	0.40	-1.16	1.56	45.84	31.64	47.18	24.83	21.65	33.99	8.61	-0.47
F3_D3328	-7.00	32	6	1.79	-0.02	1.81	45.84	31.64	47.18	26.01	23.92	37.79	8.61	0.98
F3_D3328	-7.00	36	1	-2.27	-7.96	5.69	45.84	31.64	47.18	21.86	20.17	27.45	8.61	-3.20
F3_D3328	-7.00	36	2	-3.42	-17.14	13.72	45.84	31.64	47.18	20.93	19.39	22.07	8.61	-4.37
F3_D3328	-7.00	36	3	-1.03	-14.81	13.78	45.84	31.64	47.18	23.90	18.81	34.76	8.61	-1.93
F3_D3328	-7.00	36	4	1.71	-2.12	3.83	45.84	31.64	47.18	26.15	23.26	33.79	8.61	0.89
F3_D3328	-7.00	36	5	0.50	-1.07	1.57	45.84	31.64	47.18	24.96	21.70	34.00	8.61	-0.36
F3_D3328	-7.00	36	6	2.01	0.00	2.01	45.84	31.64	47.18	26.28	23.98	37.64	8.61	1.21
F3_D3328	-7.00	40	1	-1.94	-5.38	3.44	45.84	31.64	47.18	21.87	21.26		8.61	-2.86
F3_D3328	-7.00	40	2	-2.67	-13.35	10.68	45.84	31.64	47.18	21.13	20.48		8.61	-3.61
F3_D3328	-7.00	40	3	0.03	-10.98	11.01	45.84	31.64	47.18	24.92	19.90		8.61	-0.85
F3_D3328	-7.00	40	4	2.76	0.00	2.76	45.84	31.64	47.18	27.13	24.35		8.61	1.99
F3_D3328	-7.00	40	5	1.53	0.00	1.53	45.84	31.64	47.18	25.92	22.79		8.61	0.70
F3_D3328	-7.00	40	6	2.83	0.00	2.83	45.84	31.64	47.18	27.03	25.07		8.61	2.07

F3_D3322	-7.00	2	1	1.97	0.00	1.97	45.84	31.64	47.18	25.37	34.96	32.22	8.61	1.16
F3_D3322	-7.00	2	2	-0.13	-1.07	0.94	45.84	31.64	47.18	23.38	28.98	28.20	8.61	-1.01
F3_D3322	-7.00	2	3	6.85	0.00	6.85	45.84	31.64	47.18	31.36	31.86	34.03	8.61	6.47
F3_D3322	-7.00	2	4	9.88	0.00	9.88	45.84	31.64	47.18	35.66	35.33	34.25	8.61	10.23
F3_D3322	-7.00	2	5	8.41	0.00	8.41	45.84	31.64	47.18	34.38	31.74	31.43	8.61	8.33
F3_D3322	-7.00	2	6	6.84	0.00	6.84	45.84	31.64	47.18	30.90	35.52	35.59	8.61	6.45
F3_D3322	-7.00	6	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_D3322	-7.00	6	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_D3322	-7.00	6	3	6.81	0.00	6.81	45.84	31.64	47.18	31.31	31.81	34.00	8.61	6.42
F3_D3322	-7.00	6	4	9.85	0.00	9.85	45.84	31.64	47.18	35.62	35.32	34.21	8.61	10.19
F3_D3322	-7.00	6	5	8.40	0.00	8.40	45.84	31.64	47.18	34.37	31.74	31.41	8.61	8.32
F3_D3322	-7.00	6	6	6.82	0.00	6.82	45.84	31.64	47.18	30.88	35.51	35.58	8.61	6.44
F3_D3322	-7.00	10	1	1.94	0.00	1.94	45.84	31.64	47.18	25.34	34.93	32.15	8.61	1.13
F3_D3322	-7.00	10	2	-0.18	-1.11	0.93	45.84	31.64	47.18	23.34	28.91	28.12	8.61	-1.06
F3_D3322	-7.00	10	3	6.79	0.00	6.79	45.84	31.64	47.18	31.28	31.81	34.00	8.61	6.40
F3_D3322	-7.00	10	4	9.84	0.00	9.84	45.84	31.64	47.18	35.60	35.32	34.21	8.61	10.18
F3_D3322	-7.00	10	5	8.39	0.00	8.39	45.84	31.64	47.18	34.35	31.74	31.41	8.61	8.31
F3_D3322	-7.00	10	6	6.81	0.00	6.81	45.84	31.64	47.18	30.87	35.51	35.58	8.61	6.42
F3_D3322	-7.00	14	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.89	32.09	8.61	0.87
F3_D3322	-7.00	14	2	-0.28	-1.20	0.92	45.84	31.64	47.18	23.23	28.84	28.05	8.61	-1.17
F3_D3322	-7.00	14	3	6.74	0.00	6.74	45.84	31.64	47.18	31.22	31.76	33.97	8.61	6.34
F3_D3322	-7.00	14	4	9.81	0.00	9.81	45.84	31.64	47.18	35.55	35.31	34.18	8.61	10.14
F3_D3322	-7.00	14	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.73	31.41	8.61	8.30
F3_D3322	-7.00	14	6	6.73	0.00	6.73	45.84	31.64	47.18	30.76	35.51	35.59	8.61	6.33
F3_D3322	-7.00	18	1	1.69	0.00	1.69	45.84	31.64	47.18	25.07	34.92	32.09	8.61	0.87
F3_D3322	-7.00	18	2	-0.29	-1.20	0.91	45.84	31.64	47.18	23.22	28.84	28.04	8.61	-1.17
F3_D3322	-7.00	18	3	6.72	0.00	6.72	45.84	31.64	47.18	31.21	31.72	33.95	8.61	6.32
F3_D3322	-7.00	18	4	9.81	0.00	9.81	45.84	31.64	47.18	35.54	35.31	34.17	8.61	10.13
F3_D3322	-7.00	18	5	8.39	0.00	8.39	45.84	31.64	47.18	34.34	31.75	31.40	8.61	8.30
F3_D3322	-7.00	18	6	6.72	0.00	6.72	45.84	31.64	47.18	30.75	35.54	35.58	8.61	6.32
F3_D3388	-7.00	24	1	-3.22	-7.96	4.74	29.82	29.91	20.49	22.09	20.33	27.80	-4.18	-2.98
F3_D3388	-7.00	24	2	-4.14	-16.92	12.78	29.82	29.91	20.49	21.15	19.47	22.31	-4.18	-4.17
F3_D3388	-7.00	24	3	-2.31	-14.61	12.30	29.82	29.91	20.49	24.13	19.02	34.96	-4.18	-1.71
F3_D3388	-7.00	24	4	-0.58	-2.75	2.17	29.82	29.91	20.49	26.36	23.34	34.01	-4.18	1.07
F3_D3388	-7.00	24	5	-1.30	-1.91	0.61	29.82	29.91	20.49	25.15	21.89	34.22	-4.18	-0.17
F3_D3388	-7.00	24	6	-0.41	-0.99	0.58	29.82	29.91	20.49	26.48	24.17	37.93	-4.18	1.40
F3_D3388	-7.00	28	1	-3.33	-8.16	4.83	29.82	29.91	20.49	21.96	20.12	28.05	-4.18	-3.12
F3_D3388	-7.00	28	2	-4.26	-17.16	12.90	29.82	29.91	20.49	21.00	19.32	22.20	-4.18	-4.32
F3_D3388	-7.00	28	3	-2.48	-14.85	12.37	29.82	29.91	20.49	23.90	18.74	34.73	-4.18	-1.96
F3_D3388	-7.00	28	4	-0.69	-2.91	2.22	29.82	29.91	20.49	26.15	23.21	33.81	-4.18	0.88
F3_D3388	-7.00	28	5	-1.43	-2.06	0.63	29.82	29.91	20.49	24.95	21.65	34.05	-4.18	-0.38
F3_D3388	-7.00	28	6	-0.51	-1.12	0.61	29.82	29.91	20.49	26.29	23.93	38.00	-4.18	1.21
F3_D3388	-7.00	32	1	-3.88	-8.42	4.54	29.81	29.91	20.49	21.07	20.10	27.73	-4.19	-3.84
F3_D3388	-7.00	32	2	-4.72	-17.28	12.56	29.81	29.91	20.49	20.27	19.31	22.06	-4.19	-4.88
F3_D3388	-7.00	32	3	-2.52	-14.95	12.43	29.81	29.91	20.49	23.82	18.73	34.69	-4.19	-2.01
F3_D3388	-7.00	32	4	-0.73	-2.98	2.25	29.81	29.91	20.49	26.04	23.21	33.74	-4.19	0.80
F3_D3388	-7.00	32	5	-1.49	-2.13	0.64	29.81	29.91	20.49	24.83	21.65	33.99	-4.19	-0.47
F3_D3388	-7.00	32	6	-0.63	-1.24	0.61	29.81	29.91	20.49	26.01	23.92	37.79	-4.19	0.98
F3_D3388	-7.00	36	1	-3.39	-8.18	4.79	29.82	29.91	20.49	21.86	20.17	27.45	-4.18	-3.20
F3_D3388	-7.00	36	2	-4.31	-17.16	12.85	29.82	29.91	20.49	20.93	19.39	22.07	-4.18	-4.37
F3_D3388	-7.00	36	3	-2.46	-14.85	12.39	29.82	29.91	20.49	23.90	18.81	34.76	-4.18	-1.93
F3_D3388	-7.00	36	4	-0.68	-2.91	2.23	29.82	29.91	20.49	26.15	23.26	33.79	-4.18	0.89
F3_D3388	-7.00	36	5	-1.42	-2.06	0.64	29.82	29.91	20.49	24.96	21.70	34.00	-4.18	-0.36
F3_D3388	-7.00	36	6	-0.51	-1.12	0.61	29.82	29.91	20.49	26.28	23.98	37.64	-4.18	1.21
F3_D3388	-7.00	40	1	-2.49	-5.43	2.94	29.81	29.91	20.49	21.87	21.26		-0.81	-2.86
F3_D3388	-7.00	40	2	-3.15	-13.36	10.21	29.81	29.91	20.49	21.13	20.48		-0.81	-3.61
F3_D3388	-7.00	40	3	-0.82	-11.00	10.18	29.81	29.91	20.49	24.92	19.90		-0.81	-0.85
F3_D3388	-7.00	40	4	1.29	-0.14	1.43	29.81	29.91	20.49	27.13	24.35		-0.81	1.99
F3_D3388	-7.00	40	5	0.38	0.00	0.38	29.81	29.91	20.49	25.92	22.79		-0.81	0.70
F3_D3388	-7.00	40	6	1.34	0.00	1.34	29.81	29.91	20.49	27.03	25.07		-0.81	2.07
HISPASA2	-30.00	1	1	2.77	0.00	2.77	31.26	38.76	19.82	42.47		29.72	-3.84	12.47
HISPASA2	-30.00	1	2	2.91	0.00	2.91	31.26	38.76	19.82	40.67		34.77	-3.84	14.58
HISPASA2	-30.00	1	3	2.67	0.00	2.67	31.26	38.76	19.82	36.52		33.78	-3.84	11.39
HISPASA2	-30.00	1	4	1.86	0.00	1.86	31.26	38.76	19.82	31.33		31.86	-3.84	6.76
HISPASA2	-30.00	1	5	2.18	0.00	2.18	31.26	38.76	19.82	32.78		32.75	-3.84	8.14
HISPASA2	-30.00	1	6	2.10	0.00	2.10	31.26	38.76	19.82	32.71		30.70	-3.84	7.74
HISPASA2	-30.00	1	7	2.79	0.00	2.79	31.26	38.76	19.82	40.68		30.90	-3.84	12.69
HISPASA2	-30.00	1	8	2.86	0.00	2.86	31.26	38.76	19.82	41.98		31.61	-3.84	13.62
HISPASA2	-30.00	1	9	2.82	0.00	2.82	31.26	38.76	19.82	43.19		30.40	-3.84	13.16
HISPASA2	-30.00	3	1	3.14	0.00	3.14	47.74	19.80	25.06	41.90	29.69	37.63	-3.37	11.82
HISPASA2	-30.00	3	2	3.32	0.00	3.32	47.74	19.80	25.06	41.36	34.74	36.28	-3.37	13.86
HISPASA2	-30.00	3	3	2.92	0.00	2.92	47.74	19.80	25.06	39.60	33.75	28.75	-3.37	10.11
HISPASA2	-30.00	3	4	0.69	0.00	0.69	47.74	19.80	25.06	34.99	31.83	19.75	-3.37	2.77
HISPASA2	-30.00	3	5	2.05	0.00	2.05	47.74	19.80	25.06	33.46	32.72	25.79	-3.37	6.21
HISPASA2	-30.00	3	6	2.08	0.00	2.08	47.74	19.80	25.06	31.99	30.67	29.83	-3.37	6.30
HISPASA2	-30.00	3	7	3.06	0.00	3.06	47.74	19.80	25.06	39.46	30.87	33.89	-3.37	11.12
HISPASA2	-30.00	3	8	3.19	0.00	3.19	47.74	19.80	25.06	41.86	31.58	34.31	-3.37	12.31
HISPASA2	-30.00	3	9	3.19	0.00	3.19	47.74	19.80	25.06	42.66	30.37	36.78	-3.37	12.33
HISPASA2	-30.00	5	1	2.01	0.00	2.01	31.25	25.04	19.82	42.47	37.60	29.63	-4.62	11.90
HISPASA2	-30.00	5	2	2.12	0.00	2.12	31.25	25.04	19.82	40.66	36.26	34.71	-4.62	13.52
HISPASA2	-30.00	5	3	1.68	0.00	1.68	31.25	25.04	19.82	36.52	28.72	33.71	-4.62	8.98
HISPASA2	-30.00	5	4	-0.38	-0.38	0.00	31.25	25.04	19.82	31.14	19.72	31.77	-4.62	1.91
HISPASA2	-30.00	5	5	1.03	0.00	1.03	31.25	25.04	19.82	32.58	25.76	32.69	-4.62	5.76
HISPASA2	-30.00	5	6	1.25	0.00	1.25	31.25	25.04	19.82	32.54	29.80	30.66	-4.62	6.66
HISPASA2	-30.00	5	7	1.98	0.00	1.98	31.25	25.04	19.82	40.67	33.86	30.87	-4.62	11.52
HISPASA2	-30.00	5	8	2.04	0.00	2.04	31.25	25.04	19.82	41.97	34.28	31.56	-4.62	12.32
HISPASA2	-30.00	5	9	2.05	0.00	2.05	31.25	25.04	19.82	43.19	36.75	30.31	-4.62	12.40
HISPASA2	-30.00	7	1	3.13	0.00	3.13	48.21	19.80	25.06	41.88	29.60	37.62	-3.37	11.75
HISPASA2	-30.00	7	2	3.32	0.00	3.32	48.21	19.80	25.06	41.36	34.69	36.26	-3.37	13.84
HISPASA2	-30.00	7	3	2.91	0.00	2.91	48.21	19.80	25.06	39.59	33.68	28.66	-3.37	10.05
HISPASA2	-30.00	7	4	0.65	0.00	0.65	48.21	19.80	25.06	34.98	31.74	19.65	-3.37	2.69

HISPASA2	-30.00	7	5	2.04	0.00	2.04	48.21	19.80	25.06	33.41	32.66	25.75	-3.37	6.16
HISPASA2	-30.00	7	6	2.06	0.00	2.06	48.21	19.80	25.06	31.92	30.63	29.79	-3.37	6.24
HISPASA2	-30.00	7	7	3.06	0.00	3.06	48.21	19.80	25.06	39.41	30.84	33.88	-3.37	11.09
HISPASA2	-30.00	7	8	3.19	0.00	3.19	48.21	19.80	25.06	41.85	31.53	34.31	-3.37	12.28
HISPASA2	-30.00	7	9	3.19	0.00	3.19	48.21	19.80	25.06	42.64	30.28	36.77	-3.37	12.26
HISPASA2	-30.00	9	1	2.01	0.00	2.01	31.25	25.04	19.82	42.46	37.60	29.63	-4.62	11.90
HISPASA2	-30.00	9	2	2.12	0.00	2.12	31.25	25.04	19.82	40.64	36.23	34.69	-4.62	13.50
HISPASA2	-30.00	9	3	1.67	0.00	1.67	31.25	25.04	19.82	36.45	28.63	33.69	-4.62	8.91
HISPASA2	-30.00	9	4	-0.42	-0.42	0.00	31.25	25.04	19.82	31.06	19.62	31.74	-4.62	1.82
HISPASA2	-30.00	9	5	1.01	0.00	1.01	31.25	25.04	19.82	32.51	25.72	32.66	-4.62	5.70
HISPASA2	-30.00	9	6	1.24	0.00	1.24	31.25	25.04	19.82	32.48	29.76	30.61	-4.62	6.60
HISPASA2	-30.00	9	7	1.97	0.00	1.97	31.25	25.04	19.82	40.65	33.86	30.81	-4.62	11.49
HISPASA2	-30.00	9	8	2.04	0.00	2.04	31.25	25.04	19.82	41.96	34.28	31.52	-4.62	12.30
HISPASA2	-30.00	9	9	2.05	0.00	2.05	31.25	25.04	19.82	43.18	36.74	30.31	-4.62	12.39
HISPASA2	-30.00	11	1	3.13	0.00	3.13	48.21	19.80	25.06	41.88	29.60	37.56	-3.37	11.74
HISPASA2	-30.00	11	2	3.32	0.00	3.32	48.21	19.80	25.06	41.35	34.66	36.21	-3.37	13.82
HISPASA2	-30.00	11	3	2.91	0.00	2.91	48.21	19.80	25.06	39.59	33.66	28.65	-3.37	10.04
HISPASA2	-30.00	11	4	0.65	0.00	0.65	48.21	19.80	25.06	34.98	31.71	19.65	-3.37	2.69
HISPASA2	-30.00	11	5	2.03	0.00	2.03	48.21	19.80	25.06	33.41	32.63	25.69	-3.37	6.13
HISPASA2	-30.00	11	6	2.06	0.00	2.06	48.21	19.80	25.06	31.92	30.58	29.74	-3.37	6.22
HISPASA2	-30.00	11	7	3.05	0.00	3.05	48.21	19.80	25.06	39.41	30.78	33.81	-3.37	11.05
HISPASA2	-30.00	11	8	3.18	0.00	3.18	48.21	19.80	25.06	41.85	31.49	34.23	-3.37	12.24
HISPASA2	-30.00	11	9	3.18	0.00	3.18	48.21	19.80	25.06	42.64	30.28	36.70	-3.37	12.25
HISPASA2	-30.00	13	1	2.00	0.00	2.00	31.25	25.04	19.82	42.45	37.53	29.53	-4.62	11.83
HISPASA2	-30.00	13	2	2.11	0.00	2.11	31.25	25.04	19.82	40.62	36.19	34.61	-4.62	13.46
HISPASA2	-30.00	13	3	1.66	0.00	1.66	31.25	25.04	19.82	36.39	28.63	33.63	-4.62	8.87
HISPASA2	-30.00	13	4	-0.43	-0.43	0.00	31.25	25.04	19.82	30.97	19.62	31.67	-4.62	1.79
HISPASA2	-30.00	13	5	0.99	0.00	0.99	31.25	25.04	19.82	32.43	25.66	32.57	-4.62	5.63
HISPASA2	-30.00	13	6	1.22	0.00	1.22	31.25	25.04	19.82	32.40	29.71	30.52	-4.62	6.53
HISPASA2	-30.00	13	7	1.97	0.00	1.97	31.25	25.04	19.82	40.63	33.78	30.72	-4.62	11.42
HISPASA2	-30.00	13	8	2.03	0.00	2.03	31.25	25.04	19.82	41.96	34.20	31.44	-4.62	12.24
HISPASA2	-30.00	13	9	2.04	0.00	2.04	31.25	25.04	19.82	43.17	36.67	30.21	-4.62	12.32
HISPASA2	-30.00	15	1	3.12	0.00	3.12	48.21	19.80	25.06	41.87	29.51	37.49	-3.37	11.67
HISPASA2	-30.00	15	2	3.31	0.00	3.31	48.21	19.80	25.06	41.36	34.59	36.14	-3.37	13.78
HISPASA2	-30.00	15	3	2.90	0.00	2.90	48.21	19.80	25.06	39.64	33.60	28.56	-3.37	10.00
HISPASA2	-30.00	15	4	0.62	0.00	0.62	48.21	19.80	25.06	35.13	31.64	19.55	-3.37	2.63
HISPASA2	-30.00	15	5	2.02	0.00	2.02	48.21	19.80	25.06	33.42	32.54	25.64	-3.37	6.11
HISPASA2	-30.00	15	6	2.04	0.00	2.04	48.21	19.80	25.06	31.88	30.49	29.68	-3.37	6.17
HISPASA2	-30.00	15	7	3.04	0.00	3.04	48.21	19.80	25.06	39.38	30.70	33.73	-3.37	10.98
HISPASA2	-30.00	15	8	3.18	0.00	3.18	48.21	19.80	25.06	41.84	31.41	34.14	-3.37	12.18
HISPASA2	-30.00	15	9	3.18	0.00	3.18	48.21	19.80	25.06	42.63	30.19	36.62	-3.37	12.18
HISPASA2	-30.00	17	1	1.99	0.00	1.99	31.25	25.04	19.80	42.46	37.46	29.53	-4.64	11.82
HISPASA2	-30.00	17	2	2.10	0.00	2.10	31.25	25.04	19.80	40.63	36.12	34.61	-4.64	13.45
HISPASA2	-30.00	17	3	1.65	0.00	1.65	31.25	25.04	19.80	36.40	28.53	33.63	-4.64	8.84
HISPASA2	-30.00	17	4	-0.47	-0.47	0.00	31.25	25.04	19.80	30.97	19.52	31.64	-4.64	1.72
HISPASA2	-30.00	17	5	0.98	0.00	0.98	31.25	25.04	19.80	32.42	25.62	32.57	-4.64	5.60
HISPASA2	-30.00	17	6	1.20	0.00	1.20	31.25	25.04	19.80	32.38	29.65	30.51	-4.64	6.50
HISPASA2	-30.00	17	7	1.95	0.00	1.95	31.25	25.04	19.80	40.64	33.70	30.72	-4.64	11.41
HISPASA2	-30.00	17	8	2.02	0.00	2.02	31.25	25.04	19.80	41.97	34.12	31.44	-4.64	12.22
HISPASA2	-30.00	17	9	2.03	0.00	2.03	31.25	25.04	19.80	43.18	36.59	30.21	-4.64	12.31
HISPASA2	-30.00	19	1	3.03	0.00	3.03	48.21	19.78	25.06	39.48	29.51	37.49	-3.38	10.97
HISPASA2	-30.00	19	2	3.25	0.00	3.25	48.21	19.78	25.06	40.06	34.58	36.14	-3.38	13.16
HISPASA2	-30.00	19	3	2.81	0.00	2.81	48.21	19.78	25.06	38.15	33.60	28.56	-3.38	9.54
HISPASA2	-30.00	19	4	0.58	0.00	0.58	48.21	19.78	25.06	35.08	31.61	19.49	-3.38	2.57
HISPASA2	-30.00	19	5	1.97	0.00	1.97	48.21	19.78	25.06	33.37	32.54	25.42	-3.38	5.98
HISPASA2	-30.00	19	6	1.97	0.00	1.97	48.21	19.78	25.06	31.68	30.49	29.30	-3.38	5.97
HISPASA2	-30.00	19	7	2.97	0.00	2.97	48.21	19.78	25.06	38.33	30.70	33.73	-3.38	10.57
HISPASA2	-30.00	19	8	3.11	0.00	3.11	48.21	19.78	25.06	40.25	31.41	34.14	-3.38	11.69
HISPASA2	-30.00	19	9	3.09	0.00	3.09	48.21	19.78	25.06	40.26	30.19	36.62	-3.38	11.52
AUS00400	152.00	3	1	4.36	0.00	4.36	50.50	49.29	21.33	50.01	29.82	25.15	-0.71	7.81
AUS00400	152.00	3	2	5.07	0.00	5.07	50.50	49.29	21.33	51.40	29.87	28.69	-0.71	10.15
AUS00400	152.00	3	3	5.04	0.00	5.04	50.50	49.29	21.33	51.85	29.46	28.86	-0.71	10.06
AUS00400	152.00	3	4	5.00	0.00	5.00	50.50	49.29	21.33	52.06	29.10	28.83	-0.71	9.89
AUS00400	152.00	3	5	3.61	0.00	3.61	50.50	49.29	21.33	49.26	24.27	25.97	-0.71	5.97
AUS00400	152.00	3	6	3.35	0.00	3.35	50.50	49.29	21.33	50.44	29.58	22.18	-0.71	5.42
AUS00400	152.00	7	1	4.36	0.00	4.36	50.50	49.29	21.33	50.00	29.82	25.15	-0.71	7.81
AUS00400	152.00	7	2	5.07	0.00	5.07	50.50	49.29	21.33	51.39	29.87	28.69	-0.71	10.15
AUS00400	152.00	7	3	5.04	0.00	5.04	50.50	49.29	21.33	51.83	29.46	28.86	-0.71	10.06
AUS00400	152.00	7	4	5.00	0.00	5.00	50.50	49.29	21.33	52.05	29.10	28.83	-0.71	9.89
AUS00400	152.00	7	5	3.61	0.00	3.61	50.50	49.29	21.33	49.26	24.27	25.97	-0.71	5.97
AUS00400	152.00	7	6	3.35	0.00	3.35	50.50	49.29	21.33	50.43	29.58	22.18	-0.71	5.42
AUS00400	152.00	11	1	4.37	0.00	4.37	50.50	49.34	21.33	49.95	29.85	25.16	-0.71	7.83
AUS00400	152.00	11	2	5.07	0.00	5.07	50.50	49.34	21.33	51.35	29.88	28.70	-0.71	10.15
AUS00400	152.00	11	3	5.05	0.00	5.05	50.50	49.34	21.33	51.80	29.46	28.86	-0.71	10.07
AUS00400	152.00	11	4	5.00	0.00	5.00	50.50	49.34	21.33	52.02	29.11	28.83	-0.71	9.89
AUS00400	152.00	11	5	3.61	0.00	3.61	50.50	49.34	21.33	49.24	24.27	25.97	-0.71	5.97
AUS00400	152.00	11	6	3.35	0.00	3.35	50.50	49.34	21.33	50.38	29.59	22.18	-0.71	5.42
AUS00400	152.00	15	1	4.37	0.00	4.37	50.50	49.36	21.33	50.04	29.85	25.16	-0.71	7.83
AUS00400	152.00	15	2	5.07	0.00	5.07	50.50	49.36	21.33	51.46	29.88	28.70	-0.71	10.16
AUS00400	152.00	15	3	5.05	0.00	5.05	50.50	49.36	21.33	51.87	29.46	28.86	-0.71	10.07
AUS00400	152.00	15	4	5.00	0.00	5.00	50.50	49.36	21.33	52.08	29.11	28.83	-0.71	9.89
AUS00400	152.00	15	5	3.61	0.00	3.61	50.50	49.36	21.33	49.28	24.27	25.97	-0.71	5.98
AUS00400	152.00	15	6	3.35	0.00	3.35	50.50	49.36	21.33	50.51	29.59	22.18	-0.71	5.42
AUS00400	152.00	19	1	4.17	0.00	4.17	48.73	51.96	21.33	43.53	29.25	24.95	-0.72	7.31
AUS00400	152.00	19	2	5.03	0.00	5.03	48.73	51.96	21.33	48.57	29.85	28.67	-0.72	10.05
AUS00400	152.00	19	3	5.04	0.00	5.04	48.73	51.96	21.33	52.71	29.46	28.86	-0.72	10.08
AUS00400	152.00	19	4	4.99	0.00	4.99	48.73	51.96	21.33	52.87	29.10	28.83	-0.72	9.90
AUS00400	152.00	19	5	3.61	0.00	3.61	48.73	51.96	21.33	49.70	24.27	25.97	-0.72	5.98
AUS00400	152.00	19	6	3.29	0.00	3.29	48.73	51.96	21.33	47.06	29.38	22.14	-0.72	5.32
AUS00400	152.00	23	1	4.18	0.00	4.18	49.41	52.06	21.34	44.00	29.25	24.95	-0.71	7.34
AUS00400	152.00	23	2	5.05	0.00	5.05	49.41	52.06	21.34	49.33	29.85	28.68	-0.71	10.08
AUS00400	152.00	23	3	5.05	0.00	5.05	49.41	52.06	21.34	54.91	29.46	28.86	-0.71	10.10
AUS00400	152.00	23	4	5.01	0.00	5.01	49.41	52.06	21.34	55.08	29.11	28.83	-0.71	9.92

AUS00400	152.00	23	5	3.62	0.00	3.62	49.41	52.06	21.34	50.57	24.27	25.97	-0.71	5.99
AUS00400	152.00	23	6	3.30	0.00	3.30	49.41	52.06	21.34	48.10	29.39	22.14	-0.71	5.33
AUS00500	152.00	4	1	4.46	0.00	4.46	50.69	21.32	27.11	53.18	27.44	40.10	-1.72	11.14
AUS00500	152.00	4	2	4.08	0.00	4.08	50.69	21.32	27.11	55.84	25.37	41.75	-1.72	9.25
AUS00500	152.00	4	3	4.83	0.00	4.83	50.69	21.32	27.11	52.76	30.34	42.32	-1.72	13.92
AUS00500	152.00	4	4	3.96	0.00	3.96	50.69	21.32	27.11	53.54	24.96	40.40	-1.72	8.80
AUS00500	152.00	4	5	4.74	0.00	4.74	50.69	21.32	27.11	48.73	29.65	41.29	-1.72	13.06
AUS00500	152.00	4	6	4.72	0.00	4.72	50.69	21.32	27.11	55.84	29.23	41.66	-1.72	12.94
AUS00500	152.00	8	1	4.46	0.00	4.46	50.69	21.32	27.11	53.28	27.44	40.00	-1.72	11.14
AUS00500	152.00	8	2	4.08	0.00	4.08	50.69	21.32	27.11	55.97	25.37	41.65	-1.72	9.24
AUS00500	152.00	8	3	4.83	0.00	4.83	50.69	21.32	27.11	52.83	30.34	42.23	-1.72	13.92
AUS00500	152.00	8	4	3.96	0.00	3.96	50.69	21.32	27.11	53.62	24.96	40.31	-1.72	8.80
AUS00500	152.00	8	5	4.74	0.00	4.74	50.69	21.32	27.11	48.77	29.65	41.19	-1.72	13.05
AUS00500	152.00	8	6	4.72	0.00	4.72	50.69	21.32	27.11	55.97	29.23	41.57	-1.72	12.93
AUS00500	152.00	12	1	4.47	0.00	4.47	50.79	21.32	27.11	54.61	27.44	39.97	-1.72	11.15
AUS00500	152.00	12	2	4.08	0.00	4.08	50.79	21.32	27.11	57.80	25.37	41.64	-1.72	9.25
AUS00500	152.00	12	3	4.83	0.00	4.83	50.79	21.32	27.11	53.56	30.34	42.21	-1.72	13.94
AUS00500	152.00	12	4	3.97	0.00	3.97	50.79	21.32	27.11	57.21	24.96	40.27	-1.72	8.82
AUS00500	152.00	12	5	4.74	0.00	4.74	50.79	21.32	27.11	49.04	29.65	41.18	-1.72	13.07
AUS00500	152.00	12	6	4.72	0.00	4.72	50.79	21.32	27.11	57.75	29.23	41.56	-1.72	12.95
AUS00500	152.00	16	1	5.32	0.00	5.32	50.76	21.32	60.36	53.75	27.44	46.10	-0.72	11.32
AUS00500	152.00	16	2	4.85	0.00	4.85	50.76	21.32	60.36	57.14	25.37	54.21	-0.72	9.35
AUS00500	152.00	16	3	5.77	0.00	5.77	50.76	21.32	60.36	57.70	30.34	53.68	-0.72	14.27
AUS00500	152.00	16	4	4.72	0.00	4.72	50.76	21.32	60.36	55.34	24.96	48.51	-0.72	8.92
AUS00500	152.00	16	5	5.68	0.00	5.68	50.76	21.32	60.36	55.56	29.65	48.66	-0.72	13.53
AUS00500	152.00	16	6	5.63	0.00	5.63	50.76	21.32	60.36	57.21	29.23	52.18	-0.72	13.17
AUS00500	152.00	20	1	4.90	0.00	4.90	50.36	21.31	64.19	38.34	27.39	46.02	-0.72	9.57
AUS00500	152.00	20	2	4.84	0.00	4.84	50.36	21.31	64.19	56.49	25.37	54.26	-0.72	9.34
AUS00500	152.00	20	3	5.67	0.00	5.67	50.36	21.31	64.19	45.10	30.33	53.66	-0.72	13.48
AUS00500	152.00	20	4	4.55	0.00	4.55	50.36	21.31	64.19	41.57	24.95	48.44	-0.72	8.37
AUS00500	152.00	20	5	5.37	0.00	5.37	50.36	21.31	64.19	40.11	29.60	48.59	-0.72	11.63
AUS00500	152.00	20	6	5.62	0.00	5.62	50.36	21.31	64.19	55.03	29.24	52.21	-0.72	13.14
AUS00500	152.00	24	1	4.93	0.00	4.93	52.88	21.31	52.20	38.26	27.46	67.29	-0.71	9.63
AUS00500	152.00	24	2	4.85	0.00	4.85	52.88	21.31	52.20	57.07	25.37	67.32	-0.71	9.35
AUS00500	152.00	24	3	5.68	0.00	5.68	52.88	21.31	52.20	45.05	30.38	68.07	-0.71	13.53
AUS00500	152.00	24	4	4.56	0.00	4.56	52.88	21.31	52.20	41.50	24.96	67.20	-0.71	8.39
AUS00500	152.00	24	5	5.41	0.00	5.41	52.88	21.31	52.20	40.03	29.82	67.36	-0.71	11.78
AUS00500	152.00	24	6	5.64	0.00	5.64	52.88	21.31	52.20	55.36	29.25	67.48	-0.71	13.18
AUS00600	152.00	2	1	13.18	0.00	13.18	72.98	52.18	52.15	40.41	37.94	31.12	27.04	12.22
AUS00600	152.00	2	2	12.68	0.00	12.68	72.98	52.18	52.15	42.17	36.57	29.63	27.04	11.71
AUS00600	152.00	2	3	13.69	0.00	13.69	72.98	52.18	52.15	44.62	37.91	30.17	27.04	12.73
AUS00600	152.00	2	4	9.84	0.00	9.84	72.98	52.18	52.15	41.95	40.60	25.56	27.04	8.86
AUS00600	152.00	2	5	9.28	0.00	9.28	72.98	52.18	52.15	49.58	40.41	24.49	27.04	8.30
AUS00600	152.00	2	6	10.14	0.00	10.14	72.98	52.18	52.15	35.44	38.23	29.60	27.04	9.16
AUS00600	152.00	6	1	13.20	0.00	13.20	72.98	52.18	71.15	40.41	37.93	31.12	29.91	12.22
AUS00600	152.00	6	2	12.70	0.00	12.70	72.98	52.18	71.15	42.17	36.57	29.62	29.91	11.71
AUS00600	152.00	6	3	13.70	0.00	13.70	72.98	52.18	71.15	44.62	37.91	30.17	29.91	12.72
AUS00600	152.00	6	4	9.85	0.00	9.85	72.98	52.18	71.15	41.95	40.59	25.56	29.91	8.86
AUS00600	152.00	6	5	9.29	0.00	9.29	72.98	52.18	71.15	49.58	40.40	24.49	29.91	8.29
AUS00600	152.00	6	6	10.15	0.00	10.15	72.98	52.18	71.15	35.44	38.23	29.60	29.91	9.16
AUS00600	152.00	10	1	13.20	0.00	13.20	72.98	52.18	72.06	40.43	37.90	31.12	29.92	12.22
AUS00600	152.00	10	2	12.70	0.00	12.70	72.98	52.18	72.06	42.21	36.53	29.62	29.92	11.72
AUS00600	152.00	10	3	13.71	0.00	13.71	72.98	52.18	72.06	44.67	37.87	30.17	29.92	12.73
AUS00600	152.00	10	4	9.85	0.00	9.85	72.98	52.18	72.06	41.99	40.50	25.56	29.92	8.86
AUS00600	152.00	10	5	9.29	0.00	9.29	72.98	52.18	72.06	49.81	40.31	24.49	29.92	8.30
AUS00600	152.00	10	6	10.15	0.00	10.15	72.98	52.18	72.06	35.45	38.17	29.60	29.92	9.16
AUS00600	152.00	14	1	13.21	0.00	13.21	73.51	52.18	72.06	40.44	37.89	31.12	29.98	12.22
AUS00600	152.00	14	2	12.70	0.00	12.70	73.51	52.18	72.06	42.23	36.53	29.62	29.98	11.72
AUS00600	152.00	14	3	13.71	0.00	13.71	73.51	52.18	72.06	44.70	37.86	30.17	29.98	12.73
AUS00600	152.00	14	4	9.86	0.00	9.86	73.51	52.18	72.06	42.02	40.49	25.56	29.98	8.86
AUS00600	152.00	14	5	9.29	0.00	9.29	73.51	52.18	72.06	49.97	40.30	24.49	29.98	8.30
AUS00600	152.00	14	6	10.15	0.00	10.15	73.51	52.18	72.06	35.45	38.17	29.60	29.98	9.16
AUS00600	152.00	18	1	13.35	0.00	13.35	72.97	52.13	52.20	40.41	39.78	31.12	27.04	12.38
AUS00600	152.00	18	2	12.88	0.00	12.88	72.97	52.13	52.20	42.17	38.44	29.63	27.04	11.92
AUS00600	152.00	18	3	13.90	0.00	13.90	72.97	52.13	52.20	44.62	40.10	30.17	27.04	12.94
AUS00600	152.00	18	4	9.95	0.00	9.95	72.97	52.13	52.20	41.94	50.27	25.56	27.04	8.96
AUS00600	152.00	18	5	9.37	0.00	9.37	72.97	52.13	52.20	49.60	48.64	24.49	27.04	8.39
AUS00600	152.00	18	6	10.26	0.00	10.26	72.97	52.13	52.20	35.44	41.54	29.60	27.04	9.27
AUS00600	152.00	22	1	13.36	0.00	13.36	72.97	52.13	52.20	40.43	39.78	31.13	27.04	12.39
AUS00600	152.00	22	2	12.90	0.00	12.90	72.97	52.13	52.20	42.20	38.44	29.64	27.04	11.93
AUS00600	152.00	22	3	13.91	0.00	13.91	72.97	52.13	52.20	44.65	40.10	30.18	27.04	12.95
AUS00600	152.00	22	4	9.95	0.00	9.95	72.97	52.13	52.20	41.97	50.29	25.57	27.04	8.97
AUS00600	152.00	22	5	9.38	0.00	9.38	72.97	52.13	52.20	49.76	48.66	24.49	27.04	8.39
AUS00600	152.00	22	6	10.26	0.00	10.26	72.97	52.13	52.20	35.45	41.54	29.62	27.04	9.28
AUS00700	164.00	3	1	5.61	0.00	5.61	51.45	21.75	50.06	49.20	27.28	47.49	-0.28	11.06
AUS00700	164.00	3	2	5.91	0.00	5.91	51.45	21.75	50.06	49.77	28.88	49.62	-0.28	12.63
AUS00700	164.00	3	3	6.00	0.00	6.00	51.45	21.75	50.06	55.15	29.25	55.29	-0.28	13.17
AUS00700	164.00	3	4	5.57	0.00	5.57	51.45	21.75	50.06	54.79	26.94	55.04	-0.28	10.89
AUS00700	164.00	3	5	5.98	0.00	5.98	51.45	21.75	50.06	55.64	29.13	54.09	-0.28	13.05
AUS00700	164.00	3	6	5.72	0.00	5.72	51.45	21.75	50.06	55.42	27.64	54.63	-0.28	11.58
AUS00700	164.00	7	1	5.61	0.00	5.61	51.43	21.75	50.06	49.20	27.28	47.56	-0.28	11.06
AUS00700	164.00	7	2	5.91	0.00	5.91	51.43	21.75	50.06	49.76	28.88	49.71	-0.28	12.63
AUS00700	164.00	7	3	6.00	0.00	6.00	51.43	21.75	50.06	55.14	29.25	55.62	-0.28	13.17
AUS00700	164.00	7	4	5.57	0.00	5.57	51.43	21.75	50.06	54.78	26.94	55.40	-0.28	10.89
AUS00700	164.00	7	5	5.98	0.00	5.98	51.43	21.75	50.06	55.63	29.13	54.27	-0.28	13.05
AUS00700	164.00	7	6	5.72	0.00	5.72	51.43	21.75	50.06	55.41	27.64	54.90	-0.28	11.58
AUS00700	164.00	11	1	5.61	0.00	5.61	51.45	21.75	50.15	49.18	27.28	47.75	-0.28	11.07
AUS00700	164.00	11	2	5.91	0.00	5.91	51.45	21.75	50.15	49.75	28.88	50.01	-0.28	12.63
AUS00700	164.00	11	3	6.00	0.00	6.00	51.45	21.75	50.15	55.10	29.25	56.81	-0.28	13.17
AUS00700	164.00	11	4	5.57	0.00	5.57	51.45	21.75	50.15	54.74	26.94	56.56	-0.28	10.89
AUS00700	164.00	11	5	5.98	0.00	5.98	51.45	21.75	50.15	55.60	29.13	54.85	-0.28	13.05

AUS00700	164.00	11	6	5.72	0.00	5.72	51.45	21.75	50.15	55.36	27.64	55.74	-0.28	11.58
AUS00700	164.00	15	1	5.61	0.00	5.61	51.44	21.75	50.12	49.28	27.28	47.58	-0.28	11.07
AUS00700	164.00	15	2	5.91	0.00	5.91	51.44	21.75	50.12	49.85	28.88	49.75	-0.28	12.64
AUS00700	164.00	15	3	6.00	0.00	6.00	51.44	21.75	50.12	55.01	29.25	55.83	-0.28	13.17
AUS00700	164.00	15	4	5.57	0.00	5.57	51.44	21.75	50.12	54.62	26.94	55.58	-0.28	10.89
AUS00700	164.00	15	5	5.98	0.00	5.98	51.44	21.75	50.12	55.49	29.13	54.34	-0.28	13.05
AUS00700	164.00	15	6	5.72	0.00	5.72	51.44	21.75	50.12	55.24	27.64	54.99	-0.28	11.58
AUS00700	164.00	19	1	5.60	0.00	5.60	49.79	21.76	49.80	49.63	27.28	47.55	-0.29	11.08
AUS00700	164.00	19	2	5.91	0.00	5.91	49.79	21.76	49.80	50.19	28.88	49.72	-0.29	12.65
AUS00700	164.00	19	3	5.99	0.00	5.99	49.79	21.76	49.80	55.74	29.25	56.06	-0.29	13.18
AUS00700	164.00	19	4	5.56	0.00	5.56	49.79	21.76	49.80	55.69	26.94	55.78	-0.29	10.90
AUS00700	164.00	19	5	5.97	0.00	5.97	49.79	21.76	49.80	56.45	29.13	54.28	-0.29	13.06
AUS00700	164.00	19	6	5.71	0.00	5.71	49.79	21.76	49.80	56.42	27.63	54.96	-0.29	11.59
AUS00700	164.00	23	1	5.60	0.00	5.60	50.00	21.76	49.92	49.82	27.28	47.58	-0.29	11.09
AUS00700	164.00	23	2	5.91	0.00	5.91	50.00	21.76	49.92	50.39	28.88	49.76	-0.29	12.66
AUS00700	164.00	23	3	5.99	0.00	5.99	50.00	21.76	49.92	56.48	29.25	56.33	-0.29	13.19
AUS00700	164.00	23	4	5.56	0.00	5.56	50.00	21.76	49.92	56.46	26.94	56.08	-0.29	10.90
AUS00700	164.00	23	5	5.98	0.00	5.98	50.00	21.76	49.92	57.05	29.13	54.42	-0.29	13.07
AUS00700	164.00	23	6	5.71	0.00	5.71	50.00	21.76	49.92	57.17	27.63	55.17	-0.29	11.60
AUS00800	164.00	2	1	6.20	0.00	6.20	53.58	53.76	21.77	47.14	31.92	38.58	-0.25	14.44
AUS00800	164.00	2	2	6.27	0.00	6.27	53.58	53.76	21.77	42.64	35.64	37.69	-0.25	15.04
AUS00800	164.00	2	3	3.52	0.00	3.52	53.58	53.76	21.77	40.42	22.41	29.71	-0.25	5.32
AUS00800	164.00	2	4	4.76	0.00	4.76	53.58	53.76	21.77	37.20	27.69	30.11	-0.25	8.11
AUS00800	164.00	2	5	6.06	0.00	6.06	53.58	53.76	21.77	49.84	30.26	38.59	-0.25	13.41
AUS00800	164.00	2	6	3.93	0.00	3.93	53.58	53.76	21.77	47.28	22.92	30.46	-0.25	6.13
AUS00800	164.00	6	1	6.20	0.00	6.20	53.59	53.76	21.77	47.14	31.91	38.58	-0.25	14.44
AUS00800	164.00	6	2	6.27	0.00	6.27	53.59	53.76	21.77	42.64	35.63	37.69	-0.25	15.04
AUS00800	164.00	6	3	3.52	0.00	3.52	53.59	53.76	21.77	40.42	22.41	29.71	-0.25	5.32
AUS00800	164.00	6	4	4.76	0.00	4.76	53.59	53.76	21.77	37.20	27.69	30.11	-0.25	8.11
AUS00800	164.00	6	5	6.06	0.00	6.06	53.59	53.76	21.77	49.84	30.26	38.59	-0.25	13.41
AUS00800	164.00	6	6	3.93	0.00	3.93	53.59	53.76	21.77	47.27	22.92	30.46	-0.25	6.13
AUS00800	164.00	10	1	6.20	0.00	6.20	53.73	53.76	21.77	47.27	31.91	38.57	-0.25	14.45
AUS00800	164.00	10	2	6.27	0.00	6.27	53.73	53.76	21.77	42.61	35.63	37.67	-0.25	15.02
AUS00800	164.00	10	3	3.52	0.00	3.52	53.73	53.76	21.77	40.45	22.41	29.71	-0.25	5.32
AUS00800	164.00	10	4	4.77	0.00	4.77	53.73	53.76	21.77	37.22	27.69	30.11	-0.25	8.12
AUS00800	164.00	10	5	6.07	0.00	6.07	53.73	53.76	21.77	50.01	30.26	38.59	-0.25	13.42
AUS00800	164.00	10	6	3.93	0.00	3.93	53.73	53.76	21.77	47.44	22.92	30.46	-0.25	6.14
AUS00800	164.00	14	1	6.20	0.00	6.20	53.81	53.69	21.77	47.33	31.91	38.59	-0.25	14.46
AUS00800	164.00	14	2	6.26	0.00	6.26	53.81	53.69	21.77	42.57	35.63	37.69	-0.25	15.01
AUS00800	164.00	14	3	3.52	0.00	3.52	53.81	53.69	21.77	40.46	22.41	29.71	-0.25	5.32
AUS00800	164.00	14	4	4.77	0.00	4.77	53.81	53.69	21.77	37.23	27.69	30.12	-0.25	8.12
AUS00800	164.00	14	5	6.07	0.00	6.07	53.81	53.69	21.77	50.10	30.26	38.59	-0.25	13.43
AUS00800	164.00	14	6	3.93	0.00	3.93	53.81	53.69	21.77	47.52	22.92	30.46	-0.25	6.14
AUS00800	164.00	18	1	6.15	0.00	6.15	65.60	62.49	21.77	44.16	31.92	38.53	-0.23	13.89
AUS00800	164.00	18	2	6.28	0.00	6.28	65.60	62.49	21.77	42.69	35.63	37.62	-0.23	15.04
AUS00800	164.00	18	3	3.53	0.00	3.53	65.60	62.49	21.77	40.42	22.41	29.71	-0.23	5.32
AUS00800	164.00	18	4	4.77	0.00	4.77	65.60	62.49	21.77	37.19	27.70	30.12	-0.23	8.12
AUS00800	164.00	18	5	6.08	0.00	6.08	65.60	62.49	21.77	50.49	30.27	38.61	-0.23	13.45
AUS00800	164.00	18	6	3.94	0.00	3.94	65.60	62.49	21.77	47.36	22.92	30.46	-0.23	6.14
AUS00800	164.00	22	1	6.15	0.00	6.15	65.62	62.69	21.77	44.16	31.92	38.84	-0.23	13.94
AUS00800	164.00	22	2	6.30	0.00	6.30	65.62	62.69	21.77	42.70	35.63	38.39	-0.23	15.21
AUS00800	164.00	22	3	3.53	0.00	3.53	65.62	62.69	21.77	40.42	22.41	29.71	-0.23	5.32
AUS00800	164.00	22	4	4.78	0.00	4.78	65.62	62.69	21.77	37.19	27.70	30.12	-0.23	8.12
AUS00800	164.00	22	5	6.09	0.00	6.09	65.62	62.69	21.77	50.48	30.27	38.65	-0.23	13.46
AUS00800	164.00	22	6	3.94	0.00	3.94	65.62	62.69	21.77	47.35	22.92	30.47	-0.23	6.14
AUS00900	164.00	1	1	13.60	0.00	13.60	79.96	52.28	52.30	53.36		28.73	27.25	12.64
AUS00900	164.00	1	2	9.49	0.00	9.49	79.96	52.28	52.30	54.02		24.54	27.25	8.51
AUS00900	164.00	1	3	11.08	0.00	11.08	79.96	52.28	52.30	51.93		26.17	27.25	10.10
AUS00900	164.00	1	4	9.24	0.00	9.24	79.96	52.28	52.30	51.58		24.31	27.25	8.26
AUS00900	164.00	1	5	9.93	0.00	9.93	79.96	52.28	52.30	53.61		24.98	27.25	8.94
AUS00900	164.00	1	6	13.32	0.00	13.32	79.96	52.28	52.30	53.32		28.44	27.25	12.35
AUS00900	164.00	5	1	13.56	0.00	13.56	79.96	52.28	52.30	53.15	48.89	28.73	27.25	12.59
AUS00900	164.00	5	2	9.49	0.00	9.49	79.96	52.28	52.30	53.81	55.24	24.54	27.25	8.50
AUS00900	164.00	5	3	11.07	0.00	11.07	79.96	52.28	52.30	51.72	54.77	26.17	27.25	10.09
AUS00900	164.00	5	4	9.20	0.00	9.20	79.96	52.28	52.30	51.38	44.63	24.31	27.25	8.21
AUS00900	164.00	5	5	9.92	0.00	9.92	79.96	52.28	52.30	53.41	56.32	24.98	27.25	8.94
AUS00900	164.00	5	6	13.30	0.00	13.30	79.96	52.28	52.30	53.10	53.35	28.44	27.25	12.34
AUS00900	164.00	9	1	13.58	0.00	13.58	79.96		52.30	53.11	48.96	28.73	30.25	12.59
AUS00900	164.00	9	2	9.50	0.00	9.50	79.96		52.30	53.77	55.54	24.54	30.25	8.50
AUS00900	164.00	9	3	11.08	0.00	11.08	79.96		52.30	51.68	55.13	26.18	30.25	10.09
AUS00900	164.00	9	4	9.21	0.00	9.21	79.96		52.30	51.34	44.67	24.31	30.25	8.21
AUS00900	164.00	9	5	9.93	0.00	9.93	79.96		52.30	53.38	56.72	24.98	30.25	8.94
AUS00900	164.00	9	6	13.32	0.00	13.32	79.96		52.30	53.06	53.54	28.44	30.25	12.34
AUS00900	164.00	13	1	13.57	0.00	13.57	78.53		52.30	52.84	49.15	28.73	30.23	12.59
AUS00900	164.00	13	2	9.49	0.00	9.49	78.53		52.30	53.51	56.42	24.54	30.23	8.50
AUS00900	164.00	13	3	11.06	0.00	11.06	78.53		52.30	50.63	56.29	26.18	30.23	10.07
AUS00900	164.00	13	4	9.21	0.00	9.21	78.53		52.30	51.11	44.79	24.31	30.23	8.21
AUS00900	164.00	13	5	9.93	0.00	9.93	78.53		52.30	52.61	57.94	24.98	30.23	8.93
AUS00900	164.00	13	6	13.32	0.00	13.32	78.53		52.30	52.76	54.11	28.44	30.23	12.33
AUS00900	164.00	17	1	13.61	0.00	13.61	66.84	49.90	52.30	58.93	48.98	28.73	25.58	12.66
AUS00900	164.00	17	2	9.50	0.00	9.50	66.84	49.90	52.30	59.43	55.77	24.54	25.58	8.53
AUS00900	164.00	17	3	11.10	0.00	11.10	66.84	49.90	52.30	55.06	55.31	26.17	25.58	10.13
AUS00900	164.00	17	4	9.23	0.00	9.23	66.84	49.90	52.30	57.10	44.69	24.31	25.58	8.25
AUS00900	164.00	17	5	9.94	0.00	9.94	66.84	49.90	52.30	57.49	57.00	24.98	25.58	8.96
AUS00900	164.00	17	6	13.35	0.00	13.35	66.84	49.90	52.30	58.71	53.61	28.44	25.58	12.40
AUS00900	164.00	21	1	13.62	0.00	13.62	66.81	52.28	52.30	59.25	48.95	28.73	26.82	12.67
AUS00900	164.00	21	2	9.51	0.00	9.51	66.81	52.28	52.30	59.79	55.71	24.54	26.82	8.53
AUS00900	164.00	21	3	11.11	0.00	11.11	66.81	52.28	52.30	55.22	55.51	26.17	26.82	10.13
AUS00900	164.00	21	4	9.24	0.00	9.24	66.81	52.28	52.30	57.42	44.66	24.31	26.82	8.25
AUS00900	164.00	21	5	9.95	0.00	9.95	66.81	52.28	52.30	57.71	57.21	24.98	26.82	8.96
AUS00900	164.00	21	6	13.37	0.00	13.37	66.81	52.28	52.30	59.05	53.54	28.44	26.82	12.40

E2WA7DA1	29.00	1	1	-11.53	-11.48	-0.05	25.69		24.79	19.45		24.55	-14.38	-11.58	*
E2WA7DA1	29.00	1	2	-11.26	-11.17	-0.09	25.69		24.79	19.82		21.61	-14.38	-11.25	*
E2WA7DA1	29.00	1	3	-13.65	-12.88	-0.77	25.69		24.79	16.99		18.12	-14.38	-14.10	*
E2WA7DA1	29.00	1	4	-8.72	-8.65	-0.07	25.69		24.79	23.47		21.69	-14.38	-7.70	*
E2WA7DA1	29.00	1	5	-13.47	-13.35	-0.12	25.69		24.79	17.13		23.62	-14.38	-13.89	*
E2WA7DA1	29.00	1	6	-12.59	-12.27	-0.32	25.69		24.79	18.20		20.12	-14.38	-12.87	*
E2WA7DA1	29.00	1	7	-12.19	-12.16	-0.03	25.69		24.79	18.63		26.41	-14.38	-12.39	*
E2WA7DA1	29.00	1	8	-13.40	-13.38	-0.02	25.69		24.79	17.20		25.88	-14.38	-13.81	*
E2WA7DA1	29.00	1	9	-13.07	-12.67	-0.40	25.69		24.79	17.61		21.30	-14.38	-13.43	*
E2WA7DA1	29.00	1	10	-8.94	-8.88	-0.06	25.69		24.79	23.11		22.08	-14.38	-8.03	*
E2WA7DA1	29.00	3	1	-9.80	-9.84	0.04	25.71	24.77	23.95	21.87	24.53	24.74	-14.44	-9.25	*
E2WA7DA1	29.00	3	2	-9.83	-9.84	0.01	25.71	24.77	23.95	21.94	21.58	21.70	-14.44	-9.29	*
E2WA7DA1	29.00	3	3	-11.98	-11.96	-0.02	25.71	24.77	23.95	19.51	18.10	12.74	-14.44	-12.11	*
E2WA7DA1	29.00	3	4	-6.86	-6.74	-0.12	25.71	24.77	23.95	27.85	21.66	21.76	-14.44	-3.96	*
E2WA7DA1	29.00	3	5	-10.27	-10.29	0.02	25.71	24.77	23.95	21.22	23.59	24.11	-14.44	-9.90	*
E2WA7DA1	29.00	3	6	-11.60	-11.78	0.18	25.71	24.77	23.95	19.65	20.10	16.88	-14.44	-11.64	*
E2WA7DA1	29.00	3	7	-9.42	-9.44	0.02	25.71	24.77	23.95	22.46	26.38	22.47	-14.44	-8.69	*
E2WA7DA1	29.00	3	8	-11.33	-11.34	0.01	25.71	24.77	23.95	19.79	25.85	22.59	-14.44	-11.30	*
E2WA7DA1	29.00	3	9	-11.26	-11.37	0.11	25.71	24.77	23.95	20.05	21.27	17.72	-14.44	-11.21	*
E2WA7DA1	29.00	3	10	-6.91	-6.89	-0.02	25.71	24.77	23.95	27.59	22.05	22.44	-14.44	-4.10	*
E2WA7DA1	29.00	5	1	-11.73	-11.69	-0.04	25.69	23.93	24.79	19.27	24.71	24.50	-14.46	-11.80	*
E2WA7DA1	29.00	5	2	-11.47	-11.37	-0.10	25.69	23.93	24.79	19.66	21.67	21.54	-14.46	-11.47	*
E2WA7DA1	29.00	5	3	-14.01	-13.07	-0.94	25.69	23.93	24.79	16.87	12.72	18.08	-14.46	-14.48	*
E2WA7DA1	29.00	5	4	-8.91	-8.85	-0.06	25.69	23.93	24.79	23.42	21.73	21.62	-14.46	-7.90	*
E2WA7DA1	29.00	5	5	-13.65	-13.53	-0.12	25.69	23.93	24.79	16.97	24.08	23.57	-14.46	-14.07	*
E2WA7DA1	29.00	5	6	-12.85	-12.47	-0.38	25.69	23.93	24.79	18.06	16.85	20.06	-14.46	-13.15	*
E2WA7DA1	29.00	5	7	-12.37	-12.35	-0.02	25.69	23.93	24.79	18.48	22.44	26.36	-14.46	-12.58	*
E2WA7DA1	29.00	5	8	-13.60	-13.58	-0.02	25.69	23.93	24.79	17.03	22.56	25.84	-14.46	-14.02	*
E2WA7DA1	29.00	5	9	-13.31	-12.88	-0.43	25.69	23.93	24.79	17.47	17.69	21.23	-14.46	-13.68	*
E2WA7DA1	29.00	5	10	-9.10	-9.05	-0.05	25.69	23.93	24.79	23.06	22.41	22.00	-14.46	-8.20	*
E2WA7DA1	29.00	7	1	-9.82	-9.86	0.04	25.71	24.77	23.95	21.84	24.47	24.65	-14.44	-9.27	*
E2WA7DA1	29.00	7	2	-9.85	-9.87	0.02	25.71	24.77	23.95	21.91	21.51	21.64	-14.44	-9.32	*
E2WA7DA1	29.00	7	3	-12.01	-12.01	0.00	25.71	24.77	23.95	19.48	18.05	12.73	-14.44	-12.14	*
E2WA7DA1	29.00	7	4	-6.86	-6.74	-0.12	25.71	24.77	23.95	27.85	21.60	21.66	-14.44	-3.98	*
E2WA7DA1	29.00	7	5	-10.27	-10.29	0.02	25.71	24.77	23.95	21.21	23.54	24.04	-14.44	-9.91	*
E2WA7DA1	29.00	7	6	-11.64	-11.82	0.18	25.71	24.77	23.95	19.61	20.03	16.86	-14.44	-11.69	*
E2WA7DA1	29.00	7	7	-9.42	-9.44	0.02	25.71	24.77	23.95	22.46	26.33	22.38	-14.44	-8.69	*
E2WA7DA1	29.00	7	8	-11.34	-11.36	0.02	25.71	24.77	23.95	19.77	25.81	22.55	-14.44	-11.31	*
E2WA7DA1	29.00	7	9	-11.29	-11.40	0.11	25.71	24.77	23.95	20.02	21.20	17.69	-14.44	-11.24	*
E2WA7DA1	29.00	7	10	-6.92	-6.90	-0.02	25.71	24.77	23.95	27.59	21.98	22.34	-14.44	-4.11	*
E2WA7DA1	29.00	9	1	-11.79	-11.75	-0.04	25.69	23.93	24.79	19.19	24.62	24.48	-14.46	-11.87	*
E2WA7DA1	29.00	9	2	-11.53	-11.43	-0.10	25.69	23.93	24.79	19.59	21.61	21.53	-14.46	-11.54	*
E2WA7DA1	29.00	9	3	-14.06	-13.13	-0.93	25.69	23.93	24.79	16.81	12.70	18.08	-14.46	-14.54	*
E2WA7DA1	29.00	9	4	-8.95	-8.90	-0.05	25.69	23.93	24.79	23.34	21.63	21.56	-14.46	-7.97	*
E2WA7DA1	29.00	9	5	-13.70	-13.58	-0.12	25.69	23.93	24.79	16.92	24.01	23.52	-14.46	-14.13	*
E2WA7DA1	29.00	9	6	-12.91	-12.53	-0.38	25.69	23.93	24.79	17.99	16.83	20.05	-14.46	-13.21	*
E2WA7DA1	29.00	9	7	-12.43	-12.41	-0.02	25.69	23.93	24.79	18.41	22.35	26.29	-14.46	-12.65	*
E2WA7DA1	29.00	9	8	-13.66	-13.64	-0.02	25.69	23.93	24.79	16.96	22.52	25.79	-14.46	-14.09	*
E2WA7DA1	29.00	9	9	-13.36	-12.93	-0.43	25.69	23.93	24.79	17.40	17.66	21.22	-14.46	-13.74	*
E2WA7DA1	29.00	9	10	-9.15	-9.10	-0.05	25.69	23.93	24.79	22.99	22.31	21.92	-14.46	-8.27	*
E2WA7DA1	29.00	11	1	-9.82	-9.85	0.03	25.71	24.77	23.95	21.84	24.45	24.65	-14.44	-9.28	*
E2WA7DA1	29.00	11	2	-9.86	-9.85	-0.01	25.71	24.77	23.95	21.91	21.50	21.41	-14.44	-9.33	*
E2WA7DA1	29.00	11	3	-12.01	-11.99	-0.02	25.71	24.77	23.95	19.47	18.05	12.77	-14.44	-12.14	*
E2WA7DA1	29.00	11	4	-6.87	-6.71	-0.16	25.71	24.77	23.95	27.84	21.53	21.56	-14.44	-4.00	*
E2WA7DA1	29.00	11	5	-10.28	-10.28	0.00	25.71	24.77	23.95	21.21	23.50	24.04	-14.44	-9.91	*
E2WA7DA1	29.00	11	6	-11.64	-11.81	0.17	25.71	24.77	23.95	19.60	20.03	16.96	-14.44	-11.69	*
E2WA7DA1	29.00	11	7	-9.42	-9.42	0.00	25.71	24.77	23.95	22.46	26.27	22.38	-14.44	-8.70	*
E2WA7DA1	29.00	11	8	-11.34	-11.35	0.01	25.71	24.77	23.95	19.77	25.76	22.50	-14.44	-11.32	*
E2WA7DA1	29.00	11	9	-11.29	-11.39	0.10	25.71	24.77	23.95	20.02	21.19	17.73	-14.44	-11.24	*
E2WA7DA1	29.00	11	10	-6.92	-6.87	-0.05	25.71	24.77	23.95	27.58	21.89	22.34	-14.44	-4.13	*
E2WA7DA1	29.00	13	1	-11.85	-11.82	-0.03	25.69	23.93	24.79	19.11	24.62	24.25	-14.46	-11.95	*
E2WA7DA1	29.00	13	2	-11.60	-11.50	-0.10	25.69	23.93	24.79	19.51	21.38	20.81	-14.46	-11.64	*
E2WA7DA1	29.00	13	3	-14.11	-13.20	-0.91	25.69	23.93	24.79	16.75	12.75	18.02	-14.46	-14.60	*
E2WA7DA1	29.00	13	4	-9.03	-8.97	-0.06	25.69	23.93	24.79	23.25	21.53	20.73	-14.46	-8.09	*
E2WA7DA1	29.00	13	5	-13.77	-13.65	-0.12	25.69	23.93	24.79	16.84	24.01	23.48	-14.46	-14.21	*
E2WA7DA1	29.00	13	6	-12.97	-12.60	-0.37	25.69	23.93	24.79	17.92	16.93	19.89	-14.46	-13.28	*
E2WA7DA1	29.00	13	7	-12.50	-12.48	-0.02	25.69	23.93	24.79	18.33	22.35	26.20	-14.46	-12.73	*
E2WA7DA1	29.00	13	8	-13.73	-13.71	-0.02	25.69	23.93	24.79	16.88	22.47	25.77	-14.46	-14.16	*
E2WA7DA1	29.00	13	9	-13.42	-13.00	-0.42	25.69	23.93	24.79	17.33	17.71	21.16	-14.46	-13.81	*
E2WA7DA1	29.00	13	10	-9.21	-9.17	-0.04	25.69	23.93	24.79	22.89	22.31	21.59	-14.46	-8.37	*
E2WA7DA1	29.00	15	1	-9.77	-9.81	0.04	25.71	24.77	23.95	21.92	24.22	24.56	-14.44	-9.20	*
E2WA7DA1	29.00	15	2	-9.84	-9.86	0.02	25.71	24.77	23.95	21.95	20.78	21.34	-14.44	-9.31	*
E2WA7DA1	29.00	15	3	-11.99	-11.99	0.00	25.71	24.77	23.95	19.50	18.00	12.76	-14.44	-12.12	*
E2WA7DA1	29.00	15	4	-6.86	-6.72	-0.14	25.71	24.77	23.95	27.99	20.70	21.47	-14.44	-3.97	*
E2WA7DA1	29.00	15	5	-10.20	-10.22	0.02	25.71	24.77	23.95	21.31	23.45	23.96	-14.44	-9.81	*
E2WA7DA1	29.00	15	6	-11.63	-11.82	0.19	25.71	24.77	23.95	19.62	19.87	16.93	-14.44	-11.68	*
E2WA7DA1	29.00	15	7	-9.33	-9.34	0.01	25.71	24.77	23.95	22.61	26.17	22.28	-14.44	-8.56	*
E2WA7DA1	29.00	15	8	-11.28	-11.29	0.01	25.71	24.77	23.95	19.85	25.74	22.45	-14.44	-11.24	*
E2WA7DA1	29.00	15	9	-11.25	-11.37	0.12	25.71	24.77	23.95	20.06	21.13	17.70	-14.44	-11.20	*
E2WA7DA1	29.00	15	10	-6.87	-6.83	-0.04	25.71	24.77	23.95	27.77	21.56	22.24	-14.44	-4.00	*
E2WA7DA1	29.00	17	1	-11.85	-11.81	-0.04	25.69	23.93	24.79	19.11	24.53	24.23	-14.46	-11.95	*
E2WA7DA1	29.00	17	2	-11.60	-11.50	-0.10	25.69	23.93	24.79	19.52	21.31	20.79	-14.46	-11.64	*
E2WA7DA1	29.00	17	3	-14.11	-13.20	-0.91	25.69	23.93	24.79	16.74	12.73	18.02	-14.46	-14.60	*
E2WA7DA1	29.00	17	4	-9.03	-8.96	-0.07	25.69	23.93	24.79	23.26	21.44	20.67	-14.46	-8.09	*
E2WA7DA1	29.00	17	5	-13.78	-13.66	-0.12	25.69	23.93	24.79	16.82	23.93	23.45	-14.46	-14.23	*
E2WA7DA1	29.00	17	6	-12.97	-12.59	-0.38	25.69	23.93	24.79	17.92	16.90	19.88	-14.46	-13.28	*
E2WA7DA1	29.00	17	7	-12.50	-12.48	-0.02	25.69	23.93	24.79	18.33	22.26	26.12	-14.46	-12.73	*
E2WA7DA1	29.00	17	8	-13.73	-13.70	-0.03	25.69	23.93	24.79	16.88	22.43	25.72	-14.46	-14.16	*
E2WA7DA1	29.00	17	9	-13.43	-13.00	-0.43	25.69	23.93	24.79	17.33	17.67	21.14	-14.46	-13.82	*
E2WA7DA1	29.00	17	10	-9.21	-9.16	-0.05	25.69	23.93	24.79	22.89	22.21	21.51	-14.46	-8.37	*
E2WA7DA1	29.00	19	1	-9.55	-8.08	-1.47	25.71	24.77	38.62	22.17	24.20	25.28	-14.36	-8.95	*
E2WA7DA1	29.00	19	2	-9.67	-8.19	-1.48	25.71	24.77	38.62	22.13	20.77	21.80	-14.36	-9.12	*
E2WA7DA1	29.00	19	3	-11.84	-11.00	-0.84	25.71	24.77	38.62	19.66	17.99	12.84	-14.36	-11.98	*
E2WA7DA1	29.00	19	4	-6.67	-2.50	-4.17	25.71	24.77	38.62	28.27	20.64	21.95	-14.36	-3.71	*

E2WA7DA1	29.00	19	5	-9.95	-8.57	-1.38	25.71	24.77	38.62	21.59	23.42	25.41	-14.36	-9.52 |*
E2WA7DA1	29.00	19	6	-11.49	-10.80	-0.69	25.71	24.77	38.62	19.76	19.86	17.11	-14.36	-11.53 |*
E2WA7DA1	29.00	19	7	-9.05	-7.30	-1.75	25.71	24.77	38.62	22.94	26.10	22.86	-14.36	-8.22 |*
E2WA7DA1	29.00	19	8	-11.06	-10.04	-1.02	25.71	24.77	38.62	20.09	25.70	23.16	-14.36	-11.00 |*
E2WA7DA1	29.00	19	9	-11.07	-10.20	-0.87	25.71	24.77	38.62	20.25	21.11	17.92	-14.36	-11.02 |*
E2WA7DA1	29.00	19	10	-6.66	-2.78	-3.88	25.71	24.77	38.62	28.11	21.48	22.74	-14.36	-3.69 |*
E2WA7DA1	29.00	21	1	-19.78	-19.79	0.01	43.00	38.60	-5.60	24.39	25.25	23.76	-26.60	-6.82 |*
E2WA7DA1	29.00	21	2	-19.87	-19.88	0.01	43.00	38.60	-5.60	22.67	21.78	21.14	-26.60	-8.61 |*
E2WA7DA1	29.00	21	3	-19.94	-20.01	0.07	43.00	38.60	-5.60	22.30	12.81	21.01	-26.60	-9.69 |*
E2WA7DA1	29.00	21	4	-19.62	-19.63	0.01	43.00	38.60	-5.60	39.70	21.93	20.79	-26.60	2.21 |*
E2WA7DA1	29.00	21	5	-19.78	-19.83	0.05	43.00	38.60	-5.60	24.39	25.38	23.70	-26.60	-6.82 |*
E2WA7DA1	29.00	21	6	-19.91	-19.94	0.03	43.00	38.60	-5.60	22.23	17.08	21.31	-26.60	-9.23 |*
E2WA7DA1	29.00	21	7	-19.67	-19.67	0.00	43.00	38.60	-5.60	29.35	22.83	22.57	-26.60	-2.56 |*
E2WA7DA1	29.00	21	8	-19.82	-19.83	0.01	43.00	38.60	-5.60	23.44	23.13	23.71	-26.60	-7.77 |*
E2WA7DA1	29.00	21	9	-19.85	-19.91	0.06	43.00	38.60	-5.60	23.24	17.89	21.95	-26.60	-8.25 |*
E2WA7DA1	29.00	21	10	-19.62	-19.62	0.00	43.00	38.60	-5.60	40.74	22.71	22.08	-26.60	3.27 |*
E2WA7DA1	29.00	23	1	-22.75	-22.76	0.01	47.46	-5.62	-5.60	22.64	23.73	26.10	-29.62	-8.49 |*
E2WA7DA1	29.00	23	2	-22.82	-22.82	0.00	47.46	-5.62	-5.60	20.79	21.11	21.96	-29.62	-10.39 |*
E2WA7DA1	29.00	23	3	-22.82	-22.82	0.00	47.46	-5.62	-5.60	20.87	20.98	22.41	-29.62	-10.31 |*
E2WA7DA1	29.00	23	4	-22.77	-22.78	0.01	47.46	-5.62	-5.60	22.00	20.76	24.08	-29.62	-9.21 |*
E2WA7DA1	29.00	23	5	-22.79	-22.82	0.03	47.46	-5.62	-5.60	21.33	23.68	22.53	-29.62	-9.82 |*
E2WA7DA1	29.00	23	6	-22.81	-22.81	0.00	47.46	-5.62	-5.60	20.91	21.28	22.23	-29.62	-10.27 |*
E2WA7DA1	29.00	23	7	-22.70	-22.70	0.00	47.46	-5.62	-5.60	25.01	22.54	30.35	-29.62	-6.21 |*
E2WA7DA1	29.00	23	8	-22.77	-22.78	0.01	47.46	-5.62	-5.60	21.94	23.68	26.96	-29.62	-9.16 |*
E2WA7DA1	29.00	23	9	-22.76	-22.79	0.03	47.46	-5.62	-5.60	22.38	21.92	23.54	-29.62	-8.82 |*
E2WA7DA1	29.00	23	10	-22.74	-22.75	0.01	47.46	-5.62	-5.60	22.86	22.05	27.45	-29.62	-8.31 |*
E2WA7DA1	29.00	25	1	-22.71	-22.71	0.00	40.87	-5.62	-5.60	24.42	26.07	23.80	-29.62	-6.78 |*
E2WA7DA1	29.00	25	2	-22.75	-22.76	0.01	40.87	-5.62	-5.60	22.68	21.93	21.24	-29.62	-8.59 |*
E2WA7DA1	29.00	25	3	-22.77	-22.83	0.06	40.87	-5.62	-5.60	22.15	22.38	21.03	-29.62	-9.09 |*
E2WA7DA1	29.00	25	4	-22.63	-22.63	0.00	40.87	-5.62	-5.60	38.12	24.05	20.83	-29.62	2.37 |*
E2WA7DA1	29.00	25	5	-22.71	-22.74	0.03	40.87	-5.62	-5.60	24.24	22.50	23.67	-29.62	-7.04 |*
E2WA7DA1	29.00	25	6	-22.77	-22.79	0.02	40.87	-5.62	-5.60	22.19	22.20	21.36	-29.62	-9.05 |*
E2WA7DA1	29.00	25	7	-22.65	-22.66	0.01	40.87	-5.62	-5.60	28.81	30.32	22.58	-29.62	-2.69 |*
E2WA7DA1	29.00	25	8	-22.73	-22.73	0.00	40.87	-5.62	-5.60	23.35	26.93	23.70	-29.62	-7.80 |*
E2WA7DA1	29.00	25	9	-22.74	-22.78	0.04	40.87	-5.62	-5.60	23.10	23.51	21.96	-29.62	-8.13 |*
E2WA7DA1	29.00	25	10	-22.63	-22.63	0.00	40.87	-5.62	-5.60	38.07	27.42	22.10	-29.62	3.48 |*
E2WA7DA1	29.00	27	1	-22.74	-22.74	0.00	42.59	-5.62	-5.60	22.98	23.77	26.29	-29.62	-8.16 |*
E2WA7DA1	29.00	27	2	-22.81	-22.82	0.01	42.59	-5.62	-5.60	20.97	21.21	22.33	-29.62	-10.21 |*
E2WA7DA1	29.00	27	3	-22.75	-22.76	0.01	42.59	-5.62	-5.60	22.81	21.00	22.45	-29.62	-8.47 |*
E2WA7DA1	29.00	27	4	-22.77	-22.78	0.01	42.59	-5.62	-5.60	22.06	20.81	24.41	-29.62	-9.15 |*
E2WA7DA1	29.00	27	5	-22.82	-22.85	0.03	42.59	-5.62	-5.60	20.67	23.65	22.45	-29.62	-10.45 |*
E2WA7DA1	29.00	27	6	-22.78	-22.78	0.00	42.59	-5.62	-5.60	21.85	21.33	22.39	-29.62	-9.37 |*
E2WA7DA1	29.00	27	7	-22.70	-22.70	0.00	42.59	-5.62	-5.60	25.04	22.55	30.56	-29.62	-6.18 |*
E2WA7DA1	29.00	27	8	-22.73	-22.73	0.00	42.59	-5.62	-5.60	23.39	23.67	26.91	-29.62	-7.76 |*
E2WA7DA1	29.00	27	9	-22.70	-22.73	0.03	42.59	-5.62	-5.60	25.19	21.93	23.53	-29.62	-6.19 |*
E2WA7DA1	29.00	27	10	-22.74	-22.75	0.01	42.59	-5.62	-5.60	22.92	22.07	27.72	-29.62	-8.24 |*
E2WA7DA1	29.00	29	1	-22.70	-22.70	0.00	40.53	-5.62	-5.60	24.92	26.26	23.84	-29.62	-6.29 |*
E2WA7DA1	29.00	29	2	-22.74	-22.75	0.01	40.53	-5.62	-5.60	23.14	22.30	21.41	-29.62	-8.14 |*
E2WA7DA1	29.00	29	3	-22.77	-22.84	0.07	40.53	-5.62	-5.60	22.18	22.42	21.00	-29.62	-9.06 |*
E2WA7DA1	29.00	29	4	-22.63	-22.63	0.00	40.53	-5.62	-5.60	37.92	24.38	20.91	-29.62	2.41 |*
E2WA7DA1	29.00	29	5	-22.71	-22.74	0.03	40.53	-5.62	-5.60	24.22	22.42	23.62	-29.62	-7.06 |*
E2WA7DA1	29.00	29	6	-22.76	-22.80	0.04	40.53	-5.62	-5.60	22.44	22.36	21.39	-29.62	-8.80 |*
E2WA7DA1	29.00	29	7	-22.65	-22.66	0.01	40.53	-5.62	-5.60	28.98	30.53	22.59	-29.62	-2.54 |*
E2WA7DA1	29.00	29	8	-22.73	-22.74	0.01	40.53	-5.62	-5.60	23.35	26.88	23.63	-29.62	-7.80 |*
E2WA7DA1	29.00	29	9	-22.74	-22.79	0.05	40.53	-5.62	-5.60	23.13	23.50	21.90	-29.62	-8.10 |*
E2WA7DA1	29.00	29	10	-22.63	-22.63	0.00	40.53	-5.62	-5.60	38.03	27.69	22.14	-29.62	3.51 |*
E2WA7DA1	29.00	31	1	-22.74	-22.75	0.01	42.59	-5.62	-5.60	22.92	23.81	24.02	-29.62	-8.25 |*
E2WA7DA1	29.00	31	2	-22.82	-22.83	0.01	42.59	-5.62	-5.60	20.90	21.38	18.87	-29.62	-10.36 |*
E2WA7DA1	29.00	31	3	-22.75	-22.76	0.01	42.59	-5.62	-5.60	22.81	20.97	21.25	-29.62	-8.50 |*
E2WA7DA1	29.00	31	4	-22.78	-22.79	0.01	42.59	-5.62	-5.60	21.92	20.89	21.45	-29.62	-9.33 |*
E2WA7DA1	29.00	31	5	-22.83	-22.85	0.02	42.59	-5.62	-5.60	20.61	23.59	22.39	-29.62	-10.52 |*
E2WA7DA1	29.00	31	6	-22.78	-22.78	0.00	42.59	-5.62	-5.60	21.82	21.36	20.28	-29.62	-9.45 |*
E2WA7DA1	29.00	31	7	-22.70	-22.70	0.00	42.59	-5.62	-5.60	25.03	22.56	28.32	-29.62	-6.21 |*
E2WA7DA1	29.00	31	8	-22.73	-22.73	0.00	42.59	-5.62	-5.60	23.39	23.61	26.69	-29.62	-7.76 |*
E2WA7DA1	29.00	31	9	-22.70	-22.73	0.03	42.59	-5.62	-5.60	25.19	21.87	22.76	-29.62	-6.22 |*
E2WA7DA1	29.00	31	10	-22.75	-22.75	0.00	42.59	-5.62	-5.60	22.77	22.11	25.15	-29.62	-8.41 |*
E2WA7DA1	29.00	33	1	-22.71	-22.71	0.00	40.53	-5.62	-5.60	24.60	23.99	24.58	-29.62	-6.63 |*
E2WA7DA1	29.00	33	2	-22.75	-22.77	0.02	40.53	-5.62	-5.60	22.82	18.85	23.19	-29.62	-8.53 |*
E2WA7DA1	29.00	33	3	-22.77	-22.85	0.08	40.53	-5.62	-5.60	22.08	21.22	21.03	-29.62	-9.19 |*
E2WA7DA1	29.00	33	4	-22.63	-22.64	0.01	40.53	-5.62	-5.60	37.87	21.42	21.92	-29.62	1.96 |*
E2WA7DA1	29.00	33	5	-22.72	-22.74	0.02	40.53	-5.62	-5.60	24.17	22.36	23.55	-29.62	-7.11 |*
E2WA7DA1	29.00	33	6	-22.77	-22.80	0.03	40.53	-5.62	-5.60	22.23	20.25	21.81	-29.62	-9.06 |*
E2WA7DA1	29.00	33	7	-22.65	-22.66	0.01	40.53	-5.62	-5.60	28.86	28.29	22.78	-29.62	-2.67 |*
E2WA7DA1	29.00	33	8	-22.73	-22.74	0.01	40.53	-5.62	-5.60	23.29	26.66	23.59	-29.62	-7.86 |*
E2WA7DA1	29.00	33	9	-22.74	-22.79	0.05	40.53	-5.62	-5.60	23.04	22.74	21.93	-29.62	-8.21 |*
E2WA7DA1	29.00	33	10	-22.63	-22.63	0.00	40.53	-5.62	-5.60	38.02	25.12	22.62	-29.62	3.29 |*
E2WA7DA1	29.00	35	1	-22.74	-22.75	0.01	42.59	-5.62	-5.60	22.90	24.55	25.81	-29.62	-8.23 |*
E2WA7DA1	29.00	35	2	-22.81	-22.83	0.02	42.59	-5.62	-5.60	20.90	23.16	21.52	-29.62	-10.26 |*
E2WA7DA1	29.00	35	3	-22.75	-22.76	0.01	42.59	-5.62	-5.60	22.78	21.00	22.16	-29.62	-8.50 |*
E2WA7DA1	29.00	35	4	-22.77	-22.78	0.01	42.59	-5.62	-5.60	21.99	21.89	23.73	-29.62	-9.20 |*
E2WA7DA1	29.00	35	5	-22.83	-22.86	0.03	42.59	-5.62	-5.60	20.58	23.52	22.34	-29.62	-10.55 |*
E2WA7DA1	29.00	35	6	-22.78	-22.78	0.00	42.59	-5.62	-5.60	21.80	21.78	21.93	-29.62	-9.41 |*
E2WA7DA1	29.00	35	7	-22.70	-22.70	0.00	42.59	-5.62	-5.60	24.97	22.76	30.11	-29.62	-6.24 |*
E2WA7DA1	29.00	35	8	-22.73	-22.74	0.01	42.59	-5.62	-5.60	23.30	23.57	26.78	-29.62	-7.85 |*
E2WA7DA1	29.00	35	9	-22.70	-22.73	0.03	42.59	-5.62	-5.60	25.13	21.90	23.31	-29.62	-6.25 |*
E2WA7DA1	29.00	35	10	-22.74	-22.75	0.01	42.59	-5.62	-5.60	22.84	22.59	27.15	-29.62	-8.31 |*
E2WA7DA1	29.00	37	1	-22.71	-22.72	0.01	40.53	-5.62	-5.60	24.16	25.79	24.23	-29.62	-7.02 |*
E2WA7DA1	29.00	37	2	-22.76	-22.77	0.01	40.53	-5.62	-5.60	22.42	21.50	22.21	-29.62	-8.82 |*
E2WA7DA1	29.00	37	3	-22.77	-22.85	0.08	40.53	-5.62	-5.60	22.02	22.13	21.26	-29.62	-9.21 |*
E2WA7DA1	29.00	37	4	-22.63	-22.64	0.01	40.53	-5.62	-5.60	37.77	23.71	20.55	-29.62	2.05 |*
E2WA7DA1	29.00	37	5	-22.72	-22.75	0.03	40.53	-5.62	-5.60	24.13	22.31	23.95	-29.62	-7.14 |*
E2WA7DA1	29.00	37	6	-22.77	-22.81	0.04	40.53	-5.62	-5.60	21.99	21.90	22.08	-29.62	-9.22 |*
E2WA7DA1	29.00	37	7	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.68	30.08	22.60	-29.62	-2.81 |*
E2WA7DA1	29.00	37	8	-22.73	-22.74	0.01	40.53	-5.62	-5.60	23.24	26.75	23.43	-29.62	-7.91 |*

E2WA7DA1	29.00	37	9	-22.74	-22.79	0.05	40.53	-5.62	-5.60	22.99	23.29	22.02	-29.62	-8.24	*
E2WA7DA1	29.00	37	10	-22.63	-22.63	0.00	40.53	-5.62	-5.60	37.94	27.12	21.99	-29.62	3.34	*
E2WA7DA1	29.00	39	1	-22.75	-22.75	0.00	42.58	-5.62	-5.60	22.73	24.21	23.21	-29.62	-8.44	*
E2WA7DA1	29.00	39	2	-22.83	-22.84	0.01	42.58	-5.62	-5.60	20.78	22.18	17.82	-29.62	-10.51	*
E2WA7DA1	29.00	39	3	-22.75	-22.77	0.02	42.58	-5.62	-5.60	22.65	21.24	20.70	-29.62	-8.66	*
E2WA7DA1	29.00	39	4	-22.78	-22.79	0.01	42.58	-5.62	-5.60	21.84	20.52	20.48	-29.62	-9.45	*
E2WA7DA1	29.00	39	5	-22.83	-22.86	0.03	42.58	-5.62	-5.60	20.41	23.92	22.26	-29.62	-10.70	*
E2WA7DA1	29.00	39	6	-22.79	-22.79	0.00	42.58	-5.62	-5.60	21.68	22.05	19.49	-29.62	-9.59	*
E2WA7DA1	29.00	39	7	-22.70	-22.71	0.01	42.58	-5.62	-5.60	24.71	22.58	27.52	-29.62	-6.52	*
E2WA7DA1	29.00	39	8	-22.74	-22.74	0.00	42.58	-5.62	-5.60	23.06	23.40	26.50	-29.62	-8.09	*
E2WA7DA1	29.00	39	9	-22.70	-22.73	0.03	42.58	-5.62	-5.60	24.90	21.99	22.37	-29.62	-6.49	*
E2WA7DA1	29.00	39	10	-22.75	-22.76	0.01	42.58	-5.62	-5.60	22.67	21.96	24.26	-29.62	-8.53	*
E2WA7DA2	29.00	2	1	-9.84	-9.76	-0.08	25.82	23.93	23.50	21.76	26.12	24.62	-14.36	-9.33	*
E2WA7DA2	29.00	2	2	-10.91	-10.80	-0.11	25.82	23.93	23.50	20.33	23.52	23.11	-14.36	-10.77	*
E2WA7DA2	29.00	2	3	-12.21	-11.69	-0.52	25.82	23.93	23.50	19.06	13.28	20.60	-14.36	-12.40	*
E2WA7DA2	29.00	2	4	-10.17	-10.09	-0.08	25.82	23.93	23.50	21.30	23.33	29.26	-14.36	-9.78	*
E2WA7DA2	29.00	2	5	-10.69	-10.54	-0.15	25.82	23.93	23.50	20.73	18.83	24.58	-14.36	-10.48	*
E2WA7DA2	29.00	2	6	-11.89	-11.71	-0.18	25.82	23.93	23.50	19.21	17.64	20.67	-14.36	-12.02	*
E2WA7DA2	29.00	2	7	-9.27	-9.18	-0.09	25.82	23.93	23.50	22.60	25.63	26.95	-14.36	-8.49	*
E2WA7DA2	29.00	2	8	-10.28	-10.21	-0.07	25.82	23.93	23.50	21.21	22.97	22.56	-14.36	-9.94	*
E2WA7DA2	29.00	2	9	-11.37	-11.10	-0.27	25.82	23.93	23.50	19.96	16.18	21.83	-14.36	-11.36	*
E2WA7DA2	29.00	2	10	-9.98	-9.90	-0.08	25.82	23.93	23.50	21.51	29.04	31.00	-14.36	-9.52	*
E2WA7DA2	29.00	4	1	-9.78	-9.79	0.01	25.79	23.48	23.94	21.87	24.59	26.12	-14.39	-9.23	*
E2WA7DA2	29.00	4	2	-10.18	-10.12	-0.06	25.79	23.48	23.94	21.34	23.08	23.53	-14.39	-9.80	*
E2WA7DA2	29.00	4	3	-12.92	-11.75	-1.17	25.79	23.48	23.94	18.14	20.57	13.30	-14.39	-13.24	*
E2WA7DA2	29.00	4	4	-10.13	-10.16	0.03	25.79	23.48	23.94	21.36	29.23	23.33	-14.39	-9.73	*
E2WA7DA2	29.00	4	5	-10.34	-10.26	-0.08	25.79	23.48	23.94	21.23	24.56	18.82	-14.39	-10.01	*
E2WA7DA2	29.00	4	6	-11.43	-10.96	-0.47	25.79	23.48	23.94	19.83	20.64	17.66	-14.39	-11.44	*
E2WA7DA2	29.00	4	7	-10.73	-10.75	0.02	25.79	23.48	23.94	20.52	26.93	25.62	-14.39	-10.54	*
E2WA7DA2	29.00	4	8	-11.31	-11.33	0.02	25.79	23.48	23.94	19.83	22.53	22.97	-14.39	-11.28	*
E2WA7DA2	29.00	4	9	-11.74	-11.35	-0.39	25.79	23.48	23.94	19.46	21.80	16.20	-14.39	-11.82	*
E2WA7DA2	29.00	4	10	-9.77	-9.79	0.02	25.79	23.48	23.94	21.82	30.97	29.00	-14.39	-9.21	*
E2WA7DA2	29.00	6	1	-9.87	-9.78	-0.09	25.82	23.93	23.50	21.73	26.09	24.57	-14.36	-9.36	*
E2WA7DA2	29.00	6	2	-10.95	-10.84	-0.11	25.82	23.93	23.50	20.29	23.50	23.07	-14.36	-10.82	*
E2WA7DA2	29.00	6	3	-12.25	-11.74	-0.51	25.82	23.93	23.50	19.01	13.27	20.56	-14.36	-12.45	*
E2WA7DA2	29.00	6	4	-10.21	-10.13	-0.08	25.82	23.93	23.50	21.24	23.31	29.26	-14.36	-9.84	*
E2WA7DA2	29.00	6	5	-10.71	-10.56	-0.15	25.82	23.93	23.50	20.70	18.79	24.56	-14.36	-10.51	*
E2WA7DA2	29.00	6	6	-11.94	-11.75	-0.19	25.82	23.93	23.50	19.16	17.63	20.61	-14.36	-12.07	*
E2WA7DA2	29.00	6	7	-9.28	-9.19	-0.09	25.82	23.93	23.50	22.58	25.60	26.95	-14.36	-8.51	*
E2WA7DA2	29.00	6	8	-10.29	-10.22	-0.07	25.82	23.93	23.50	21.20	22.95	22.52	-14.36	-9.95	*
E2WA7DA2	29.00	6	9	-11.41	-11.14	-0.27	25.82	23.93	23.50	19.91	16.17	21.78	-14.36	-11.41	*
E2WA7DA2	29.00	6	10	-10.02	-9.94	-0.08	25.82	23.93	23.50	21.45	28.97	31.00	-14.36	-9.58	*
E2WA7DA2	29.00	8	1	-9.81	-9.82	0.01	25.79	23.48	23.94	21.82	24.55	26.12	-14.39	-9.28	*
E2WA7DA2	29.00	8	2	-10.22	-10.16	-0.06	25.79	23.48	23.94	21.29	23.04	23.53	-14.39	-9.85	*
E2WA7DA2	29.00	8	3	-12.96	-11.79	-1.17	25.79	23.48	23.94	18.09	20.53	13.30	-14.39	-13.28	*
E2WA7DA2	29.00	8	4	-10.20	-10.23	0.03	25.79	23.48	23.94	21.27	29.23	23.26	-14.39	-9.82	*
E2WA7DA2	29.00	8	5	-10.36	-10.29	-0.07	25.79	23.48	23.94	21.20	24.53	18.82	-14.39	-10.04	*
E2WA7DA2	29.00	8	6	-11.47	-10.99	-0.48	25.79	23.48	23.94	19.78	20.59	17.66	-14.39	-11.48	*
E2WA7DA2	29.00	8	7	-10.78	-10.80	0.02	25.79	23.48	23.94	20.46	26.92	25.62	-14.39	-10.60	*
E2WA7DA2	29.00	8	8	-11.33	-11.34	0.01	25.79	23.48	23.94	19.81	22.50	22.97	-14.39	-11.30	*
E2WA7DA2	29.00	8	9	-11.78	-11.39	-0.39	25.79	23.48	23.94	19.42	21.75	16.20	-14.39	-11.87	*
E2WA7DA2	29.00	8	10	-9.83	-9.85	0.02	25.79	23.48	23.94	21.74	30.97	29.00	-14.39	-9.29	*
E2WA7DA2	29.00	10	1	-9.87	-9.79	-0.08	25.82	23.93	23.50	21.72	26.09	24.57	-14.36	-9.37	*
E2WA7DA2	29.00	10	2	-10.95	-10.85	-0.10	25.82	23.93	23.50	20.28	23.50	23.06	-14.36	-10.83	*
E2WA7DA2	29.00	10	3	-12.26	-11.75	-0.51	25.82	23.93	23.50	19.00	13.27	20.55	-14.36	-12.46	*
E2WA7DA2	29.00	10	4	-10.25	-10.17	-0.08	25.82	23.93	23.50	21.18	23.24	29.24	-14.36	-9.90	*
E2WA7DA2	29.00	10	5	-10.72	-10.57	-0.15	25.82	23.93	23.50	20.68	18.79	24.55	-14.36	-10.53	*
E2WA7DA2	29.00	10	6	-11.94	-11.75	-0.19	25.82	23.93	23.50	19.16	17.63	20.61	-14.36	-12.07	*
E2WA7DA2	29.00	10	7	-9.30	-9.21	-0.09	25.82	23.93	23.50	22.55	25.60	26.94	-14.36	-8.54	*
E2WA7DA2	29.00	10	8	-10.30	-10.23	-0.07	25.82	23.93	23.50	21.18	22.95	22.52	-14.36	-9.97	*
E2WA7DA2	29.00	10	9	-11.41	-11.15	-0.26	25.82	23.93	23.50	19.90	16.17	21.78	-14.36	-11.42	*
E2WA7DA2	29.00	10	10	-10.07	-9.99	-0.08	25.82	23.93	23.50	21.38	28.97	30.97	-14.36	-9.65	*
E2WA7DA2	29.00	12	1	-9.81	-9.82	0.01	25.79	23.48	23.94	21.82	24.54	26.09	-14.39	-9.28	*
E2WA7DA2	29.00	12	2	-10.37	-10.32	-0.05	25.79	23.48	23.94	21.08	23.04	23.50	-14.39	-10.05	*
E2WA7DA2	29.00	12	3	-12.85	-11.65	-1.20	25.79	23.48	23.94	18.23	20.52	13.30	-14.39	-13.15	*
E2WA7DA2	29.00	12	4	-10.26	-10.30	0.04	25.79	23.48	23.94	21.18	29.21	23.17	-14.39	-9.91	*
E2WA7DA2	29.00	12	5	-10.36	-10.29	-0.07	25.79	23.48	23.94	21.20	24.52	18.78	-14.39	-10.04	*
E2WA7DA2	29.00	12	6	-11.32	-10.83	-0.49	25.79	23.48	23.94	19.98	20.58	17.65	-14.39	-11.29	*
E2WA7DA2	29.00	12	7	-10.78	-10.80	0.02	25.79	23.48	23.94	20.46	26.91	25.59	-14.39	-10.60	*
E2WA7DA2	29.00	12	8	-11.35	-11.36	0.01	25.79	23.48	23.94	19.78	22.49	22.95	-14.39	-11.33	*
E2WA7DA2	29.00	12	9	-11.73	-11.34	-0.39	25.79	23.48	23.94	19.48	21.75	16.19	-14.39	-11.80	*
E2WA7DA2	29.00	12	10	-9.83	-9.86	0.03	25.79	23.48	23.94	21.73	30.94	28.93	-14.39	-9.30	*
E2WA7DA2	29.00	14	1	-9.90	-9.81	-0.09	25.82	23.93	23.50	21.69	26.06	24.52	-14.36	-9.41	*
E2WA7DA2	29.00	14	2	-11.34	-11.25	-0.09	25.82	23.93	23.50	19.77	23.47	23.02	-14.36	-11.33	*
E2WA7DA2	29.00	14	3	-12.27	-11.76	-0.51	25.82	23.93	23.50	18.99	13.27	20.50	-14.36	-12.47	*
E2WA7DA2	29.00	14	4	-10.81	-10.73	-0.08	25.82	23.93	23.50	20.43	23.15	29.22	-14.36	-10.64	*
E2WA7DA2	29.00	14	5	-10.67	-10.52	-0.15	25.82	23.93	23.50	20.75	18.76	24.52	-14.36	-10.46	*
E2WA7DA2	29.00	14	6	-12.00	-11.82	-0.18	25.82	23.93	23.50	19.07	17.62	20.55	-14.36	-12.15	*
E2WA7DA2	29.00	14	7	-9.26	-9.17	-0.09	25.82	23.93	23.50	22.62	25.56	26.93	-14.36	-8.48	*
E2WA7DA2	29.00	14	8	-10.21	-10.14	-0.07	25.82	23.93	23.50	21.31	22.92	22.48	-14.36	-9.85	*
E2WA7DA2	29.00	14	9	-11.40	-11.13	-0.27	25.82	23.93	23.50	19.92	16.17	21.72	-14.36	-11.40	*
E2WA7DA2	29.00	14	10	-10.27	-10.19	-0.08	25.82	23.93	23.50	21.11	28.90	30.95	-14.36	-9.92	*
E2WA7DA2	29.00	16	1	-9.85	-9.86	0.01	25.79	23.48	23.94	21.77	24.49	26.10	-14.39	-9.33	*
E2WA7DA2	29.00	16	2	-10.42	-10.36	-0.06	25.79	23.48	23.94	21.01	22.99	23.50	-14.39	-10.12	*
E2WA7DA2	29.00	16	3	-12.88	-11.70	-1.18	25.79	23.48	23.94	18.19	20.47	13.30	-14.39	-13.19	*
E2WA7DA2	29.00	16	4	-10.33	-10.36	0.03	25.79	23.48	23.94	21.09	29.19	23.18	-14.39	-9.99	*
E2WA7DA2	29.00	16	5	-10.39	-10.32	-0.07	25.79	23.48	23.94	21.16	24.49	18.76	-14.39	-10.08	*
E2WA7DA2	29.00	16	6	-11.36	-10.88	-0.48	25.79	23.48	23.94	19.93	20.52	17.65	-14.39	-11.34	*
E2WA7DA2	29.00	16	7	-10.83	-10.84	0.01	25.79	23.48	23.94	20.40	26.90	25.60	-14.39	-10.66	*
E2WA7DA2	29.00	16	8	-11.36	-11.38	0.02	25.79	23.48	23.94	19.76	22.45	22.94	-14.39	-11.35	*
E2WA7DA2	29.00	16	9	-11.77	-11.38	-0.39	25.79	23.48	23.94	19.43	21.69	16.19	-14.39	-11.85	*
E2WA7DA2	29.00	16	10	-9.89	-9.92	0.03	25.79	23.48	23.94	21.65	30.92	28.94	-14.39	-9.39	*
E2WA7DA2	29.00	18	1	-9.80	-9.66	-0.14	25.82	23.93	23.50	21.83	26.07	24.52	-14.36	-9.27	*

E2WA7DA2	29.00	18	2	-11.30	-11.16	-0.14	25.82	23.93	23.50	19.83	23.48	23.01	-14.36	-11.27 |*
E2WA7DA2	29.00	18	3	-12.21	-11.66	-0.55	25.82	23.93	23.50	19.07	13.27	20.50	-14.36	-12.40 |*
E2WA7DA2	29.00	18	4	-10.82	-10.71	-0.11	25.82	23.93	23.50	20.41	23.15	29.22	-14.36	-10.66 |*
E2WA7DA2	29.00	18	5	-10.57	-10.37	-0.20	25.82	23.93	23.50	20.89	18.73	24.51	-14.36	-10.33 |*
E2WA7DA2	29.00	18	6	-11.95	-11.73	-0.22	25.82	23.93	23.50	19.15	17.62	20.55	-14.36	-12.08 |*
E2WA7DA2	29.00	18	7	-9.17	-9.01	-0.16	25.82	23.93	23.50	22.76	25.57	26.93	-14.36	-8.34 |*
E2WA7DA2	29.00	18	8	-10.07	-9.94	-0.13	25.82	23.93	23.50	21.52	22.91	22.48	-14.36	-9.65 |*
E2WA7DA2	29.00	18	9	-11.32	-11.01	-0.31	25.82	23.93	23.50	20.03	16.16	21.72	-14.36	-11.30 |*
E2WA7DA2	29.00	18	10	-10.29	-10.17	-0.12	25.82	23.93	23.50	21.08	28.91	30.94	-14.36	-9.95 |*
E2WA7DA2	29.00	20	1	-7.87	-7.81	-0.06	38.35	23.48	43.24	22.45	24.49	24.79	-3.08	-8.68 |*
E2WA7DA2	29.00	20	2	-8.70	-8.58	-0.12	38.35	23.48	43.24	21.61	22.99	22.85	-3.08	-9.55 |*
E2WA7DA2	29.00	20	3	-11.60	-10.34	-1.26	38.35	23.48	43.24	18.59	20.47	22.55	-3.08	-12.53 |*
E2WA7DA2	29.00	20	4	-8.66	-8.65	-0.01	38.35	23.48	43.24	21.52	29.19	38.20	-3.08	-9.50 |*
E2WA7DA2	29.00	20	5	-8.19	-8.11	-0.08	38.35	23.48	43.24	22.10	24.48	24.89	-3.08	-9.02 |*
E2WA7DA2	29.00	20	6	-9.84	-9.27	-0.57	38.35	23.48	43.24	20.45	20.52	22.47	-3.08	-10.72 |*
E2WA7DA2	29.00	20	7	-9.11	-9.07	-0.04	38.35	23.48	43.24	21.07	26.90	30.60	-3.08	-9.97 |*
E2WA7DA2	29.00	20	8	-9.83	-9.80	-0.03	38.35	23.48	43.24	20.40	22.45	23.98	-3.08	-10.72 |*
E2WA7DA2	29.00	20	9	-10.29	-9.93	-0.36	38.35	23.48	43.24	19.93	21.69	23.59	-3.08	-11.19 |*
E2WA7DA2	29.00	20	10	-8.05	-8.02	-0.03	38.35	23.48	43.24	22.15	30.91	39.29	-3.08	-8.87 |*
E2WA7DA2	29.00	22	1	-11.24	-11.23	-0.01	20.50	43.22	47.58	23.80	24.77	22.99	-19.50	-7.42 |*
E2WA7DA2	29.00	22	2	-12.27	-12.26	-0.01	20.50	43.22	47.58	21.19	22.82	20.91	-19.50	-10.00 |*
E2WA7DA2	29.00	22	3	-12.30	-12.31	0.01	20.50	43.22	47.58	21.12	22.53	20.72	-19.50	-10.08 |*
E2WA7DA2	29.00	22	4	-12.40	-12.39	-0.01	20.50	43.22	47.58	20.81	38.17	22.07	-19.50	-10.27 |*
E2WA7DA2	29.00	22	5	-11.22	-11.23	0.01	20.50	43.22	47.58	23.90	24.86	21.69	-19.50	-7.36 |*
E2WA7DA2	29.00	22	6	-12.18	-12.17	-0.01	20.50	43.22	47.58	21.38	22.44	20.89	-19.50	-9.82 |*
E2WA7DA2	29.00	22	7	-11.63	-11.62	-0.01	20.50	43.22	47.58	22.56	30.57	25.78	-19.50	-8.51 |*
E2WA7DA2	29.00	22	8	-11.26	-11.25	-0.01	20.50	43.22	47.58	23.76	23.95	22.40	-19.50	-7.48 |*
E2WA7DA2	29.00	22	9	-11.88	-11.88	0.00	20.50	43.22	47.58	22.05	23.56	22.63	-19.50	-9.12 |*
E2WA7DA2	29.00	22	10	-11.83	-11.82	-0.01	20.50	43.22	47.58	22.08	39.26	22.96	-19.50	-9.01 |*
E2WA7DA2	29.00	24	1	-11.44	-11.44	0.00	20.50	47.56	43.22	23.17	22.97	24.88	-19.50	-6.01 |*
E2WA7DA2	29.00	24	2	-12.41	-12.42	0.01	20.50	47.56	43.22	20.88	20.88	22.92	-19.50	-10.29 |*
E2WA7DA2	29.00	24	3	-12.48	-12.50	0.02	20.50	47.56	43.22	20.74	20.70	22.48	-19.50	-10.44 |*
E2WA7DA2	29.00	24	4	-11.43	-11.44	0.01	20.50	47.56	43.22	23.17	22.04	38.30	-19.50	-7.97 |*
E2WA7DA2	29.00	24	5	-12.52	-12.53	0.01	20.50	47.56	43.22	20.61	21.66	24.83	-19.50	-10.52 |*
E2WA7DA2	29.00	24	6	-12.46	-12.47	0.01	20.50	47.56	43.22	20.78	20.86	22.48	-19.50	-10.40 |*
E2WA7DA2	29.00	24	7	-11.08	-11.08	0.00	20.50	47.56	43.22	24.16	25.75	30.65	-19.50	-6.93 |*
E2WA7DA2	29.00	24	8	-11.69	-11.68	-0.01	20.50	47.56	43.22	22.53	22.38	23.92	-19.50	-8.66 |*
E2WA7DA2	29.00	24	9	-12.15	-12.17	0.02	20.50	47.56	43.22	21.41	22.60	23.52	-19.50	-9.74 |*
E2WA7DA2	29.00	24	10	-10.79	-10.80	0.01	20.50	47.56	43.22	25.29	22.93	39.37	-19.50	-5.90 |*
E2WA7DA2	29.00	26	1	-11.24	-11.24	0.00	20.48	43.20	47.92	23.82	24.86	23.35	-19.52	-7.38 |*
E2WA7DA2	29.00	26	2	-12.24	-12.26	0.02	20.48	43.20	47.92	21.26	22.90	21.12	-19.52	-9.93 |*
E2WA7DA2	29.00	26	3	-12.31	-12.34	0.03	20.48	43.20	47.92	21.09	22.46	22.63	-19.52	-10.06 |*
E2WA7DA2	29.00	26	4	-12.40	-12.41	0.01	20.48	43.20	47.92	20.83	38.27	22.14	-19.52	-10.25 |*
E2WA7DA2	29.00	26	5	-11.26	-11.28	0.02	20.48	43.20	47.92	23.84	24.80	20.99	-19.52	-7.45 |*
E2WA7DA2	29.00	26	6	-12.18	-12.19	0.01	20.48	43.20	47.92	21.40	22.45	21.86	-19.52	-9.78 |*
E2WA7DA2	29.00	26	7	-11.64	-11.64	0.00	20.48	43.20	47.92	22.55	30.63	25.81	-19.52	-8.52 |*
E2WA7DA2	29.00	26	8	-11.27	-11.26	-0.01	20.48	43.20	47.92	23.73	23.89	24.04	-19.52	-7.47 |*
E2WA7DA2	29.00	26	9	-11.87	-11.90	0.03	20.48	43.20	47.92	22.03	23.49	25.70	-19.52	-9.09 |*
E2WA7DA2	29.00	26	10	-11.84	-11.84	0.00	20.48	43.20	47.92	22.09	39.34	23.04	-19.52	-9.00 |*
E2WA7DA2	29.00	28	1	-11.42	-11.43	0.01	20.49	47.90	43.23	23.26	23.33	25.43	-19.51	-7.91 |*
E2WA7DA2	29.00	28	2	-12.29	-12.34	0.05	20.49	47.90	43.23	21.15	21.09	23.42	-19.51	-10.02 |*
E2WA7DA2	29.00	28	3	-12.47	-12.54	0.07	20.49	47.90	43.23	20.74	22.61	22.53	-19.51	-10.40 |*
E2WA7DA2	29.00	28	4	-11.35	-11.40	0.05	20.49	47.90	43.23	23.41	22.12	38.37	-19.51	-7.74 |*
E2WA7DA2	29.00	28	5	-12.56	-12.58	0.02	20.49	47.90	43.23	20.55	20.96	24.80	-19.51	-10.59 |*
E2WA7DA2	29.00	28	6	-12.41	-12.46	0.05	20.49	47.90	43.23	20.87	21.83	22.76	-19.51	-10.28 |*
E2WA7DA2	29.00	28	7	-11.08	-11.08	0.00	20.49	47.90	43.23	24.20	25.79	30.86	-19.51	-6.90 |*
E2WA7DA2	29.00	28	8	-11.69	-11.69	0.00	20.49	47.90	43.23	22.50	24.01	23.91	-19.51	-8.65 |*
E2WA7DA2	29.00	28	9	-12.15	-12.19	0.04	20.49	47.90	43.23	21.38	25.68	23.55	-19.51	-9.72 |*
E2WA7DA2	29.00	28	10	-10.77	-10.78	0.01	20.49	47.90	43.23	25.42	23.01	39.40	-19.51	-5.77 |*
E2WA7DA2	29.00	30	1	-11.22	-11.22	0.00	20.48	43.22	47.92	23.87	25.41	23.29	-19.52	-7.33 |*
E2WA7DA2	29.00	30	2	-12.16	-12.20	0.04	20.48	43.22	47.92	21.43	23.39	21.04	-19.52	-9.75 |*
E2WA7DA2	29.00	30	3	-12.32	-12.38	0.06	20.48	43.22	47.92	21.06	22.50	22.63	-19.52	-10.09 |*
E2WA7DA2	29.00	30	4	-12.36	-12.37	0.01	20.48	43.22	47.92	20.92	38.34	22.01	-19.52	-10.17 |*
E2WA7DA2	29.00	30	5	-11.28	-11.30	0.02	20.48	43.22	47.92	23.78	24.77	20.91	-19.52	-7.50 |*
E2WA7DA2	29.00	30	6	-12.16	-12.20	0.04	20.48	43.22	47.92	21.44	22.73	21.82	-19.52	-9.74 |*
E2WA7DA2	29.00	30	7	-11.64	-11.63	-0.01	20.48	43.22	47.92	22.56	30.83	25.79	-19.52	-8.51 |*
E2WA7DA2	29.00	30	8	-11.29	-11.28	-0.01	20.48	43.22	47.92	23.67	23.88	24.03	-19.52	-7.53 |*
E2WA7DA2	29.00	30	9	-11.90	-11.93	0.03	20.48	43.22	47.92	21.97	23.53	25.69	-19.52	-9.15 |*
E2WA7DA2	29.00	30	10	-11.82	-11.82	0.00	20.48	43.22	47.92	22.13	39.37	22.88	-19.52	-8.96 |*
E2WA7DA2	29.00	32	1	-11.90	-11.90	0.00	20.49	47.90	43.23	21.98	23.27	25.06	-19.52	-9.15 |*
E2WA7DA2	29.00	32	2	-13.82	-13.85	0.03	20.49	47.90	43.23	18.29	21.02	23.08	-19.52	-12.80 |*
E2WA7DA2	29.00	32	3	-12.90	-12.96	0.06	20.49	47.90	43.23	19.89	22.60	22.41	-19.52	-11.23 |*
E2WA7DA2	29.00	32	4	-12.36	-12.39	0.03	20.49	47.90	43.23	20.91	21.98	38.29	-19.52	-10.18 |*
E2WA7DA2	29.00	32	5	-12.58	-12.60	0.02	20.49	47.90	43.23	20.51	20.88	24.73	-19.52	-10.63 |*
E2WA7DA2	29.00	32	6	-13.23	-13.28	0.05	20.49	47.90	43.23	19.28	21.80	22.52	-19.52	-11.83 |*
E2WA7DA2	29.00	32	7	-11.28	-11.28	0.00	20.49	47.90	43.23	23.57	25.76	30.65	-19.52	-7.52 |*
E2WA7DA2	29.00	32	8	-11.73	-11.72	-0.01	20.49	47.90	43.23	22.42	24.00	23.83	-19.52	-8.73 |*
E2WA7DA2	29.00	32	9	-12.37	-12.41	0.04	20.49	47.90	43.23	20.90	25.66	23.44	-19.52	-10.19 |*
E2WA7DA2	29.00	32	10	-11.24	-11.25	0.01	20.49	47.90	43.23	23.73	22.86	39.34	-19.52	-7.40 |*
E2WA7DA2	29.00	34	1	-11.01	-11.01	0.00	20.48	43.22	47.92	24.61	25.04	23.27	-19.52	-6.63 |*
E2WA7DA2	29.00	34	2	-11.47	-11.51	0.04	20.48	43.22	47.92	23.23	23.05	21.04	-19.52	-8.05 |*
E2WA7DA2	29.00	34	3	-12.31	-12.37	0.06	20.48	43.22	47.92	21.09	22.39	22.61	-19.52	-10.06 |*
E2WA7DA2	29.00	34	4	-11.91	-11.93	0.02	20.48	43.22	47.92	21.92	38.26	22.07	-19.52	-9.19 |*
E2WA7DA2	29.00	34	5	-11.30	-11.32	0.02	20.48	43.22	47.92	23.72	24.70	20.89	-19.52	-7.57 |*
E2WA7DA2	29.00	34	6	-11.98	-12.02	0.04	20.48	43.22	47.92	21.86	22.50	21.81	-19.52	-9.34 |*
E2WA7DA2	29.00	34	7	-11.57	-11.56	-0.01	20.48	43.22	47.92	22.76	30.62	25.73	-19.52	-8.32 |*
E2WA7DA2	29.00	34	8	-11.30	-11.30	0.00	20.48	43.22	47.92	23.63	23.80	23.94	-19.52	-7.57 |*
E2WA7DA2	29.00	34	9	-11.89	-11.93	0.04	20.48	43.22	47.92	22.00	23.42	25.65	-19.52	-9.12 |*
E2WA7DA2	29.00	34	10	-11.63	-11.63	0.00	20.48	43.22	47.92	22.61	39.32	22.96	-19.52	-8.49 |*
E2WA7DA2	29.00	36	1	-11.51	-11.52	0.01	20.49	47.90	43.23	23.01	23.25	24.60	-19.51	-8.16 |*
E2WA7DA2	29.00	36	2	-12.59	-12.64	0.05	20.49	47.90	43.23	20.52	21.02	22.66	-19.51	-10.64 |*
E2WA7DA2	29.00	36	3	-12.57	-12.64	0.07	20.49	47.90	43.23	20.54	22.58	22.36	-19.51	-10.60 |*
E2WA7DA2	29.00	36	4	-11.54	-11.59	0.05	20.49	47.90	43.23	22.87	22.05	38.21	-19.51	-8.27 |*
E2WA7DA2	29.00	36	5	-12.60	-12.62	0.02	20.49	47.90	43.23	20.48	20.86	24.70	-19.51	-10.66 |*

E2WA7DA2	29.00	36	6	-12.57	-12.63	0.06	20.49	47.90	43.23	20.54	21.78	22.28	-19.51	-10.61 |*
E2WA7DA2	29.00	36	7	-11.12	-11.12	0.00	20.49	47.90	43.23	24.09	25.70	30.42	-19.51	-7.01 |*
E2WA7DA2	29.00	36	8	-11.71	-11.71	0.00	20.49	47.90	43.23	22.45	23.91	23.79	-19.51	-8.70 |*
E2WA7DA2	29.00	36	9	-12.21	-12.25	0.04	20.49	47.90	43.23	21.25	25.62	23.40	-19.51	-9.85 |*
E2WA7DA2	29.00	36	10	-10.86	-10.87	0.01	20.49	47.90	43.23	25.08	22.93	39.30	-19.51	-6.10 |*
E2WA7DA2	29.00	38	1	-11.11	-11.11	0.00	20.48	43.22	47.91	24.26	24.57	23.19	-19.52	-6.97 |*
E2WA7DA2	29.00	38	2	-11.84	-11.88	0.04	20.48	43.22	47.91	22.24	22.63	20.96	-19.52	-9.00 |*
E2WA7DA2	29.00	38	3	-12.20	-12.26	0.06	20.48	43.22	47.91	21.34	22.33	22.58	-19.52	-9.83 |*
E2WA7DA2	29.00	38	4	-12.53	-12.55	0.02	20.48	43.22	47.91	20.55	38.18	21.93	-19.52	-10.53 |*
E2WA7DA2	29.00	38	5	-11.17	-11.20	0.03	20.48	43.22	47.91	24.13	24.67	20.79	-19.52	-7.19 |*
E2WA7DA2	29.00	38	6	-11.87	-11.92	0.05	20.48	43.22	47.91	22.13	22.25	21.76	-19.52	-9.09 |*
E2WA7DA2	29.00	38	7	-11.63	-11.63	0.00	20.48	43.22	47.91	22.58	30.39	25.64	-19.52	-8.49 |*
E2WA7DA2	29.00	38	8	-11.35	-11.35	0.00	20.48	43.22	47.91	23.47	23.76	23.83	-19.52	-7.73 |*
E2WA7DA2	29.00	38	9	-11.85	-11.89	0.04	20.48	43.22	47.91	22.10	23.37	25.58	-19.52	-9.03 |*
E2WA7DA2	29.00	38	10	-11.88	-11.89	0.01	20.48	43.22	47.91	21.98	39.27	22.80	-19.52	-9.11 |*
E2WA7DA2	29.00	40	1	-12.10	-12.10	0.00	20.49	47.89	47.91	21.46	23.16		-19.51	-9.62 |*
E2WA7DA2	29.00	40	2	-14.40	-14.42	0.02	20.49	47.89	47.91	17.36	20.93		-19.51	-13.69 |*
E2WA7DA2	29.00	40	3	-13.08	-13.11	0.03	20.49	47.89	47.91	19.50	22.55		-19.51	-11.56 |*
E2WA7DA2	29.00	40	4	-12.79	-12.82	0.03	20.49	47.89	47.91	20.04	21.91		-19.51	-11.03 |*
E2WA7DA2	29.00	40	5	-12.60	-12.61	0.01	20.49	47.89	47.91	20.43	20.76		-19.51	-10.67 |*
E2WA7DA2	29.00	40	6	-13.57	-13.59	0.02	20.49	47.89	47.91	18.65	21.74		-19.51	-12.40 |*
E2WA7DA2	29.00	40	7	-11.37	-11.37	0.00	20.49	47.89	47.91	23.29	25.61		-19.51	-7.78 |*
E2WA7DA2	29.00	40	8	-11.72	-11.72	0.00	20.49	47.89	47.91	22.35	23.81		-19.51	-8.73 |*
E2WA7DA2	29.00	40	9	-12.46	-12.49	0.03	20.49	47.89	47.91	20.64	25.55		-19.51	-10.39 |*
E2WA7DA2	29.00	40	10	-11.46	-11.47	0.01	20.49	47.89	47.91	23.08	22.77		-19.51	-8.04 |*
E2WA7DB1	29.00	1	1	-11.44	-10.28	-1.16	25.69		24.79	19.66		18.86	-14.38	-11.47 |*
E2WA7DB1	29.00	1	2	-11.20	-10.89	-0.31	25.69		24.79	19.94		19.97	-14.38	-11.17 |*
E2WA7DB1	29.00	1	3	-12.99	-10.95	-2.04	25.69		24.79	18.11		11.77	-14.38	-13.34 |*
E2WA7DB1	29.00	1	4	-10.60	-8.60	-2.00	25.69		24.79	21.20		13.50	-14.38	-10.40 |*
E2WA7DB1	29.00	1	5	-8.74	-8.31	-0.43	25.69		24.79	23.38		23.70	-14.38	-7.72 |*
E2WA7DB1	29.00	1	6	-11.71	-11.63	-0.08	25.69		24.79	19.22		25.53	-14.38	-11.81 |*
E2WA7DB1	29.00	1	7	-12.40	-12.30	-0.10	25.69		24.79	18.39		22.89	-14.38	-12.65 |*
E2WA7DB1	29.00	1	8	-11.26	-8.99	-2.27	25.69		24.79	20.20		13.88	-14.38	-11.24 |*
E2WA7DB1	29.00	1	9	-12.25	-12.14	-0.11	25.69		24.79	18.56		24.45	-14.38	-12.47 |*
E2WA7DB1	29.00	1	10	-11.30	-10.55	-0.75	25.69		24.79	19.79		20.61	-14.38	-11.30 |*
E2WA7DB1	29.00	3	1	-8.78	-8.26	-0.52	25.71	24.77	23.95	24.48	18.84	15.03	-14.44	-7.71 |*
E2WA7DB1	29.00	3	2	-10.30	-10.29	-0.01	25.71	24.77	23.95	21.58	19.95	16.06	-14.44	-9.94 |*
E2WA7DB1	29.00	3	3	-13.21	-10.07	-3.14	25.71	24.77	23.95	18.34	11.74	11.56	-14.44	-13.57 |*
E2WA7DB1	29.00	3	4	-9.02	-8.19	-0.83	25.71	24.77	23.95	24.30	13.47	19.85	-14.44	-8.08 |*
E2WA7DB1	29.00	3	5	-7.72	-7.72	0.00	25.71	24.77	23.95	25.48	23.67	23.90	-14.44	-5.83 |*
E2WA7DB1	29.00	3	6	-8.92	-8.95	0.03	25.71	24.77	23.95	23.18	25.51	26.91	-14.44	-7.93 |*
E2WA7DB1	29.00	3	7	-11.24	-11.33	0.09	25.71	24.77	23.95	19.93	22.87	22.33	-14.44	-11.18 |*
E2WA7DB1	29.00	3	8	-8.83	-7.47	-1.36	25.71	24.77	23.95	25.18	13.85	15.52	-14.44	-7.78 |*
E2WA7DB1	29.00	3	9	-10.20	-10.26	0.06	25.71	24.77	23.95	21.31	24.42	23.30	-14.44	-9.82 |*
E2WA7DB1	29.00	3	10	-9.85	-9.81	-0.04	25.71	24.77	23.95	22.36	20.59	15.17	-14.44	-9.32 |*
E2WA7DB1	29.00	5	1	-11.77	-10.44	-1.33	25.69	23.93	24.79	19.57	15.00	18.85	-14.46	-11.85 |*
E2WA7DB1	29.00	5	2	-11.50	-11.07	-0.43	25.69	23.93	24.79	19.84	16.03	19.92	-14.46	-11.51 |*
E2WA7DB1	29.00	5	3	-13.41	-11.09	-2.32	25.69	23.93	24.79	18.07	11.53	11.77	-14.46	-13.79 |*
E2WA7DB1	29.00	5	4	-10.75	-8.74	-2.01	25.69	23.93	24.79	21.18	19.82	13.50	-14.46	-10.55 |*
E2WA7DB1	29.00	5	5	-8.87	-8.46	-0.41	25.69	23.93	24.79	23.35	23.87	23.69	-14.46	-7.84 |*
E2WA7DB1	29.00	5	6	-11.88	-11.81	-0.07	25.69	23.93	24.79	19.06	26.88	25.50	-14.46	-11.99 |*
E2WA7DB1	29.00	5	7	-12.61	-12.51	-0.10	25.69	23.93	24.79	18.21	22.30	22.82	-14.46	-12.87 |*
E2WA7DB1	29.00	5	8	-11.53	-9.10	-2.43	25.69	23.93	24.79	20.18	15.50	13.88	-14.46	-11.54 |*
E2WA7DB1	29.00	5	9	-12.45	-12.35	-0.10	25.69	23.93	24.79	18.39	23.27	24.38	-14.46	-12.67 |*
E2WA7DB1	29.00	5	10	-11.66	-10.74	-0.92	25.69	23.93	24.79	19.68	15.15	20.57	-14.46	-11.70 |*
E2WA7DB1	29.00	7	1	-8.79	-8.28	-0.51	25.71	24.77	23.95	24.46	18.82	15.02	-14.44	-7.72 |*
E2WA7DB1	29.00	7	2	-10.32	-10.33	0.01	25.71	24.77	23.95	21.54	19.89	16.05	-14.44	-9.98 |*
E2WA7DB1	29.00	7	3	-13.23	-10.12	-3.11	25.71	24.77	23.95	18.32	11.74	11.55	-14.44	-13.59 |*
E2WA7DB1	29.00	7	4	-9.05	-8.23	-0.82	25.71	24.77	23.95	24.24	13.47	19.84	-14.44	-8.13 |*
E2WA7DB1	29.00	7	5	-7.75	-7.75	0.00	25.71	24.77	23.95	25.42	23.66	23.87	-14.44	-5.89 |*
E2WA7DB1	29.00	7	6	-8.93	-8.96	0.03	25.71	24.77	23.95	23.17	25.47	26.85	-14.44	-7.94 |*
E2WA7DB1	29.00	7	7	-11.27	-11.36	0.09	25.71	24.77	23.95	19.90	22.79	22.27	-14.44	-11.22 |*
E2WA7DB1	29.00	7	8	-8.85	-7.49	-1.36	25.71	24.77	23.95	25.14	13.85	15.52	-14.44	-7.81 |*
E2WA7DB1	29.00	7	9	-10.22	-10.28	0.06	25.71	24.77	23.95	21.28	24.35	23.24	-14.44	-9.84 |*
E2WA7DB1	29.00	7	10	-9.87	-9.85	-0.02	25.71	24.77	23.95	22.33	20.55	15.16	-14.44	-9.35 |*
E2WA7DB1	29.00	9	1	-11.80	-10.48	-1.32	25.69	23.93	24.79	19.53	14.99	18.85	-14.46	-11.88 |*
E2WA7DB1	29.00	9	2	-11.54	-11.12	-0.42	25.69	23.93	24.79	19.79	16.02	19.91	-14.46	-11.56 |*
E2WA7DB1	29.00	9	3	-13.42	-11.12	-2.30	25.69	23.93	24.79	18.05	11.52	11.77	-14.46	-13.81 |*
E2WA7DB1	29.00	9	4	-10.77	-8.77	-2.00	25.69	23.93	24.79	21.14	19.81	13.50	-14.46	-10.58 |*
E2WA7DB1	29.00	9	5	-8.91	-8.50	-0.41	25.69	23.93	24.79	23.30	23.84	23.64	-14.46	-7.90 |*
E2WA7DB1	29.00	9	6	-11.93	-11.86	-0.07	25.69	23.93	24.79	19.00	26.82	25.44	-14.46	-12.04 |*
E2WA7DB1	29.00	9	7	-12.67	-12.57	-0.10	25.69	23.93	24.79	18.14	22.24	22.80	-14.46	-12.94 |*
E2WA7DB1	29.00	9	8	-11.55	-9.14	-2.41	25.69	23.93	24.79	20.15	15.49	13.88	-14.46	-11.57 |*
E2WA7DB1	29.00	9	9	-12.51	-12.40	-0.11	25.69	23.93	24.79	18.32	23.21	24.36	-14.46	-12.74 |*
E2WA7DB1	29.00	9	10	-11.70	-10.79	-0.91	25.69	23.93	24.79	19.62	15.13	20.57	-14.46	-11.76 |*
E2WA7DB1	29.00	11	1	-8.79	-8.26	-0.53	25.71	24.77	23.95	24.45	18.82	15.03	-14.44	-7.73 |*
E2WA7DB1	29.00	11	2	-10.32	-10.31	-0.01	25.71	24.77	23.95	21.53	19.88	16.17	-14.44	-9.97 |*
E2WA7DB1	29.00	11	3	-13.23	-10.10	-3.13	25.71	24.77	23.95	18.32	11.74	11.56	-14.44	-13.59 |*
E2WA7DB1	29.00	11	4	-9.05	-8.21	-0.84	25.71	24.77	23.95	24.23	13.47	19.83	-14.44	-8.13 |*
E2WA7DB1	29.00	11	5	-7.75	-7.73	-0.02	25.71	24.77	23.95	25.41	23.61	23.83	-14.44	-5.90 |*
E2WA7DB1	29.00	11	6	-8.93	-8.94	0.01	25.71	24.77	23.95	23.17	25.41	26.85	-14.44	-7.94 |*
E2WA7DB1	29.00	11	7	-11.27	-11.35	0.08	25.71	24.77	23.95	19.90	22.78	22.31	-14.44	-11.22 |*
E2WA7DB1	29.00	11	8	-8.85	-7.47	-1.38	25.71	24.77	23.95	25.14	13.85	15.52	-14.44	-7.82 |*
E2WA7DB1	29.00	11	9	-10.22	-10.26	0.04	25.71	24.77	23.95	21.28	24.33	23.24	-14.44	-9.84 |*
E2WA7DB1	29.00	11	10	-9.87	-9.83	-0.04	25.71	24.77	23.95	22.33	20.54	15.20	-14.44	-9.35 |*
E2WA7DB1	29.00	13	1	-11.85	-10.54	-1.31	25.69	23.93	24.79	19.47	15.00	18.83	-14.46	-11.94 |*
E2WA7DB1	29.00	13	2	-11.60	-11.18	-0.42	25.69	23.93	24.79	19.71	16.14	19.57	-14.46	-11.63 |*
E2WA7DB1	29.00	13	3	-13.46	-11.19	-2.27	25.69	23.93	24.79	17.99	11.53	11.76	-14.46	-13.86 |*
E2WA7DB1	29.00	13	4	-10.81	-8.82	-1.99	25.69	23.93	24.79	21.10	19.80	13.50	-14.46	-10.62 |*
E2WA7DB1	29.00	13	5	-8.95	-8.54	-0.41	25.69	23.93	24.79	23.23	23.80	23.65	-14.46	-7.96 |*
E2WA7DB1	29.00	13	6	-12.00	-11.92	-0.08	25.69	23.93	24.79	18.92	26.82	25.40	-14.46	-12.12 |*
E2WA7DB1	29.00	13	7	-12.74	-12.64	-0.10	25.69	23.93	24.79	18.06	22.29	22.71	-14.46	-13.01 |*
E2WA7DB1	29.00	13	8	-11.58	-9.19	-2.39	25.69	23.93	24.79	20.10	15.49	13.88	-14.46	-11.61 |*

E2WA7DB1	29.00	13	9	-12.57	-12.47	-0.10	25.69	23.93	24.79	18.25	23.22	24.30	-14.46	-12.82
E2WA7DB1	29.00	13	10	-11.75	-10.85	-0.90	25.69	23.93	24.79	19.56	15.17	20.52	-14.46	-11.81
E2WA7DB1	29.00	15	1	-8.76	-8.25	-0.51	25.71	24.77	23.95	24.52	18.81	15.02	-14.44	-7.68
E2WA7DB1	29.00	15	2	-10.33	-10.35	0.02	25.71	24.77	23.95	21.53	19.54	16.15	-14.44	-9.99
E2WA7DB1	29.00	15	3	-13.23	-10.15	-3.08	25.71	24.77	23.95	18.32	11.74	11.56	-14.44	-13.60
E2WA7DB1	29.00	15	4	-9.07	-8.24	-0.83	25.71	24.77	23.95	24.20	13.47	19.81	-14.44	-8.16
E2WA7DB1	29.00	15	5	-7.76	-7.75	-0.01	25.71	24.77	23.95	25.40	23.62	23.76	-14.44	-5.91
E2WA7DB1	29.00	15	6	-8.87	-8.89	0.02	25.71	24.77	23.95	23.27	25.38	26.76	-14.44	-7.84
E2WA7DB1	29.00	15	7	-11.24	-11.33	0.09	25.71	24.77	23.95	19.93	22.69	22.25	-14.44	-11.19
E2WA7DB1	29.00	15	8	-8.84	-7.47	-1.37	25.71	24.77	23.95	25.16	13.85	15.51	-14.44	-7.80
E2WA7DB1	29.00	15	9	-10.18	-10.23	0.05	25.71	24.77	23.95	21.35	24.27	23.18	-14.44	-9.78
E2WA7DB1	29.00	15	10	-9.85	-9.84	-0.01	25.71	24.77	23.95	22.35	20.49	15.19	-14.44	-9.33
E2WA7DB1	29.00	17	1	-11.86	-10.55	-1.31	25.69	23.93	24.79	19.46	14.99	18.83	-14.46	-11.96
E2WA7DB1	29.00	17	2	-11.60	-11.17	-0.43	25.69	23.93	24.79	19.72	16.12	19.56	-14.46	-11.63
E2WA7DB1	29.00	17	3	-13.47	-11.19	-2.28	25.69	23.93	24.79	17.98	11.53	11.76	-14.46	-13.87
E2WA7DB1	29.00	17	4	-10.81	-8.81	-2.00	25.69	23.93	24.79	21.09	19.78	13.50	-14.46	-10.62
E2WA7DB1	29.00	17	5	-8.96	-8.54	-0.42	25.69	23.93	24.79	23.22	23.73	23.65	-14.46	-7.97
E2WA7DB1	29.00	17	6	-12.01	-11.93	-0.08	25.69	23.93	24.79	18.90	26.73	25.37	-14.46	-12.14
E2WA7DB1	29.00	17	7	-12.74	-12.63	-0.11	25.69	23.93	24.79	18.06	22.22	22.70	-14.46	-13.02
E2WA7DB1	29.00	17	8	-11.59	-9.19	-2.40	25.69	23.93	24.79	20.09	15.49	13.88	-14.46	-11.62
E2WA7DB1	29.00	17	9	-12.58	-12.47	-0.11	25.69	23.93	24.79	18.24	23.15	24.28	-14.46	-12.82
E2WA7DB1	29.00	17	10	-11.75	-10.84	-0.91	25.69	23.93	24.79	19.55	15.16	20.51	-14.46	-11.82
E2WA7DB1	29.00	19	1	-8.61	-5.77	-2.84	25.71	24.77	38.62	24.70	18.80	15.09	-14.36	-7.53
E2WA7DB1	29.00	19	2	-10.23	-8.95	-1.28	25.71	24.77	38.62	21.62	19.53	16.28	-14.36	-9.90
E2WA7DB1	29.00	19	3	-13.20	-8.71	-4.49	25.71	24.77	38.62	18.33	11.73	11.61	-14.36	-13.58
E2WA7DB1	29.00	19	4	-8.98	-5.81	-3.17	25.71	24.77	38.62	24.24	13.47	20.22	-14.36	-8.10
E2WA7DB1	29.00	19	5	-7.64	-4.86	-2.78	25.71	24.77	38.62	25.46	23.63	24.90	-14.36	-5.82
E2WA7DB1	29.00	19	6	-8.63	-6.67	-1.96	25.71	24.77	38.62	23.55	25.34	28.84	-14.36	-7.55
E2WA7DB1	29.00	19	7	-11.06	-10.15	-0.91	25.71	24.77	38.62	20.12	22.67	22.75	-14.36	-11.00
E2WA7DB1	29.00	19	8	-8.74	-4.40	-4.34	25.71	24.77	38.62	25.25	13.85	15.62	-14.36	-7.73
E2WA7DB1	29.00	19	9	-9.96	-8.67	-1.29	25.71	24.77	38.62	21.58	24.25	23.81	-14.36	-9.54
E2WA7DB1	29.00	19	10	-9.71	-8.24	-1.47	25.71	24.77	38.62	22.51	20.49	15.26	-14.36	-9.19
E2WA7DB1	29.00	21	1	-19.72	-19.79	0.07	43.00	38.60	-5.60	27.45	15.07	26.05	-26.60	-5.22
E2WA7DB1	29.00	21	2	-19.96	-19.97	0.01	43.00	38.60	-5.60	21.54	16.26	21.09	-26.60	-9.93
E2WA7DB1	29.00	21	3	-19.78	-19.89	0.11	43.00	38.60	-5.60	26.90	11.58	22.35	-26.60	-6.95
E2WA7DB1	29.00	21	4	-19.63	-19.78	0.15	43.00	38.60	-5.60	37.42	20.19	23.25	-26.60	1.67
E2WA7DB1	29.00	21	5	-19.62	-19.68	0.06	43.00	38.60	-5.60	36.75	24.87	25.10	-26.60	3.31
E2WA7DB1	29.00	21	6	-19.69	-19.72	0.03	43.00	38.60	-5.60	27.20	28.81	25.65	-26.60	-4.03
E2WA7DB1	29.00	21	7	-19.78	-19.80	0.02	43.00	38.60	-5.60	24.52	22.73	22.52	-26.60	-6.80
E2WA7DB1	29.00	21	8	-19.65	-19.78	0.13	43.00	38.60	-5.60	35.80	15.59	25.54	-26.60	-1.11
E2WA7DB1	29.00	21	9	-19.77	-19.80	0.03	43.00	38.60	-5.60	24.63	23.79	23.49	-26.60	-6.64
E2WA7DB1	29.00	21	10	-19.78	-19.82	0.04	43.00	38.60	-5.60	25.13	15.24	23.85	-26.60	-6.94
E2WA7DB1	29.00	23	1	-22.70	-22.74	0.04	47.46	-5.62	-5.60	24.54	26.02	25.90	-29.62	-6.61
E2WA7DB1	29.00	23	2	-22.85	-22.79	-0.06	47.46	-5.62	-5.60	20.19	21.06	21.06	-29.62	-10.99
E2WA7DB1	29.00	23	3	-22.85	-22.77	-0.08	47.46	-5.62	-5.60	20.04	22.32	24.91	-29.62	-11.06
E2WA7DB1	29.00	23	4	-22.72	-22.76	0.04	47.46	-5.62	-5.60	23.73	23.22	24.46	-29.62	-7.48
E2WA7DB1	29.00	23	5	-22.70	-22.72	0.02	47.46	-5.62	-5.60	24.93	25.07	23.74	-29.62	-6.31
E2WA7DB1	29.00	23	6	-22.74	-22.76	0.02	47.46	-5.62	-5.60	22.87	25.62	24.15	-29.62	-8.27
E2WA7DB1	29.00	23	7	-22.73	-22.75	0.02	47.46	-5.62	-5.60	23.20	22.49	25.05	-29.62	-7.99
E2WA7DB1	29.00	23	8	-22.72	-22.76	0.04	47.46	-5.62	-5.60	23.88	25.51	25.52	-29.62	-7.27
E2WA7DB1	29.00	23	9	-22.73	-22.75	0.02	47.46	-5.62	-5.60	23.38	23.46	25.10	-29.62	-7.80
E2WA7DB1	29.00	23	10	-22.72	-22.73	0.01	47.46	-5.62	-5.60	23.61	23.82	25.23	-29.62	-7.57
E2WA7DB1	29.00	25	1	-22.67	-22.72	0.05	40.87	-5.62	-5.60	27.15	25.87	26.05	-29.62	-4.13
E2WA7DB1	29.00	25	2	-22.80	-22.81	0.01	40.87	-5.62	-5.60	21.44	21.04	21.21	-29.62	-9.79
E2WA7DB1	29.00	25	3	-22.68	-22.77	0.09	40.87	-5.62	-5.60	26.27	24.89	22.37	-29.62	-5.13
E2WA7DB1	29.00	25	4	-22.63	-22.72	0.09	40.87	-5.62	-5.60	35.86	24.43	23.24	-29.62	2.29
E2WA7DB1	29.00	25	5	-22.63	-22.66	0.03	40.87	-5.62	-5.60	36.29	23.71	25.07	-29.62	2.77
E2WA7DB1	29.00	25	6	-22.67	-22.68	0.01	40.87	-5.62	-5.60	27.05	24.12	25.60	-29.62	-4.31
E2WA7DB1	29.00	25	7	-22.71	-22.72	0.01	40.87	-5.62	-5.60	24.47	25.02	22.53	-29.62	-6.79
E2WA7DB1	29.00	25	8	-22.63	-22.72	0.09	40.87	-5.62	-5.60	34.70	25.49	25.54	-29.62	2.19
E2WA7DB1	29.00	25	9	-22.71	-22.72	0.01	40.87	-5.62	-5.60	24.51	25.08	23.49	-29.62	-6.72
E2WA7DB1	29.00	25	10	-22.70	-22.73	0.03	40.87	-5.62	-5.60	24.97	25.20	23.87	-29.62	-6.27
E2WA7DB1	29.00	27	1	-22.70	-22.73	0.03	42.59	-5.62	-5.60	24.82	26.03	25.84	-29.62	-6.35
E2WA7DB1	29.00	27	2	-22.83	-22.80	-0.03	42.59	-5.62	-5.60	20.47	21.18	21.43	-29.62	-10.70
E2WA7DB1	29.00	27	3	-22.84	-22.79	-0.05	42.59	-5.62	-5.60	20.33	22.34	24.94	-29.62	-10.78
E2WA7DB1	29.00	27	4	-22.69	-22.74	0.05	42.59	-5.62	-5.60	25.18	23.22	24.39	-29.62	-6.12
E2WA7DB1	29.00	27	5	-22.65	-22.67	0.02	42.59	-5.62	-5.60	29.46	25.04	23.67	-29.62	-2.21
E2WA7DB1	29.00	27	6	-22.77	-22.78	0.01	42.59	-5.62	-5.60	21.92	25.57	24.06	-29.62	-9.19
E2WA7DB1	29.00	27	7	-22.69	-22.70	0.01	42.59	-5.62	-5.60	25.38	22.51	25.08	-29.62	-5.94
E2WA7DB1	29.00	27	8	-22.74	-22.79	0.05	42.59	-5.62	-5.60	22.84	25.51	25.44	-29.62	-8.27
E2WA7DB1	29.00	27	9	-22.68	-22.70	0.02	42.59	-5.62	-5.60	25.92	23.46	25.04	-29.62	-5.40
E2WA7DB1	29.00	27	10	-22.69	-22.69	0.00	42.59	-5.62	-5.60	25.49	23.85	25.27	-29.62	-5.78
E2WA7DB1	29.00	29	1	-22.67	-22.72	0.05	40.53	-5.62	-5.60	27.12	25.81	25.98	-29.62	-4.16
E2WA7DB1	29.00	29	2	-22.79	-22.83	0.04	40.53	-5.62	-5.60	21.62	21.41	21.41	-29.62	-9.60
E2WA7DB1	29.00	29	3	-22.68	-22.83	0.15	40.53	-5.62	-5.60	25.98	24.92	22.31	-29.62	-5.39
E2WA7DB1	29.00	29	4	-22.63	-22.72	0.09	40.53	-5.62	-5.60	35.15	24.36	23.15	-29.62	1.85
E2WA7DB1	29.00	29	5	-22.63	-22.66	0.03	40.53	-5.62	-5.60	36.02	23.64	25.01	-29.62	2.59
E2WA7DB1	29.00	29	6	-22.67	-22.68	0.01	40.53	-5.62	-5.60	27.03	24.03	25.56	-29.62	-4.33
E2WA7DB1	29.00	29	7	-22.70	-22.72	0.02	40.53	-5.62	-5.60	24.66	25.05	22.49	-29.62	-6.61
E2WA7DB1	29.00	29	8	-22.63	-22.72	0.09	40.53	-5.62	-5.60	34.30	25.41	25.45	-29.62	1.88
E2WA7DB1	29.00	29	9	-22.71	-22.72	0.01	40.53	-5.62	-5.60	24.52	25.02	23.42	-29.62	-6.71
E2WA7DB1	29.00	29	10	-22.70	-22.74	0.04	40.53	-5.62	-5.60	24.99	25.24	23.84	-29.62	-6.25
E2WA7DB1	29.00	31	1	-22.70	-22.74	0.04	42.59	-5.62	-5.60	24.77	25.95	25.58	-29.62	-6.40
E2WA7DB1	29.00	31	2	-22.84	-22.81	-0.03	42.59	-5.62	-5.60	20.44	21.38	17.97	-29.62	-10.83
E2WA7DB1	29.00	31	3	-22.84	-22.80	-0.04	42.59	-5.62	-5.60	20.32	22.28	23.90	-29.62	-10.80
E2WA7DB1	29.00	31	4	-22.70	-22.75	0.05	42.59	-5.62	-5.60	25.15	23.13	24.37	-29.62	-6.14
E2WA7DB1	29.00	31	5	-22.65	-22.68	0.03	42.59	-5.62	-5.60	29.42	24.98	23.65	-29.62	-2.24
E2WA7DB1	29.00	31	6	-22.77	-22.79	0.02	42.59	-5.62	-5.60	21.85	25.53	24.03	-29.62	-9.26
E2WA7DB1	29.00	31	7	-22.69	-22.71	0.02	42.59	-5.62	-5.60	25.36	22.46	23.96	-29.62	-5.99
E2WA7DB1	29.00	31	8	-22.75	-22.80	0.05	42.59	-5.62	-5.60	22.78	25.42	25.41	-29.62	-8.33
E2WA7DB1	29.00	31	9	-22.68	-22.70	0.02	42.59	-5.62	-5.60	25.90	23.39	24.74	-29.62	-5.42
E2WA7DB1	29.00	31	10	-22.69	-22.70	0.01	42.59	-5.62	-5.60	25.49	23.81	24.08	-29.62	-5.81
E2WA7DB1	29.00	33	1	-22.67	-22.73	0.06	40.53	-5.62	-5.60	27.05	25.55	25.93	-29.62	-4.24
E2WA7DB1	29.00	33	2	-22.80	-22.84	0.04	40.53	-5.62	-5.60	21.42	17.95	21.85	-29.62	-9.91

E2WA7DB1	29.00	33	3	-22.69	-22.83	0.14	40.53	-5.62	-5.60	25.91	23.88	22.32	-29.62	-5.49 |*
E2WA7DB1	29.00	33	4	-22.63	-22.72	0.09	40.53	-5.62	-5.60	35.14	24.34	23.15	-29.62	1.84 |*
E2WA7DB1	29.00	33	5	-22.63	-22.66	0.03	40.53	-5.62	-5.60	36.01	23.62	24.97	-29.62	2.57 |*
E2WA7DB1	29.00	33	6	-22.67	-22.68	0.01	40.53	-5.62	-5.60	26.99	24.00	25.48	-29.62	-4.37 |*
E2WA7DB1	29.00	33	7	-22.71	-22.73	0.02	40.53	-5.62	-5.60	24.50	23.93	22.64	-29.62	-6.78 |*
E2WA7DB1	29.00	33	8	-22.63	-22.72	0.09	40.53	-5.62	-5.60	34.29	25.38	25.44	-29.62	1.87 |*
E2WA7DB1	29.00	33	9	-22.71	-22.73	0.02	40.53	-5.62	-5.60	24.45	24.71	23.39	-29.62	-6.79 |*
E2WA7DB1	29.00	33	10	-22.70	-22.74	0.04	40.53	-5.62	-5.60	24.89	24.05	23.86	-29.62	-6.37 |*
E2WA7DB1	29.00	35	1	-22.70	-22.74	0.04	42.59	-5.62	-5.60	24.75	25.90	25.70	-29.62	-6.42 |*
E2WA7DB1	29.00	35	2	-22.84	-22.80	-0.04	42.59	-5.62	-5.60	20.43	21.82	20.61	-29.62	-10.75 |*
E2WA7DB1	29.00	35	3	-22.84	-22.80	-0.04	42.59	-5.62	-5.60	20.32	22.30	24.68	-29.62	-10.79 |*
E2WA7DB1	29.00	35	4	-22.70	-22.75	0.05	42.59	-5.62	-5.60	25.14	23.12	24.30	-29.62	-6.15 |*
E2WA7DB1	29.00	35	5	-22.65	-22.68	0.03	42.59	-5.62	-5.60	29.39	24.95	23.58	-29.62	-2.27 |*
E2WA7DB1	29.00	35	6	-22.78	-22.79	0.01	42.59	-5.62	-5.60	21.83	25.45	23.96	-29.62	-9.29 |*
E2WA7DB1	29.00	35	7	-22.69	-22.71	0.02	42.59	-5.62	-5.60	25.30	22.61	24.81	-29.62	-6.01 |*
E2WA7DB1	29.00	35	8	-22.75	-22.80	0.05	42.59	-5.62	-5.60	22.78	25.41	25.33	-29.62	-8.34 |*
E2WA7DB1	29.00	35	9	-22.68	-22.70	0.02	42.59	-5.62	-5.60	25.83	23.36	24.90	-29.62	-5.48 |*
E2WA7DB1	29.00	35	10	-22.69	-22.70	0.01	42.59	-5.62	-5.60	25.46	23.83	24.98	-29.62	-5.81 |*
E2WA7DB1	29.00	37	1	-22.67	-22.73	0.06	40.53	-5.62	-5.60	27.02	25.67	25.86	-29.62	-4.26 |*
E2WA7DB1	29.00	37	2	-22.80	-22.84	0.04	40.53	-5.62	-5.60	21.23	20.58	23.03	-29.62	-9.97 |*
E2WA7DB1	29.00	37	3	-22.69	-22.83	0.14	40.53	-5.62	-5.60	25.90	24.65	22.38	-29.62	-5.47 |*
E2WA7DB1	29.00	37	4	-22.63	-22.72	0.09	40.53	-5.62	-5.60	35.09	24.27	22.55	-29.62	1.65 |*
E2WA7DB1	29.00	37	5	-22.63	-22.66	0.03	40.53	-5.62	-5.60	35.93	23.55	24.62	-29.62	2.44 |*
E2WA7DB1	29.00	37	6	-22.67	-22.69	0.02	40.53	-5.62	-5.60	26.93	23.93	26.21	-29.62	-4.40 |*
E2WA7DB1	29.00	37	7	-22.71	-22.73	0.02	40.53	-5.62	-5.60	24.31	24.78	22.65	-29.62	-6.94 |*
E2WA7DB1	29.00	37	8	-22.63	-22.73	0.10	40.53	-5.62	-5.60	34.23	25.31	24.92	-29.62	1.73 |*
E2WA7DB1	29.00	37	9	-22.71	-22.73	0.02	40.53	-5.62	-5.60	24.41	24.87	23.48	-29.62	-6.82 |*
E2WA7DB1	29.00	37	10	-22.70	-22.74	0.04	40.53	-5.62	-5.60	24.84	24.95	24.10	-29.62	-6.39 |*
E2WA7DB1	29.00	39	1	-22.70	-22.74	0.04	42.58	-5.62	-5.60	24.62	25.83	25.37	-29.62	-6.55 |*
E2WA7DB1	29.00	39	2	-22.85	-22.81	-0.04	42.58	-5.62	-5.60	20.37	23.00	16.91	-29.62	-10.92 |*
E2WA7DB1	29.00	39	3	-22.84	-22.80	-0.04	42.58	-5.62	-5.60	20.30	22.35	23.41	-29.62	-10.82 |*
E2WA7DB1	29.00	39	4	-22.70	-22.75	0.05	42.58	-5.62	-5.60	25.10	22.52	24.27	-29.62	-6.22 |*
E2WA7DB1	29.00	39	5	-22.65	-22.68	0.03	42.58	-5.62	-5.60	29.32	24.59	23.55	-29.62	-2.36 |*
E2WA7DB1	29.00	39	6	-22.78	-22.80	0.02	42.58	-5.62	-5.60	21.67	26.19	23.92	-29.62	-9.43 |*
E2WA7DB1	29.00	39	7	-22.70	-22.71	0.01	42.58	-5.62	-5.60	25.05	22.62	23.45	-29.62	-6.29 |*
E2WA7DB1	29.00	39	8	-22.75	-22.80	0.05	42.58	-5.62	-5.60	22.70	24.89	25.29	-29.62	-8.42 |*
E2WA7DB1	29.00	39	9	-22.69	-22.71	0.02	42.58	-5.62	-5.60	25.56	23.45	24.51	-29.62	-5.74 |*
E2WA7DB1	29.00	39	10	-22.69	-22.70	0.01	42.58	-5.62	-5.60	25.34	24.07	23.54	-29.62	-5.96 |*
E2WA7DB2	29.00	2	1	-9.36	-8.24	-1.12	25.82	23.93	23.50	23.22	14.19	25.91	-14.36	-8.63 |*
E2WA7DB2	29.00	2	2	-11.11	-10.89	-0.22	25.82	23.93	23.50	20.20	18.98	21.09	-14.36	-11.03 |*
E2WA7DB2	29.00	2	3	-11.56	-8.37	-3.19	25.82	23.93	23.50	20.40	11.08	17.87	-14.36	-11.60 |*
E2WA7DB2	29.00	2	4	-10.26	-6.99	-3.27	25.82	23.93	23.50	21.75	13.94	23.85	-14.36	-9.92 |*
E2WA7DB2	29.00	2	5	-7.92	-7.53	-0.39	25.82	23.93	23.50	25.19	19.79	25.24	-14.36	-6.27 |*
E2WA7DB2	29.00	2	6	-9.25	-9.13	-0.12	25.82	23.93	23.50	22.70	21.96	26.52	-14.36	-8.47 |*
E2WA7DB2	29.00	2	7	-10.87	-10.76	-0.11	25.82	23.93	23.50	20.43	21.70	21.88	-14.36	-10.73 |*
E2WA7DB2	29.00	2	8	-9.95	-6.89	-3.06	25.82	23.93	23.50	22.56	12.46	25.61	-14.36	-9.48 |*
E2WA7DB2	29.00	2	9	-10.08	-9.94	-0.14	25.82	23.93	23.50	21.52	21.22	23.92	-14.36	-9.66 |*
E2WA7DB2	29.00	2	10	-10.02	-9.50	-0.52	25.82	23.93	23.50	21.91	15.83	23.39	-14.36	-9.59 |*
E2WA7DB2	29.00	4	1	-10.08	-8.43	-1.65	25.79	23.48	23.94	21.99	25.88	14.21	-14.39	-9.66 |*
E2WA7DB2	29.00	4	2	-10.89	-10.33	-0.56	25.79	23.48	23.94	20.50	21.06	18.99	-14.39	-10.74 |*
E2WA7DB2	29.00	4	3	-11.85	-9.21	-2.64	25.79	23.48	23.94	19.96	17.84	11.10	-14.39	-11.95 |*
E2WA7DB2	29.00	4	4	-8.59	-7.58	-1.01	25.79	23.48	23.94	24.87	23.82	13.97	-14.39	-7.41 |*
E2WA7DB2	29.00	4	5	-8.14	-8.01	-0.13	25.79	23.48	23.94	24.78	25.21	19.81	-14.39	-6.64 |*
E2WA7DB2	29.00	4	6	-8.77	-8.74	-0.03	25.79	23.48	23.94	23.50	26.50	21.95	-14.39	-7.71 |*
E2WA7DB2	29.00	4	7	-10.92	-10.88	-0.04	25.79	23.48	23.94	20.37	21.85	21.72	-14.39	-10.78 |*
E2WA7DB2	29.00	4	8	-9.25	-6.94	-2.31	25.79	23.48	23.94	23.89	25.58	12.49	-14.39	-8.46 |*
E2WA7DB2	29.00	4	9	-10.39	-10.35	-0.04	25.79	23.48	23.94	21.08	23.89	21.22	-14.39	-10.08 |*
E2WA7DB2	29.00	4	10	-10.71	-9.60	-1.11	25.79	23.48	23.94	20.88	23.36	15.85	-14.39	-10.51 |*
E2WA7DB2	29.00	6	1	-9.38	-8.27	-1.11	25.82	23.93	23.50	23.18	14.18	25.88	-14.36	-8.66 |*
E2WA7DB2	29.00	6	2	-11.15	-10.94	-0.21	25.82	23.93	23.50	20.13	18.96	21.05	-14.36	-11.09 |*
E2WA7DB2	29.00	6	3	-11.58	-8.41	-3.17	25.82	23.93	23.50	20.37	11.08	17.85	-14.36	-11.63 |*
E2WA7DB2	29.00	6	4	-10.27	-7.00	-3.27	25.82	23.93	23.50	21.75	13.94	23.79	-14.36	-9.92 |*
E2WA7DB2	29.00	6	5	-7.93	-7.54	-0.39	25.82	23.93	23.50	25.18	19.78	25.18	-14.36	-6.28 |*
E2WA7DB2	29.00	6	6	-9.27	-9.14	-0.13	25.82	23.93	23.50	22.68	21.92	26.50	-14.36	-8.49 |*
E2WA7DB2	29.00	6	7	-10.90	-10.79	-0.11	25.82	23.93	23.50	20.39	21.69	21.82	-14.36	-10.77 |*
E2WA7DB2	29.00	6	8	-9.95	-6.91	-3.04	25.82	23.93	23.50	22.55	12.46	25.56	-14.36	-9.49 |*
E2WA7DB2	29.00	6	9	-10.10	-9.97	-0.13	25.82	23.93	23.50	21.48	21.19	23.87	-14.36	-9.70 |*
E2WA7DB2	29.00	6	10	-10.06	-9.54	-0.52	25.82	23.93	23.50	21.85	15.82	23.34	-14.36	-9.64 |*
E2WA7DB2	29.00	8	1	-10.11	-8.47	-1.64	25.79	23.48	23.94	21.95	25.85	14.21	-14.39	-9.69 |*
E2WA7DB2	29.00	8	2	-10.92	-10.36	-0.56	25.79	23.48	23.94	20.47	21.03	18.99	-14.39	-10.78 |*
E2WA7DB2	29.00	8	3	-11.87	-9.26	-2.61	25.79	23.48	23.94	19.92	17.83	11.10	-14.39	-11.98 |*
E2WA7DB2	29.00	8	4	-8.61	-7.61	-1.00	25.79	23.48	23.94	24.83	23.76	13.96	-14.39	-7.44 |*
E2WA7DB2	29.00	8	5	-8.15	-8.03	-0.12	25.79	23.48	23.94	24.76	25.15	19.79	-14.39	-6.66 |*
E2WA7DB2	29.00	8	6	-8.79	-8.76	-0.03	25.79	23.48	23.94	23.47	26.47	21.94	-14.39	-7.73 |*
E2WA7DB2	29.00	8	7	-10.95	-10.91	-0.04	25.79	23.48	23.94	20.33	21.79	21.72	-14.39	-10.82 |*
E2WA7DB2	29.00	8	8	-9.27	-6.97	-2.30	25.79	23.48	23.94	23.87	25.53	12.48	-14.39	-8.48 |*
E2WA7DB2	29.00	8	9	-10.42	-10.38	-0.04	25.79	23.48	23.94	21.04	23.84	21.22	-14.39	-10.12 |*
E2WA7DB2	29.00	8	10	-10.74	-9.63	-1.11	25.79	23.48	23.94	20.84	23.32	15.85	-14.39	-10.55 |*
E2WA7DB2	29.00	10	1	-9.39	-8.28	-1.11	25.82	23.93	23.50	23.16	14.18	25.88	-14.36	-8.67 |*
E2WA7DB2	29.00	10	2	-11.16	-10.95	-0.21	25.82	23.93	23.50	20.12	18.96	21.05	-14.36	-11.10 |*
E2WA7DB2	29.00	10	3	-11.58	-8.42	-3.16	25.82	23.93	23.50	20.37	11.07	17.85	-14.36	-11.63 |*
E2WA7DB2	29.00	10	4	-10.28	-7.03	-3.25	25.82	23.93	23.50	21.73	13.93	23.78	-14.36	-9.94 |*
E2WA7DB2	29.00	10	5	-7.97	-7.58	-0.39	25.82	23.93	23.50	25.11	19.76	25.17	-14.36	-6.35 |*
E2WA7DB2	29.00	10	6	-9.29	-9.16	-0.13	25.82	23.93	23.50	22.65	21.92	26.49	-14.36	-8.52 |*
E2WA7DB2	29.00	10	7	-10.91	-10.80	-0.11	25.82	23.93	23.50	20.38	21.69	21.81	-14.36	-10.78 |*
E2WA7DB2	29.00	10	8	-9.96	-6.92	-3.04	25.82	23.93	23.50	22.53	12.45	25.55	-14.36	-9.50 |*
E2WA7DB2	29.00	10	9	-10.11	-9.98	-0.13	25.82	23.93	23.50	21.47	21.19	23.87	-14.36	-9.71 |*
E2WA7DB2	29.00	10	10	-10.06	-9.54	-0.52	25.82	23.93	23.50	21.84	15.82	23.34	-14.36	-9.64 |*
E2WA7DB2	29.00	12	1	-10.08	-8.43	-1.65	25.79	23.48	23.94	21.99	25.85	14.21	-14.39	-9.66 |*
E2WA7DB2	29.00	12	2	-10.67	-10.09	-0.58	25.79	23.48	23.94	20.80	21.02	18.97	-14.39	-10.46 |*
E2WA7DB2	29.00	12	3	-11.82	-9.16	-2.66	25.79	23.48	23.94	20.01	17.82	11.09	-14.39	-11.91 |*
E2WA7DB2	29.00	12	4	-8.63	-7.63	-1.00	25.79	23.48	23.94	24.79	23.75	13.95	-14.39	-7.47 |*
E2WA7DB2	29.00	12	5	-8.18	-8.06	-0.12	25.79	23.48	23.94	24.71	25.14	19.75	-14.39	-6.71 |*

E2WA7DB2	29.00	12	6	-8.79	-8.76	-0.03	25.79	23.48	23.94	23.47	26.46	21.90	-14.39	-7.74 |*
E2WA7DB2	29.00	12	7	-10.93	-10.89	-0.04	25.79	23.48	23.94	20.36	21.78	21.70	-14.39	-10.79 |*
E2WA7DB2	29.00	12	8	-9.27	-6.98	-2.29	25.79	23.48	23.94	23.86	25.53	12.47	-14.39	-8.48 |*
E2WA7DB2	29.00	12	9	-10.42	-10.38	-0.04	25.79	23.48	23.94	21.05	23.84	21.19	-14.39	-10.11 |*
E2WA7DB2	29.00	12	10	-10.64	-9.51	-1.13	25.79	23.48	23.94	20.98	23.31	15.85	-14.39	-10.42 |*
E2WA7DB2	29.00	14	1	-9.38	-8.27	-1.11	25.82	23.93	23.50	23.18	14.18	25.84	-14.36	-8.66 |*
E2WA7DB2	29.00	14	2	-11.41	-11.21	-0.20	25.82	23.93	23.50	19.79	18.94	21.01	-14.36	-11.42 |*
E2WA7DB2	29.00	14	3	-11.59	-8.43	-3.16	25.82	23.93	23.50	20.36	11.06	17.83	-14.36	-11.64 |*
E2WA7DB2	29.00	14	4	-10.28	-7.03	-3.25	25.82	23.93	23.50	21.73	13.92	23.74	-14.36	-9.94 |*
E2WA7DB2	29.00	14	5	-7.97	-7.58	-0.39	25.82	23.93	23.50	25.11	19.73	25.16	-14.36	-6.35 |*
E2WA7DB2	29.00	14	6	-9.24	-9.11	-0.13	25.82	23.93	23.50	22.73	21.87	26.46	-14.36	-8.45 |*
E2WA7DB2	29.00	14	7	-10.89	-10.77	-0.12	25.82	23.93	23.50	20.41	21.68	21.75	-14.36	-10.74 |*
E2WA7DB2	29.00	14	8	-9.96	-6.92	-3.04	25.82	23.93	23.50	22.54	12.45	25.50	-14.36	-9.49 |*
E2WA7DB2	29.00	14	9	-10.06	-9.93	-0.13	25.82	23.93	23.50	21.54	21.16	23.81	-14.36	-9.64 |*
E2WA7DB2	29.00	14	10	-10.07	-9.55	-0.52	25.82	23.93	23.50	21.83	15.82	23.29	-14.36	-9.65 |*
E2WA7DB2	29.00	16	1	-10.11	-8.47	-1.64	25.79	23.48	23.94	21.95	25.81	14.20	-14.39	-9.69 |*
E2WA7DB2	29.00	16	2	-10.72	-10.14	-0.58	25.79	23.48	23.94	20.74	20.98	18.97	-14.39	-10.52 |*
E2WA7DB2	29.00	16	3	-11.84	-9.20	-2.64	25.79	23.48	23.94	19.98	17.80	11.09	-14.39	-11.94 |*
E2WA7DB2	29.00	16	4	-8.65	-7.66	-0.99	25.79	23.48	23.94	24.74	23.72	13.95	-14.39	-7.50 |*
E2WA7DB2	29.00	16	5	-8.22	-8.10	-0.12	25.79	23.48	23.94	24.63	25.13	19.75	-14.39	-6.79 |*
E2WA7DB2	29.00	16	6	-8.81	-8.79	-0.02	25.79	23.48	23.94	23.43	26.43	21.86	-14.39	-7.77 |*
E2WA7DB2	29.00	16	7	-10.96	-10.92	-0.04	25.79	23.48	23.94	20.32	21.72	21.71	-14.39	-10.83 |*
E2WA7DB2	29.00	16	8	-9.28	-7.00	-2.28	25.79	23.48	23.94	23.84	25.47	12.47	-14.39	-8.50 |*
E2WA7DB2	29.00	16	9	-10.45	-10.40	-0.05	25.79	23.48	23.94	21.01	23.79	21.18	-14.39	-10.15 |*
E2WA7DB2	29.00	16	10	-10.68	-9.55	-1.13	25.79	23.48	23.94	20.94	23.26	15.85	-14.39	-10.46 |*
E2WA7DB2	29.00	18	1	-9.34	-8.15	-1.19	25.82	23.93	23.50	23.25	14.17	25.84	-14.36	-8.60 |*
E2WA7DB2	29.00	18	2	-11.39	-11.15	-0.24	25.82	23.93	23.50	19.82	18.94	21.01	-14.36	-11.39 |*
E2WA7DB2	29.00	18	3	-11.59	-8.35	-3.24	25.82	23.93	23.50	20.37	11.06	17.83	-14.36	-11.63 |*
E2WA7DB2	29.00	18	4	-10.28	-6.93	-3.35	25.82	23.93	23.50	21.73	13.92	23.79	-14.36	-9.94 |*
E2WA7DB2	29.00	18	5	-7.96	-7.49	-0.47	25.82	23.93	23.50	25.12	19.72	25.21	-14.36	-6.34 |*
E2WA7DB2	29.00	18	6	-9.15	-8.96	-0.19	25.82	23.93	23.50	22.87	21.84	26.44	-14.36	-8.32 |*
E2WA7DB2	29.00	18	7	-10.79	-10.63	-0.16	25.82	23.93	23.50	20.55	21.68	21.75	-14.36	-10.62 |*
E2WA7DB2	29.00	18	8	-9.95	-6.80	-3.15	25.82	23.93	23.50	22.56	12.44	25.49	-14.36	-9.48 |*
E2WA7DB2	29.00	18	9	-9.96	-9.78	-0.18	25.82	23.93	23.50	21.69	21.15	23.81	-14.36	-9.50 |*
E2WA7DB2	29.00	18	10	-10.03	-9.44	-0.59	25.82	23.93	23.50	21.91	15.82	23.29	-14.36	-9.59 |*
E2WA7DB2	29.00	20	1	-7.88	-5.72	-2.16	38.35	23.48	43.24	22.39	25.81	27.67	-3.08	-8.70 |*
E2WA7DB2	29.00	20	2	-9.18	-8.34	-0.84	38.35	23.48	43.24	21.17	20.98	21.61	-3.08	-10.04 |*
E2WA7DB2	29.00	20	3	-10.09	-6.81	-3.28	38.35	23.48	43.24	20.23	17.80	26.61	-3.08	-10.98 |*
E2WA7DB2	29.00	20	4	-4.97	-2.93	-2.04	38.35	23.48	43.24	25.58	23.76	36.46	-3.08	-5.59 |*
E2WA7DB2	29.00	20	5	-5.01	-1.53	-3.48	38.35	23.48	43.24	25.49	25.18	35.90	-3.08	-5.64 |*
E2WA7DB2	29.00	20	6	-5.90	-5.78	-0.12	38.35	23.48	43.24	24.52	26.41	27.80	-3.08	-6.60 |*
E2WA7DB2	29.00	20	7	-9.38	-9.32	-0.06	38.35	23.48	43.24	20.88	21.72	25.05	-3.08	-10.25 |*
E2WA7DB2	29.00	20	8	-6.05	-2.42	-3.63	38.35	23.48	43.24	24.33	25.46	35.27	-3.08	-6.76 |*
E2WA7DB2	29.00	20	9	-8.65	-8.59	-0.06	38.35	23.48	43.24	21.62	23.78	25.09	-3.08	-9.50 |*
E2WA7DB2	29.00	20	10	-8.93	-7.53	-1.40	38.35	23.48	43.24	21.32	23.26	25.37	-3.08	-9.79 |*
E2WA7DB2	29.00	22	1	-10.57	-10.59	0.02	20.50	43.22	47.58	26.26	27.64	24.56	-19.50	-4.97 |*
E2WA7DB2	29.00	22	2	-12.30	-12.27	-0.03	20.50	43.22	47.58	21.17	21.58	19.75	-19.50	-10.07 |*
E2WA7DB2	29.00	22	3	-11.71	-11.71	0.00	20.50	43.22	47.58	22.54	26.58	19.32	-19.50	-8.72 |*
E2WA7DB2	29.00	22	4	-11.29	-11.32	0.03	20.50	43.22	47.58	23.54	36.43	23.79	-19.50	-7.57 |*
E2WA7DB2	29.00	22	5	-10.73	-10.74	0.01	20.50	43.22	47.58	25.48	35.87	25.01	-19.50	-5.65 |*
E2WA7DB2	29.00	22	6	-10.67	-10.67	0.00	20.50	43.22	47.58	25.85	27.77	23.20	-19.50	-5.41 |*
E2WA7DB2	29.00	22	7	-11.65	-11.65	0.00	20.50	43.22	47.58	22.58	25.02	23.65	-19.50	-8.56 |*
E2WA7DB2	29.00	22	8	-10.65	-10.69	0.04	20.50	43.22	47.58	25.86	35.24	23.91	-19.50	-5.32 |*
E2WA7DB2	29.00	22	9	-11.30	-11.30	0.00	20.50	43.22	47.58	23.58	25.07	23.82	-19.50	-7.60 |*
E2WA7DB2	29.00	22	10	-11.18	-11.18	0.00	20.50	43.22	47.58	23.96	25.34	23.43	-19.50	-7.24 |*
E2WA7DB2	29.00	24	1	-11.04	-11.07	0.03	20.50	47.56	43.22	24.35	24.54	27.59	-19.50	-6.80 |*
E2WA7DB2	29.00	24	2	-12.61	-12.61	0.00	20.50	47.56	43.22	20.51	19.73	21.59	-19.50	-10.70 |*
E2WA7DB2	29.00	24	3	-11.21	-11.25	0.04	20.50	47.56	43.22	24.03	19.29	26.54	-19.50	-7.34 |*
E2WA7DB2	29.00	24	4	-11.00	-11.06	0.06	20.50	47.56	43.22	24.46	23.76	36.51	-19.50	-6.67 |*
E2WA7DB2	29.00	24	5	-11.20	-11.23	0.03	20.50	47.56	43.22	23.77	24.99	35.94	-19.50	-7.32 |*
E2WA7DB2	29.00	24	6	-11.72	-11.73	0.01	20.50	47.56	43.22	22.37	23.17	27.75	-19.50	-8.75 |*
E2WA7DB2	29.00	24	7	-11.77	-11.78	0.01	20.50	47.56	43.22	22.27	23.62	25.04	-19.50	-8.87 |*
E2WA7DB2	29.00	24	8	-10.97	-11.03	0.06	20.50	47.56	43.22	24.57	23.89	35.29	-19.50	-6.57 |*
E2WA7DB2	29.00	24	9	-11.67	-11.68	0.01	20.50	47.56	43.22	22.51	23.79	25.02	-19.50	-8.63 |*
E2WA7DB2	29.00	24	10	-11.29	-11.31	0.02	20.50	47.56	43.22	23.60	23.40	25.30	-19.50	-7.59 |*
E2WA7DB2	29.00	26	1	-10.60	-10.64	0.04	20.48	43.20	47.92	26.19	27.56	24.89	-19.52	-5.03 |*
E2WA7DB2	29.00	26	2	-12.30	-12.34	0.04	20.48	43.20	47.92	21.19	21.56	20.09	-19.52	-10.04 |*
E2WA7DB2	29.00	26	3	-11.83	-11.93	0.10	20.48	43.20	47.92	22.23	26.51	19.73	-19.52	-8.99 |*
E2WA7DB2	29.00	26	4	-11.33	-11.38	0.05	20.48	43.20	47.92	23.42	36.48	25.44	-19.52	-7.65 |*
E2WA7DB2	29.00	26	5	-10.75	-10.76	0.01	20.48	43.20	47.92	25.39	35.92	29.80	-19.52	-5.65 |*
E2WA7DB2	29.00	26	6	-10.72	-10.72	0.00	20.48	43.20	47.92	25.77	27.73	22.19	-19.52	-5.53 |*
E2WA7DB2	29.00	26	7	-11.65	-11.65	0.00	20.48	43.20	47.92	22.58	25.01	26.14	-19.52	-8.53 |*
E2WA7DB2	29.00	26	8	-10.71	-10.77	0.06	20.48	43.20	47.92	25.72	35.26	22.94	-19.52	-5.49 |*
E2WA7DB2	29.00	26	9	-11.30	-11.31	0.01	20.48	43.20	47.92	23.56	25.00	26.74	-19.52	-7.57 |*
E2WA7DB2	29.00	26	10	-11.19	-11.21	0.02	20.48	43.20	47.92	23.93	25.27	25.27	-19.52	-7.22 |*
E2WA7DB2	29.00	28	1	-11.07	-11.13	0.06	20.49	47.90	43.23	24.28	24.86	27.58	-19.51	-6.87 |*
E2WA7DB2	29.00	28	2	-12.49	-12.59	0.10	20.49	47.90	43.23	20.77	20.06	21.82	-19.51	-10.44 |*
E2WA7DB2	29.00	28	3	-11.30	-11.57	0.27	20.49	47.90	43.23	23.76	19.71	26.53	-19.51	-7.57 |*
E2WA7DB2	29.00	28	4	-11.05	-11.14	0.09	20.49	47.90	43.23	24.30	25.41	36.45	-19.51	-6.79 |*
E2WA7DB2	29.00	28	5	-11.23	-11.25	0.02	20.49	47.90	43.23	23.67	29.78	35.88	-19.51	-7.36 |*
E2WA7DB2	29.00	28	6	-11.77	-11.78	0.01	20.49	47.90	43.23	22.30	22.16	27.71	-19.51	-8.84 |*
E2WA7DB2	29.00	28	7	-11.76	-11.78	0.02	20.49	47.90	43.23	22.27	26.11	25.25	-19.51	-8.83 |*
E2WA7DB2	29.00	28	8	-11.03	-11.12	0.09	20.49	47.90	43.23	24.44	22.92	35.23	-19.51	-6.73 |*
E2WA7DB2	29.00	28	9	-11.68	-11.70	0.02	20.49	47.90	43.23	22.47	26.71	25.02	-19.51	-8.63 |*
E2WA7DB2	29.00	28	10	-11.29	-11.34	0.05	20.49	47.90	43.23	23.59	25.24	25.34	-19.51	-7.55 |*
E2WA7DB2	29.00	30	1	-10.62	-10.67	0.05	20.48	43.22	47.92	26.12	27.55	24.84	-19.52	-5.10 |*
E2WA7DB2	29.00	30	2	-12.21	-12.29	0.08	20.48	43.22	47.92	21.40	21.79	20.05	-19.52	-9.84 |*
E2WA7DB2	29.00	30	3	-11.86	-12.06	0.20	20.48	43.22	47.92	22.18	26.50	19.73	-19.52	-9.05 |*
E2WA7DB2	29.00	30	4	-11.36	-11.42	0.06	20.48	43.22	47.92	23.33	36.43	25.41	-19.52	-7.74 |*
E2WA7DB2	29.00	30	5	-10.76	-10.78	0.02	20.48	43.22	47.92	25.34	35.86	29.77	-19.52	-5.71 |*
E2WA7DB2	29.00	30	6	-10.73	-10.73	0.00	20.48	43.22	47.92	25.73	27.69	22.11	-19.52	-5.58 |*
E2WA7DB2	29.00	30	7	-11.66	-11.67	0.01	20.48	43.22	47.92	22.54	25.22	26.11	-19.52	-8.57 |*
E2WA7DB2	29.00	30	8	-10.73	-10.80	0.07	20.48	43.22	47.92	25.64	35.20	22.88	-19.52	-5.58 |*
E2WA7DB2	29.00	30	9	-11.32	-11.33	0.01	20.48	43.22	47.92	23.49	25.00	26.71	-19.52	-7.64 |*

E2WA7DB2	29.00	30	10	-11.20	-11.24	0.04	20.48	43.22	47.92	23.90	25.31	25.26	-19.52	-7.26
E2WA7DB2	29.00	32	1	-11.13	-11.19	0.06	20.49	47.90	43.23	24.09	24.81	27.49	-19.52	-7.05
E2WA7DB2	29.00	32	2	-14.24	-14.31	0.07	20.49	47.90	43.23	17.65	20.03	21.61	-19.52	-13.45
E2WA7DB2	29.00	32	3	-11.57	-11.83	0.26	20.49	47.90	43.23	22.94	19.70	26.45	-19.52	-8.33
E2WA7DB2	29.00	32	4	-11.06	-11.15	0.09	20.49	47.90	43.23	24.27	25.38	36.44	-19.52	-6.82
E2WA7DB2	29.00	32	5	-11.24	-11.26	0.02	20.49	47.90	43.23	23.65	29.74	35.87	-19.52	-7.38
E2WA7DB2	29.00	32	6	-11.78	-11.78	0.00	20.49	47.90	43.23	22.28	22.09	27.66	-19.52	-8.86
E2WA7DB2	29.00	32	7	-12.02	-12.04	0.02	20.49	47.90	43.23	21.65	26.09	25.05	-19.52	-9.44
E2WA7DB2	29.00	32	8	-11.04	-11.13	0.09	20.49	47.90	43.23	24.41	22.86	35.20	-19.52	-6.75
E2WA7DB2	29.00	32	9	-11.75	-11.77	0.02	20.49	47.90	43.23	22.30	26.68	24.93	-19.52	-8.80
E2WA7DB2	29.00	32	10	-11.59	-11.63	0.04	20.49	47.90	43.23	22.75	25.23	25.22	-19.52	-8.38
E2WA7DB2	29.00	34	1	-10.63	-10.68	0.05	20.48	43.22	47.92	26.07	27.47	24.82	-19.52	-5.15
E2WA7DB2	29.00	34	2	-12.02	-12.12	0.10	20.48	43.22	47.92	21.83	21.58	20.05	-19.52	-9.44
E2WA7DB2	29.00	34	3	-11.85	-12.07	0.22	20.48	43.22	47.92	22.19	26.42	19.73	-19.52	-9.03
E2WA7DB2	29.00	34	4	-11.36	-11.43	0.07	20.48	43.22	47.92	23.32	36.41	25.40	-19.52	-7.75
E2WA7DB2	29.00	34	5	-10.77	-10.79	0.02	20.48	43.22	47.92	25.30	35.84	29.74	-19.52	-5.75
E2WA7DB2	29.00	34	6	-10.75	-10.75	0.00	20.48	43.22	47.92	25.65	27.63	22.09	-19.52	-5.65
E2WA7DB2	29.00	34	7	-11.61	-11.62	0.01	20.48	43.22	47.92	22.69	25.03	26.06	-19.52	-8.42
E2WA7DB2	29.00	34	8	-10.73	-10.81	0.08	20.48	43.22	47.92	25.62	35.18	22.88	-19.52	-5.59
E2WA7DB2	29.00	34	9	-11.33	-11.34	0.01	20.48	43.22	47.92	23.47	24.91	26.64	-19.52	-7.66
E2WA7DB2	29.00	34	10	-11.19	-11.23	0.04	20.48	43.22	47.92	23.92	25.19	25.24	-19.52	-7.24
E2WA7DB2	29.00	36	1	-11.10	-11.17	0.07	20.49	47.90	43.23	24.18	24.80	27.48	-19.51	-6.96
E2WA7DB2	29.00	36	2	-12.84	-12.94	0.10	20.49	47.90	43.23	20.05	20.03	21.41	-19.51	-11.13
E2WA7DB2	29.00	36	3	-11.36	-11.64	0.28	20.49	47.90	43.23	23.55	19.70	26.44	-19.51	-7.76
E2WA7DB2	29.00	36	4	-11.08	-11.17	0.09	20.49	47.90	43.23	24.21	25.37	36.36	-19.51	-6.88
E2WA7DB2	29.00	36	5	-11.26	-11.29	0.03	20.49	47.90	43.23	23.58	29.71	35.79	-19.51	-7.45
E2WA7DB2	29.00	36	6	-11.80	-11.81	0.01	20.49	47.90	43.23	22.23	22.06	27.61	-19.51	-8.91
E2WA7DB2	29.00	36	7	-11.82	-11.84	0.02	20.49	47.90	43.23	22.13	26.03	24.85	-19.51	-8.97
E2WA7DB2	29.00	36	8	-11.06	-11.15	0.09	20.49	47.90	43.23	24.35	22.85	35.13	-19.51	-6.81
E2WA7DB2	29.00	36	9	-11.72	-11.73	0.01	20.49	47.90	43.23	22.39	26.62	24.90	-19.51	-8.71
E2WA7DB2	29.00	36	10	-11.36	-11.41	0.05	20.49	47.90	43.23	23.39	25.21	25.17	-19.51	-7.75
E2WA7DB2	29.00	38	1	-10.64	-10.70	0.06	20.48	43.22	47.91	26.00	27.45	24.76	-19.52	-5.22
E2WA7DB2	29.00	38	2	-11.58	-11.68	0.10	20.48	43.22	47.91	23.02	21.38	20.01	-19.52	-8.34
E2WA7DB2	29.00	38	3	-11.83	-12.05	0.22	20.48	43.22	47.91	22.25	26.41	19.72	-19.52	-8.98
E2WA7DB2	29.00	38	4	-11.58	-11.64	0.06	20.48	43.22	47.91	22.71	36.34	25.36	-19.52	-8.36
E2WA7DB2	29.00	38	5	-10.87	-10.89	0.02	20.48	43.22	47.91	24.92	35.77	29.66	-19.52	-6.12
E2WA7DB2	29.00	38	6	-10.58	-10.59	0.01	20.48	43.22	47.91	26.43	27.59	21.99	-19.52	-4.94
E2WA7DB2	29.00	38	7	-11.60	-11.62	0.02	20.48	43.22	47.91	22.70	24.82	25.97	-19.52	-8.41
E2WA7DB2	29.00	38	8	-10.86	-10.94	0.08	20.48	43.22	47.91	25.09	35.10	22.81	-19.52	-6.10
E2WA7DB2	29.00	38	9	-11.30	-11.31	0.01	20.48	43.22	47.91	23.56	24.87	26.54	-19.52	-7.58
E2WA7DB2	29.00	38	10	-11.12	-11.16	0.04	20.48	43.22	47.91	24.17	25.14	25.21	-19.52	-7.00
E2WA7DB2	29.00	40	1	-11.15	-11.18	0.03	20.49	47.89	47.91	23.96	24.73		-19.51	-7.13
E2WA7DB2	29.00	40	2	-14.88	-14.91	0.03	20.49	47.89	47.91	16.67	19.99		-19.51	-14.38
E2WA7DB2	29.00	40	3	-11.65	-11.75	0.10	20.49	47.89	47.91	22.67	19.69		-19.51	-8.55
E2WA7DB2	29.00	40	4	-11.07	-11.12	0.05	20.49	47.89	47.91	24.23	25.33		-19.51	-6.85
E2WA7DB2	29.00	40	5	-11.26	-11.28	0.02	20.49	47.89	47.91	23.57	29.63		-19.51	-7.46
E2WA7DB2	29.00	40	6	-11.79	-11.80	0.01	20.49	47.89	47.91	22.21	21.96		-19.51	-8.91
E2WA7DB2	29.00	40	7	-12.13	-12.14	0.01	20.49	47.89	47.91	21.34	25.95		-19.51	-9.70
E2WA7DB2	29.00	40	8	-11.05	-11.10	0.05	20.49	47.89	47.91	24.36	22.78		-19.51	-6.80
E2WA7DB2	29.00	40	9	-11.78	-11.79	0.01	20.49	47.89	47.91	22.17	26.52		-19.51	-8.87
E2WA7DB2	29.00	40	10	-11.71	-11.73	0.02	20.49	47.89	47.91	22.35	25.19		-19.51	-8.71
E2WA7DC1	29.00	1	1	-4.78	-4.67	-0.11	25.69		24.79	36.74		31.98	-14.38	5.43
E2WA7DC1	29.00	1	2	-4.84	-4.72	-0.12	25.69		24.79	35.94		33.00	-14.38	4.73
E2WA7DC1	29.00	1	3	-4.81	-4.72	-0.09	25.69		24.79	36.54		29.64	-14.38	5.03
E2WA7DC1	29.00	1	4	-6.23	-5.77	-0.46	25.69		24.79	28.62		27.59	-14.38	-2.52
E2WA7DC1	29.00	1	5	-5.59	-4.98	-0.61	25.69		24.79	30.92		28.69	-14.38	-0.26
E2WA7DC1	29.00	1	6	-5.32	-5.19	-0.13	25.69		24.79	32.21		29.86	-14.38	1.03
E2WA7DC1	29.00	1	7	-7.24	-5.52	-1.72	25.69		24.79	26.08		27.27	-14.38	-5.00
E2WA7DC1	29.00	1	8	-5.47	-5.52	0.05	25.69		24.79	31.63		26.52	-14.38	0.29
E2WA7DC1	29.00	1	9	-5.02	-4.76	-0.26	25.69		24.79	34.37		29.59	-14.38	3.05
E2WA7DC1	29.00	1	10	-5.39	-4.87	-0.52	25.69		24.79	31.93		28.42	-14.38	0.69
E2WA7DC1	29.00	3	1	-4.78	-4.87	0.09	25.71	24.77	23.95	40.05	31.95	31.50	-14.44	7.77
E2WA7DC1	29.00	3	2	-4.78	-4.86	0.08	25.71	24.77	23.95	39.61	32.98	32.51	-14.44	7.66
E2WA7DC1	29.00	3	3	-4.82	-5.07	0.25	25.71	24.77	23.95	39.74	29.61	29.41	-14.44	6.89
E2WA7DC1	29.00	3	4	-5.36	-6.94	1.58	25.71	24.77	23.95	32.93	27.56	32.43	-14.44	1.46
E2WA7DC1	29.00	3	5	-5.44	-5.69	0.25	25.71	24.77	23.95	32.47	28.66	29.53	-14.44	1.02
E2WA7DC1	29.00	3	6	-5.13	-5.16	0.03	25.71	24.77	23.95	34.74	29.83	29.40	-14.44	3.08
E2WA7DC1	29.00	3	7	-6.12	-7.32	1.20	25.71	24.77	23.95	29.35	27.24	31.87	-14.44	-1.89
E2WA7DC1	29.00	3	8	-4.99	-6.06	1.07	25.71	24.77	23.95	37.25	26.49	28.13	-14.44	4.47
E2WA7DC1	29.00	3	9	-4.97	-5.20	0.23	25.71	24.77	23.95	36.57	29.56	29.98	-14.44	4.63
E2WA7DC1	29.00	3	10	-5.09	-5.58	0.49	25.71	24.77	23.95	35.37	28.39	29.25	-14.44	3.48
E2WA7DC1	29.00	5	1	-4.96	-4.89	-0.07	25.69	23.93	24.79	36.68	31.47	31.91	-14.46	5.05
E2WA7DC1	29.00	5	2	-5.01	-4.92	-0.09	25.69	23.93	24.79	35.88	32.48	32.95	-14.46	4.45
E2WA7DC1	29.00	5	3	-5.00	-5.07	0.07	25.69	23.93	24.79	36.48	29.38	29.55	-14.46	4.50
E2WA7DC1	29.00	5	4	-6.36	-6.56	0.20	25.69	23.93	24.79	28.60	32.40	27.50	-14.46	-2.58
E2WA7DC1	29.00	5	5	-5.75	-5.31	-0.44	25.69	23.93	24.79	30.89	29.50	28.60	-14.46	-0.43
E2WA7DC1	29.00	5	6	-5.50	-5.41	-0.09	25.69	23.93	24.79	32.14	29.37	29.79	-14.46	0.77
E2WA7DC1	29.00	5	7	-7.34	-6.18	-1.16	25.69	23.93	24.79	26.07	31.84	27.18	-14.46	-5.05
E2WA7DC1	29.00	5	8	-5.65	-6.20	0.55	25.69	23.93	24.79	31.60	28.10	26.42	-14.46	0.04
E2WA7DC1	29.00	5	9	-5.19	-5.06	-0.13	25.69	23.93	24.79	34.33	29.95	29.50	-14.46	2.74
E2WA7DC1	29.00	5	10	-5.56	-5.30	-0.26	25.69	23.93	24.79	31.90	29.22	28.33	-14.46	0.47
E2WA7DC1	29.00	7	1	-4.78	-4.87	0.09	25.71	24.77	23.95	40.05	31.89	31.46	-14.44	7.76
E2WA7DC1	29.00	7	2	-4.78	-4.86	0.08	25.71	24.77	23.95	39.61	32.92	32.44	-14.44	7.64
E2WA7DC1	29.00	7	3	-4.82	-5.08	0.26	25.71	24.77	23.95	39.74	29.52	29.38	-14.44	6.87
E2WA7DC1	29.00	7	4	-5.36	-6.83	1.47	25.71	24.77	23.95	32.93	27.47	32.39	-14.44	1.45
E2WA7DC1	29.00	7	5	-5.44	-5.70	0.26	25.71	24.77	23.95	32.47	28.57	29.52	-14.44	1.01
E2WA7DC1	29.00	7	6	-5.14	-5.17	0.03	25.71	24.77	23.95	34.72	29.76	29.37	-14.44	3.06
E2WA7DC1	29.00	7	7	-6.13	-7.33	1.20	25.71	24.77	23.95	29.34	27.16	31.83	-14.44	-1.89
E2WA7DC1	29.00	7	8	-4.99	-6.00	1.01	25.71	24.77	23.95	37.24	26.40	28.10	-14.44	4.45
E2WA7DC1	29.00	7	9	-4.98	-5.20	0.22	25.71	24.77	23.95	36.56	29.47	29.96	-14.44	4.62
E2WA7DC1	29.00	7	10	-5.09	-5.59	0.50	25.71	24.77	23.95	35.37	28.30	29.23	-14.44	3.47
E2WA7DC1	29.00	9	1	-4.96	-4.90	-0.06	25.69	23.93	24.79	36.65	31.43	31.86	-14.46	5.00
E2WA7DC1	29.00	9	2	-5.01	-4.93	-0.08	25.69	23.93	24.79	35.83	32.41	32.90	-14.46	4.40

E2WA7DC1	29.00	9	3	-5.00	-5.07	0.07	25.69	23.93	24.79	36.46	29.35	29.46	-14.46	4.48 |*
E2WA7DC1	29.00	9	4	-6.36	-6.57	0.21	25.69	23.93	24.79	28.59	32.36	27.41	-14.46	-2.59 |*
E2WA7DC1	29.00	9	5	-5.75	-5.31	-0.44	25.69	23.93	24.79	30.88	29.49	28.52	-14.46	-0.44 |*
E2WA7DC1	29.00	9	6	-5.51	-5.42	-0.09	25.69	23.93	24.79	32.10	29.34	29.75	-14.46	0.73 |*
E2WA7DC1	29.00	9	7	-7.34	-6.19	-1.15	25.69	23.93	24.79	26.06	31.81	27.10	-14.46	-5.05 |*
E2WA7DC1	29.00	9	8	-5.65	-6.21	0.56	25.69	23.93	24.79	31.60	28.07	26.33	-14.46	0.02 |*
E2WA7DC1	29.00	9	9	-5.19	-5.06	-0.13	25.69	23.93	24.79	34.31	29.93	29.42	-14.46	2.72 |*
E2WA7DC1	29.00	9	10	-5.56	-5.31	-0.25	25.69	23.93	24.79	31.90	29.20	28.24	-14.46	0.46 |*
E2WA7DC1	29.00	11	1	-4.77	-4.82	0.05	25.71	24.77	23.95	40.03	31.83	32.59	-14.44	7.87 |*
E2WA7DC1	29.00	11	2	-4.78	-4.82	0.04	25.71	24.77	23.95	39.59	32.87	32.23	-14.44	7.61 |*
E2WA7DC1	29.00	11	3	-4.80	-5.02	0.22	25.71	24.77	23.95	39.72	29.43	31.55	-14.44	7.15 |*
E2WA7DC1	29.00	11	4	-5.36	-6.75	1.39	25.71	24.77	23.95	32.91	27.38	34.44	-14.44	1.47 |*
E2WA7DC1	29.00	11	5	-5.42	-5.66	0.24	25.71	24.77	23.95	32.46	28.49	32.76	-14.44	1.10 |*
E2WA7DC1	29.00	11	6	-5.13	-5.12	-0.01	25.71	24.77	23.95	34.71	29.72	30.36	-14.44	3.12 |*
E2WA7DC1	29.00	11	7	-6.12	-7.30	1.18	25.71	24.77	23.95	29.34	27.08	34.27	-14.44	-1.88 |*
E2WA7DC1	29.00	11	8	-4.96	-5.87	0.91	25.71	24.77	23.95	37.21	26.30	31.96	-14.44	4.77 |*
E2WA7DC1	29.00	11	9	-4.96	-5.15	0.19	25.71	24.77	23.95	36.55	29.39	32.92	-14.44	4.80 |*
E2WA7DC1	29.00	11	10	-5.07	-5.54	0.47	25.71	24.77	23.95	35.36	28.21	32.90	-14.44	3.66 |*
E2WA7DC1	29.00	13	1	-4.96	-4.89	-0.07	25.69	23.93	24.79	36.57	32.56	31.07	-14.46	4.95 |*
E2WA7DC1	29.00	13	2	-5.03	-4.94	-0.09	25.69	23.93	24.79	35.75	32.20	31.07	-14.46	4.21 |*
E2WA7DC1	29.00	13	3	-4.98	-5.05	0.07	25.69	23.93	24.79	36.40	31.52	30.80	-14.46	4.73 |*
E2WA7DC1	29.00	13	4	-6.33	-6.57	0.24	25.69	23.93	24.79	28.57	34.42	32.03	-14.46	-2.50 |*
E2WA7DC1	29.00	13	5	-5.73	-5.28	-0.45	25.69	23.93	24.79	30.84	32.73	31.19	-14.46	-0.32 |*
E2WA7DC1	29.00	13	6	-5.52	-5.43	-0.09	25.69	23.93	24.79	32.02	30.33	29.19	-14.46	0.67 |*
E2WA7DC1	29.00	13	7	-7.32	-6.17	-1.15	25.69	23.93	24.79	26.05	34.24	31.13	-14.46	-5.00 |*
E2WA7DC1	29.00	13	8	-5.59	-6.17	0.58	25.69	23.93	24.79	31.57	31.94	29.86	-14.46	0.32 |*
E2WA7DC1	29.00	13	9	-5.17	-5.04	-0.13	25.69	23.93	24.79	34.26	32.90	31.37	-14.46	2.92 |*
E2WA7DC1	29.00	13	10	-5.52	-5.27	-0.25	25.69	23.93	24.79	31.87	32.88	31.11	-14.46	0.66 |*
E2WA7DC1	29.00	15	1	-4.78	-4.86	0.08	25.71	24.77	23.95	40.03	31.04	32.49	-14.44	7.76 |*
E2WA7DC1	29.00	15	2	-4.79	-4.86	0.07	25.71	24.77	23.95	39.64	31.04	32.13	-14.44	7.42 |*
E2WA7DC1	29.00	15	3	-4.80	-5.04	0.24	25.71	24.77	23.95	39.68	30.77	31.51	-14.44	7.35 |*
E2WA7DC1	29.00	15	4	-5.32	-6.76	1.44	25.71	24.77	23.95	32.90	32.00	34.36	-14.44	1.69 |*
E2WA7DC1	29.00	15	5	-5.41	-5.68	0.27	25.71	24.77	23.95	32.45	31.16	32.67	-14.44	1.21 |*
E2WA7DC1	29.00	15	6	-5.14	-5.15	0.01	25.71	24.77	23.95	34.71	29.16	30.27	-14.44	3.07 |*
E2WA7DC1	29.00	15	7	-6.09	-7.33	1.24	25.71	24.77	23.95	29.33	31.10	34.18	-14.44	-1.77 |*
E2WA7DC1	29.00	15	8	-4.92	-5.86	0.94	25.71	24.77	23.95	37.19	29.83	31.90	-14.44	5.32 |*
E2WA7DC1	29.00	15	9	-4.95	-5.17	0.22	25.71	24.77	23.95	36.54	31.34	32.89	-14.44	4.97 |*
E2WA7DC1	29.00	15	10	-5.04	-5.55	0.51	25.71	24.77	23.95	35.35	31.09	32.86	-14.44	3.89 |*
E2WA7DC1	29.00	17	1	-4.96	-4.87	-0.09	25.69	23.93	24.79	36.57	32.47	31.05	-14.46	4.95 |*
E2WA7DC1	29.00	17	2	-5.03	-4.92	-0.11	25.69	23.93	24.79	35.76	32.11	31.05	-14.46	4.21 |*
E2WA7DC1	29.00	17	3	-4.98	-4.92	-0.06	25.69	23.93	24.79	36.41	31.48	30.78	-14.46	4.73 |*
E2WA7DC1	29.00	17	4	-6.33	-5.91	-0.42	25.69	23.93	24.79	28.58	34.33	31.98	-14.46	-2.50 |*
E2WA7DC1	29.00	17	5	-5.73	-5.21	-0.52	25.69	23.93	24.79	30.85	32.64	31.17	-14.46	-0.32 |*
E2WA7DC1	29.00	17	6	-5.52	-5.41	-0.11	25.69	23.93	24.79	32.03	30.24	29.18	-14.46	0.67 |*
E2WA7DC1	29.00	17	7	-7.32	-5.81	-1.51	25.69	23.93	24.79	26.05	34.16	31.09	-14.46	-5.00 |*
E2WA7DC1	29.00	17	8	-5.59	-5.50	-0.09	25.69	23.93	24.79	31.57	31.87	29.83	-14.46	0.32 |*
E2WA7DC1	29.00	17	9	-5.17	-4.97	-0.20	25.69	23.93	24.79	34.27	32.86	31.35	-14.46	2.92 |*
E2WA7DC1	29.00	17	10	-5.52	-5.07	-0.45	25.69	23.93	24.79	31.88	32.84	31.09	-14.46	0.66 |*
E2WA7DC1	29.00	19	1	-4.63	0.00	-4.63	25.71	24.77	38.62	40.07	31.02	33.00	-14.36	7.83 |*
E2WA7DC1	29.00	19	2	-4.64	0.00	-4.64	25.71	24.77	38.62	39.74	31.02	32.61	-14.36	7.54 |*
E2WA7DC1	29.00	19	3	-4.65	0.00	-4.65	25.71	24.77	38.62	39.67	30.75	32.07	-14.36	7.40 |*
E2WA7DC1	29.00	19	4	-5.19	-3.39	-1.80	25.71	24.77	38.62	32.90	31.95	37.86	-14.36	1.74 |*
E2WA7DC1	29.00	19	5	-5.28	0.00	-5.28	25.71	24.77	38.62	32.46	31.14	33.46	-14.36	1.23 |*
E2WA7DC1	29.00	19	6	-4.99	0.00	-4.99	25.71	24.77	38.62	34.76	29.15	30.72	-14.36	3.14 |*
E2WA7DC1	29.00	19	7	-5.98	-4.51	-1.47	25.71	24.77	38.62	29.33	31.06	36.91	-14.36	-1.76 |*
E2WA7DC1	29.00	19	8	-4.77	-0.72	-4.05	25.71	24.77	38.62	37.20	29.80	33.19	-14.36	5.40 |*
E2WA7DC1	29.00	19	9	-4.81	0.00	-4.81	25.71	24.77	38.62	36.55	31.33	33.55	-14.36	5.00 |*
E2WA7DC1	29.00	19	10	-4.91	0.00	-4.91	25.71	24.77	38.62	35.35	31.06	33.75	-14.36	3.92 |*
E2WA7DC1	29.00	21	1	-19.60	-19.61	0.01	43.00	38.60	-5.60	44.34	32.97	30.09	-26.60	10.30 |*
E2WA7DC1	29.00	21	2	-19.60	-19.61	0.01	43.00	38.60	-5.60	45.65	32.58	30.27	-26.60	10.89 |*
E2WA7DC1	29.00	21	3	-19.60	-19.61	0.01	43.00	38.60	-5.60	42.43	32.04	28.83	-26.60	8.76 |*
E2WA7DC1	29.00	21	4	-19.62	-19.66	0.04	43.00	38.60	-5.60	33.49	37.83	27.79	-26.60	2.07 |*
E2WA7DC1	29.00	21	5	-19.62	-19.62	0.00	43.00	38.60	-5.60	33.16	33.43	28.94	-26.60	1.78 |*
E2WA7DC1	29.00	21	6	-19.62	-19.63	0.01	43.00	38.60	-5.60	34.49	30.69	28.59	-26.60	2.85 |*
E2WA7DC1	29.00	21	7	-19.65	-19.67	0.02	43.00	38.60	-5.60	29.59	36.88	28.07	-26.60	-1.58 |*
E2WA7DC1	29.00	21	8	-19.61	-19.63	0.02	43.00	38.60	-5.60	38.48	33.16	26.63	-26.60	5.80 |*
E2WA7DC1	29.00	21	9	-19.61	-19.61	0.00	43.00	38.60	-5.60	37.44	33.53	29.48	-26.60	5.58 |*
E2WA7DC1	29.00	21	10	-19.61	-19.62	0.01	43.00	38.60	-5.60	36.16	33.72	28.51	-26.60	4.40 |*
E2WA7DC1	29.00	23	1	-22.62	-22.63	0.01	47.46	-5.62	-5.60	36.28	30.07	30.68	-29.62	4.50 |*
E2WA7DC1	29.00	23	2	-22.63	-22.63	0.00	47.46	-5.62	-5.60	35.28	30.25	31.41	-29.62	3.71 |*
E2WA7DC1	29.00	23	3	-22.62	-22.63	0.01	47.46	-5.62	-5.60	40.36	28.80	29.63	-29.62	7.17 |*
E2WA7DC1	29.00	23	4	-22.62	-22.65	0.03	47.46	-5.62	-5.60	39.72	27.77	27.85	-29.62	6.22 |*
E2WA7DC1	29.00	23	5	-22.62	-22.64	0.02	47.46	-5.62	-5.60	37.15	28.91	29.04	-29.62	4.91 |*
E2WA7DC1	29.00	23	6	-22.63	-22.64	0.01	47.46	-5.62	-5.60	31.76	28.56	28.67	-29.62	0.33 |*
E2WA7DC1	29.00	23	7	-22.63	-22.67	0.04	47.46	-5.62	-5.60	35.75	28.04	27.68	-29.62	3.58 |*
E2WA7DC1	29.00	23	8	-22.62	-22.63	0.01	47.46	-5.62	-5.60	44.50	26.60	27.40	-29.62	7.66 |*
E2WA7DC1	29.00	23	9	-22.62	-22.63	0.01	47.46	-5.62	-5.60	38.66	29.46	29.83	-29.62	6.20 |*
E2WA7DC1	29.00	23	10	-22.62	-22.64	0.02	47.46	-5.62	-5.60	41.27	28.48	28.99	-29.62	7.48 |*
E2WA7DC1	29.00	25	1	-22.62	-22.62	0.00	40.87	-5.62	-5.60	41.52	30.66	30.24	-29.62	8.36 |*
E2WA7DC1	29.00	25	2	-22.62	-22.62	0.00	40.87	-5.62	-5.60	43.69	31.39	30.39	-29.62	9.76 |*
E2WA7DC1	29.00	25	3	-22.63	-22.63	0.00	40.87	-5.62	-5.60	36.86	29.61	28.99	-29.62	4.76 |*
E2WA7DC1	29.00	25	4	-22.65	-22.66	0.01	40.87	-5.62	-5.60	28.52	27.82	27.97	-29.62	-2.72 |*
E2WA7DC1	29.00	25	5	-22.64	-22.63	-0.01	40.87	-5.62	-5.60	31.92	29.01	29.12	-29.62	0.52 |*
E2WA7DC1	29.00	25	6	-22.63	-22.63	0.00	40.87	-5.62	-5.60	34.03	28.65	28.75	-29.62	2.34 |*
E2WA7DC1	29.00	25	7	-22.66	-22.66	0.00	40.87	-5.62	-5.60	27.39	27.66	28.25	-29.62	-3.80 |*
E2WA7DC1	29.00	25	8	-22.64	-22.64	0.00	40.87	-5.62	-5.60	30.93	27.37	26.80	-29.62	-0.57 |*
E2WA7DC1	29.00	25	9	-22.63	-22.63	0.00	40.87	-5.62	-5.60	35.28	29.80	29.65	-29.62	3.56 |*
E2WA7DC1	29.00	25	10	-22.63	-22.63	0.00	40.87	-5.62	-5.60	32.93	28.96	28.68	-29.62	1.40 |*
E2WA7DC1	29.00	27	1	-22.63	-22.63	0.00	42.59	-5.62	-5.60	35.46	30.21	31.23	-29.62	3.85 |*
E2WA7DC1	29.00	27	2	-22.63	-22.63	0.00	42.59	-5.62	-5.60	35.02	30.37	31.93	-29.62	3.51 |*
E2WA7DC1	29.00	27	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	34.81	28.96	30.26	-29.62	3.14 |*
E2WA7DC1	29.00	27	4	-22.66	-22.69	0.03	42.59	-5.62	-5.60	27.88	27.94	28.42	-29.62	-3.32 |*
E2WA7DC1	29.00	27	5	-22.63	-22.64	0.01	42.59	-5.62	-5.60	33.66	29.09	29.63	-29.62	2.11 |*
E2WA7DC1	29.00	27	6	-22.64	-22.64	0.00	42.59	-5.62	-5.60	31.50	28.72	29.20	-29.62	0.12 |*

E2WA7DC1	29.00	27	7	-22.65	-22.68	0.03	42.59	-5.62	-5.60	28.53	28.22	28.20	-29.62	-2.70
E2WA7DC1	29.00	27	8	-22.65	-22.66	0.01	42.59	-5.62	-5.60	29.53	26.77	28.04	-29.62	-1.81
E2WA7DC1	29.00	27	9	-22.63	-22.64	0.01	42.59	-5.62	-5.60	35.02	29.63	30.43	-29.62	3.38
E2WA7DC1	29.00	27	10	-22.63	-22.65	0.02	42.59	-5.62	-5.60	33.00	28.65	29.61	-29.62	1.49
E2WA7DC1	29.00	29	1	-22.62	-22.63	0.01	40.53	-5.62	-5.60	40.48	31.20	30.51	-29.62	7.83
E2WA7DC1	29.00	29	2	-22.62	-22.62	0.00	40.53	-5.62	-5.60	43.01	31.90	30.62	-29.62	9.55
E2WA7DC1	29.00	29	3	-22.63	-22.63	0.00	40.53	-5.62	-5.60	35.24	30.23	29.29	-29.62	3.53
E2WA7DC1	29.00	29	4	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	26.99	28.39	28.29	-29.62	-4.17
E2WA7DC1	29.00	29	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.33	29.60	29.46	-29.62	0.01
E2WA7DC1	29.00	29	6	-22.63	-22.63	0.00	40.53	-5.62	-5.60	33.98	29.17	29.05	-29.62	2.36
E2WA7DC1	29.00	29	7	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	26.44	28.18	28.57	-29.62	-4.70
E2WA7DC1	29.00	29	8	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.12	28.01	27.10	-29.62	-2.19
E2WA7DC1	29.00	29	9	-22.63	-22.63	0.00	40.53	-5.62	-5.60	34.37	30.40	29.98	-29.62	2.83
E2WA7DC1	29.00	29	10	-22.64	-22.63	-0.01	40.53	-5.62	-5.60	31.71	29.59	29.00	-29.62	0.34
E2WA7DC1	29.00	31	1	-22.63	-22.63	0.00	42.59	-5.62	-5.60	35.41	30.49	26.91	-29.62	3.42
E2WA7DC1	29.00	31	2	-22.63	-22.63	0.00	42.59	-5.62	-5.60	34.94	30.59	27.76	-29.62	3.15
E2WA7DC1	29.00	31	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	34.79	29.26	25.53	-29.62	2.65
E2WA7DC1	29.00	31	4	-22.66	-22.69	0.03	42.59	-5.62	-5.60	27.88	28.26	24.00	-29.62	-3.47
E2WA7DC1	29.00	31	5	-22.63	-22.65	0.02	42.59	-5.62	-5.60	33.64	29.43	25.06	-29.62	1.68
E2WA7DC1	29.00	31	6	-22.64	-22.65	0.01	42.59	-5.62	-5.60	31.44	29.02	24.95	-29.62	-0.19
E2WA7DC1	29.00	31	7	-22.65	-22.69	0.04	42.59	-5.62	-5.60	28.53	28.55	24.02	-29.62	-2.87
E2WA7DC1	29.00	31	8	-22.65	-22.67	0.02	42.59	-5.62	-5.60	29.53	27.07	23.25	-29.62	-2.08
E2WA7DC1	29.00	31	9	-22.63	-22.64	0.01	42.59	-5.62	-5.60	35.00	29.95	25.80	-29.62	2.89
E2WA7DC1	29.00	31	10	-22.63	-22.65	0.02	42.59	-5.62	-5.60	32.99	28.98	24.89	-29.62	1.11
E2WA7DC1	29.00	33	1	-22.62	-22.63	0.01	40.53	-5.62	-5.60	40.41	26.88	31.42	-29.62	6.94
E2WA7DC1	29.00	33	2	-22.62	-22.62	0.00	40.53	-5.62	-5.60	42.89	27.74	32.55	-29.62	8.68
E2WA7DC1	29.00	33	3	-22.63	-22.63	0.00	40.53	-5.62	-5.60	35.24	25.51	29.25	-29.62	2.98
E2WA7DC1	29.00	33	4	-22.67	-22.67	0.00	40.53	-5.62	-5.60	26.99	23.97	32.54	-29.62	-4.25
E2WA7DC1	29.00	33	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.30	25.03	29.37	-29.62	-0.29
E2WA7DC1	29.00	33	6	-22.63	-22.64	0.01	40.53	-5.62	-5.60	33.80	24.92	29.42	-29.62	1.79
E2WA7DC1	29.00	33	7	-22.68	-22.66	-0.02	40.53	-5.62	-5.60	26.44	23.99	31.96	-29.62	-4.78
E2WA7DC1	29.00	33	8	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.12	23.22	27.97	-29.62	-2.41
E2WA7DC1	29.00	33	9	-22.63	-22.63	0.00	40.53	-5.62	-5.60	34.34	25.78	29.81	-29.62	2.37
E2WA7DC1	29.00	33	10	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.70	24.86	29.08	-29.62	0.03
E2WA7DC1	29.00	35	1	-22.63	-22.63	0.00	42.59	-5.62	-5.60	35.43	31.39	30.12	-29.62	3.82
E2WA7DC1	29.00	35	2	-22.63	-22.63	0.00	42.59	-5.62	-5.60	34.97	32.53	30.88	-29.62	3.52
E2WA7DC1	29.00	35	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	34.80	29.23	29.00	-29.62	3.06
E2WA7DC1	29.00	35	4	-22.66	-22.69	0.03	42.59	-5.62	-5.60	27.88	32.51	27.28	-29.62	-3.28
E2WA7DC1	29.00	35	5	-22.63	-22.65	0.02	42.59	-5.62	-5.60	33.64	29.34	28.43	-29.62	2.03
E2WA7DC1	29.00	35	6	-22.64	-22.65	0.01	42.59	-5.62	-5.60	31.45	29.39	28.12	-29.62	0.06
E2WA7DC1	29.00	35	7	-22.65	-22.69	0.04	42.59	-5.62	-5.60	28.53	31.94	27.15	-29.62	-2.66
E2WA7DC1	29.00	35	8	-22.65	-22.67	0.02	42.59	-5.62	-5.60	29.53	27.94	26.76	-29.62	-1.82
E2WA7DC1	29.00	35	9	-22.63	-22.64	0.01	42.59	-5.62	-5.60	35.00	29.78	29.21	-29.62	3.28
E2WA7DC1	29.00	35	10	-22.63	-22.65	0.02	42.59	-5.62	-5.60	32.99	29.05	28.36	-29.62	1.44
E2WA7DC1	29.00	37	1	-22.62	-22.63	0.01	40.53	-5.62	-5.60	40.34	30.09	30.17	-29.62	7.50
E2WA7DC1	29.00	37	2	-22.62	-22.62	0.00	40.53	-5.62	-5.60	42.76	30.85	30.11	-29.62	9.08
E2WA7DC1	29.00	37	3	-22.63	-22.63	0.00	40.53	-5.62	-5.60	35.23	28.98	29.03	-29.62	3.40
E2WA7DC1	29.00	37	4	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	26.99	27.25	31.23	-29.62	-4.15
E2WA7DC1	29.00	37	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.28	28.40	30.87	-29.62	-0.04
E2WA7DC1	29.00	37	6	-22.63	-22.64	0.01	40.53	-5.62	-5.60	33.63	28.09	29.59	-29.62	2.01
E2WA7DC1	29.00	37	7	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	26.44	27.13	31.70	-29.62	-4.69
E2WA7DC1	29.00	37	8	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.12	26.74	27.75	-29.62	-2.21
E2WA7DC1	29.00	37	9	-22.63	-22.63	0.00	40.53	-5.62	-5.60	34.32	29.18	30.38	-29.62	2.74
E2WA7DC1	29.00	37	10	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.70	28.33	29.59	-29.62	0.30
E2WA7DC1	29.00	39	1	-22.63	-22.64	0.01	42.58	-5.62	-5.60	35.37	30.15	25.70	-29.62	3.17
E2WA7DC1	29.00	39	2	-22.63	-22.63	0.00	42.58	-5.62	-5.60	34.88	30.08	26.58	-29.62	2.93
E2WA7DC1	29.00	39	3	-22.63	-22.64	0.01	42.58	-5.62	-5.60	34.77	29.00	24.28	-29.62	2.38
E2WA7DC1	29.00	39	4	-22.66	-22.69	0.03	42.58	-5.62	-5.60	27.87	31.20	22.78	-29.62	-3.51
E2WA7DC1	29.00	39	5	-22.63	-22.65	0.02	42.58	-5.62	-5.60	33.61	30.84	23.82	-29.62	1.52
E2WA7DC1	29.00	39	6	-22.64	-22.65	0.01	42.58	-5.62	-5.60	31.38	29.57	23.76	-29.62	-0.35
E2WA7DC1	29.00	39	7	-22.66	-22.69	0.03	42.58	-5.62	-5.60	28.53	31.67	22.84	-29.62	-2.91
E2WA7DC1	29.00	39	8	-22.65	-22.67	0.02	42.58	-5.62	-5.60	29.52	27.72	21.99	-29.62	-2.20
E2WA7DC1	29.00	39	9	-22.63	-22.64	0.01	42.58	-5.62	-5.60	34.97	30.35	24.56	-29.62	2.67
E2WA7DC1	29.00	39	10	-22.63	-22.65	0.02	42.58	-5.62	-5.60	32.98	29.57	23.63	-29.62	0.93
E2WA7DC2	29.00	2	1	-5.41	-5.20	-0.21	25.82	23.93	23.50	31.99	36.37	37.25	-14.36	0.92
E2WA7DC2	29.00	2	2	-5.26	-5.04	-0.22	25.82	23.93	23.50	32.91	35.76	37.62	-14.36	1.82
E2WA7DC2	29.00	2	3	-5.95	-5.76	-0.19	25.82	23.93	23.50	29.69	32.24	33.76	-14.36	-1.41
E2WA7DC2	29.00	2	4	-6.81	-6.65	-0.16	25.82	23.93	23.50	27.65	21.39	26.21	-14.36	-3.92
E2WA7DC2	29.00	2	5	-6.37	-6.16	-0.21	25.82	23.93	23.50	28.72	24.82	25.07	-14.36	-2.77
E2WA7DC2	29.00	2	6	-5.93	-5.74	-0.19	25.82	23.93	23.50	29.77	31.76	32.56	-14.36	-1.35
E2WA7DC2	29.00	2	7	-7.18	-6.90	-0.28	25.82	23.93	23.50	27.33	18.47	21.47	-14.36	-4.78
E2WA7DC2	29.00	2	8	-7.13	-6.98	-0.15	25.82	23.93	23.50	26.55	24.02	30.36	-14.36	-4.68
E2WA7DC2	29.00	2	9	-6.00	-5.81	-0.19	25.82	23.93	23.50	29.63	29.22	29.82	-14.36	-1.59
E2WA7DC2	29.00	2	10	-6.43	-6.21	-0.22	25.82	23.93	23.50	28.47	24.26	27.47	-14.36	-2.94
E2WA7DC2	29.00	4	1	-5.52	-5.67	0.15	25.79	23.48	23.94	31.53	37.22	36.36	-14.39	0.47
E2WA7DC2	29.00	4	2	-5.36	-5.44	0.08	25.79	23.48	23.94	32.42	37.59	35.75	-14.39	1.34
E2WA7DC2	29.00	4	3	-6.02	-6.51	0.49	25.79	23.48	23.94	29.49	33.74	32.25	-14.39	-1.60
E2WA7DC2	29.00	4	4	-5.55	-8.12	2.57	25.79	23.48	23.94	33.07	26.19	21.41	-14.39	0.34
E2WA7DC2	29.00	4	5	-6.13	-6.58	0.45	25.79	23.48	23.94	29.63	25.04	24.84	-14.39	-1.97
E2WA7DC2	29.00	4	6	-6.04	-6.16	0.12	25.79	23.48	23.94	29.47	32.53	31.75	-14.39	-1.65
E2WA7DC2	29.00	4	7	-5.98	-7.76	1.78	25.79	23.48	23.94	32.37	21.45	18.50	-14.39	-1.47
E2WA7DC2	29.00	4	8	-6.49	-8.10	1.61	25.79	23.48	23.94	28.28	30.33	24.04	-14.39	-3.06
E2WA7DC2	29.00	4	9	-5.90	-6.29	0.39	25.79	23.48	23.94	30.07	29.79	29.24	-14.39	-1.18
E2WA7DC2	29.00	4	10	-6.18	-6.93	0.75	25.79	23.48	23.94	29.36	27.45	24.28	-14.39	-2.13
E2WA7DC2	29.00	6	1	-5.42	-5.22	-0.20	25.82	23.93	23.50	31.92	36.33	37.24	-14.36	0.85
E2WA7DC2	29.00	6	2	-5.27	-5.05	-0.22	25.82	23.93	23.50	32.85	35.72	37.61	-14.36	1.76
E2WA7DC2	29.00	6	3	-5.97	-5.79	-0.18	25.82	23.93	23.50	29.60	32.23	33.76	-14.36	-1.50
E2WA7DC2	29.00	6	4	-6.84	-6.68	-0.16	25.82	23.93	23.50	27.56	21.38	26.21	-14.36	-4.00
E2WA7DC2	29.00	6	5	-6.40	-6.19	-0.21	25.82	23.93	23.50	28.63	24.81	25.07	-14.36	-2.85
E2WA7DC2	29.00	6	6	-5.95	-5.76	-0.19	25.82	23.93	23.50	29.70	31.72	32.55	-14.36	-1.42
E2WA7DC2	29.00	6	7	-7.21	-6.94	-0.27	25.82	23.93	23.50	27.24	18.47	21.47	-14.36	-4.84
E2WA7DC2	29.00	6	8	-7.17	-7.02	-0.15	25.82	23.93	23.50	26.46	24.01	30.36	-14.36	-4.77
E2WA7DC2	29.00	6	9	-6.02	-5.83	-0.19	25.82	23.93	23.50	29.54	29.21	29.82	-14.36	-1.68

E2WA7DC2	29.00	6	10	-6.46	-6.25	-0.21	25.82	23.93	23.50	28.38	24.25	27.47	-14.36	-3.02 *
E2WA7DC2	29.00	8	1	-5.53	-5.68	0.15	25.79	23.48	23.94	31.49	37.22	36.32	-14.39	0.43 *
E2WA7DC2	29.00	8	2	-5.37	-5.45	0.08	25.79	23.48	23.94	32.35	37.59	35.70	-14.39	1.27 *
E2WA7DC2	29.00	8	3	-6.03	-6.52	0.49	25.79	23.48	23.94	29.47	33.74	32.25	-14.39	-1.63 *
E2WA7DC2	29.00	8	4	-5.55	-8.17	2.62	25.79	23.48	23.94	33.04	26.19	21.41	-14.39	0.31 *
E2WA7DC2	29.00	8	5	-6.13	-6.59	0.46	25.79	23.48	23.94	29.62	25.04	24.83	-14.39	-1.98 *
E2WA7DC2	29.00	8	6	-6.04	-6.17	0.13	25.79	23.48	23.94	29.44	32.52	31.71	-14.39	-1.67 *
E2WA7DC2	29.00	8	7	-5.99	-7.80	1.81	25.79	23.48	23.94	32.34	21.45	18.50	-14.39	-1.49 *
E2WA7DC2	29.00	8	8	-6.50	-8.13	1.63	25.79	23.48	23.94	28.25	30.33	24.04	-14.39	-3.09 *
E2WA7DC2	29.00	8	9	-5.91	-6.30	0.39	25.79	23.48	23.94	30.05	29.79	29.23	-14.39	-1.19 *
E2WA7DC2	29.00	8	10	-6.18	-6.95	0.77	25.79	23.48	23.94	29.35	27.45	24.28	-14.39	-2.14 *
E2WA7DC2	29.00	10	1	-5.44	-5.23	-0.21	25.82	23.93	23.50	31.87	36.30	37.22	-14.36	0.80 *
E2WA7DC2	29.00	10	2	-5.28	-5.06	-0.22	25.82	23.93	23.50	32.81	35.67	37.60	-14.36	1.72 *
E2WA7DC2	29.00	10	3	-6.00	-5.81	-0.19	25.82	23.93	23.50	29.52	32.22	33.74	-14.36	-1.58 *
E2WA7DC2	29.00	10	4	-6.87	-6.71	-0.16	25.82	23.93	23.50	27.47	21.38	26.19	-14.36	-4.08 *
E2WA7DC2	29.00	10	5	-6.43	-6.21	-0.22	25.82	23.93	23.50	28.55	24.81	25.06	-14.36	-2.92 *
E2WA7DC2	29.00	10	6	-5.96	-5.77	-0.19	25.82	23.93	23.50	29.66	31.68	32.53	-14.36	-1.46 *
E2WA7DC2	29.00	10	7	-7.24	-6.97	-0.27	25.82	23.93	23.50	27.16	18.47	21.47	-14.36	-4.91 *
E2WA7DC2	29.00	10	8	-7.21	-7.06	-0.15	25.82	23.93	23.50	26.37	24.01	30.33	-14.36	-4.86 *
E2WA7DC2	29.00	10	9	-6.05	-5.86	-0.19	25.82	23.93	23.50	29.46	29.20	29.81	-14.36	-1.76 *
E2WA7DC2	29.00	10	10	-6.49	-6.28	-0.21	25.82	23.93	23.50	28.29	24.25	27.47	-14.36	-3.10 *
E2WA7DC2	29.00	12	1	-5.33	-5.49	0.16	25.79	23.48	23.94	32.63	37.19	36.25	-14.39	1.55 *
E2WA7DC2	29.00	12	2	-5.41	-5.49	0.08	25.79	23.48	23.94	32.15	37.57	35.62	-14.39	1.07 *
E2WA7DC2	29.00	12	3	-5.51	-6.07	0.56	25.79	23.48	23.94	31.70	33.71	32.22	-14.39	0.54 *
E2WA7DC2	29.00	12	4	-5.28	-8.07	2.79	25.79	23.48	23.94	35.53	26.16	21.41	-14.39	1.82 *
E2WA7DC2	29.00	12	5	-5.46	-6.01	0.55	25.79	23.48	23.94	32.99	25.04	24.82	-14.39	0.78 *
E2WA7DC2	29.00	12	6	-5.78	-5.92	0.14	25.79	23.48	23.94	30.46	32.51	31.64	-14.39	-0.69 *
E2WA7DC2	29.00	12	7	-5.67	-7.63	1.96	25.79	23.48	23.94	35.20	21.44	18.49	-14.39	-0.23 *
E2WA7DC2	29.00	12	8	-5.51	-7.51	2.00	25.79	23.48	23.94	32.36	30.30	24.04	-14.39	0.52 *
E2WA7DC2	29.00	12	9	-5.31	-5.78	0.47	25.79	23.48	23.94	33.11	29.78	29.22	-14.39	1.63 *
E2WA7DC2	29.00	12	10	-5.40	-6.33	0.93	25.79	23.48	23.94	33.20	27.44	24.28	-14.39	1.09 *
E2WA7DC2	29.00	14	1	-5.60	-5.40	-0.20	25.82	23.93	23.50	31.07	36.22	37.20	-14.36	0.01 *
E2WA7DC2	29.00	14	2	-5.61	-5.41	-0.20	25.82	23.93	23.50	31.00	35.59	37.58	-14.36	-0.06 *
E2WA7DC2	29.00	14	3	-5.66	-5.46	-0.20	25.82	23.93	23.50	30.87	32.20	33.72	-14.36	-0.26 *
E2WA7DC2	29.00	14	4	-5.66	-5.45	-0.21	25.82	23.93	23.50	32.22	21.38	26.17	-14.36	-0.26 *
E2WA7DC2	29.00	14	5	-5.73	-5.49	-0.24	25.82	23.93	23.50	31.25	24.80	25.06	-14.36	-0.59 *
E2WA7DC2	29.00	14	6	-6.12	-5.93	-0.19	25.82	23.93	23.50	29.11	31.61	32.51	-14.36	-2.00 *
E2WA7DC2	29.00	14	7	-6.14	-5.81	-0.33	25.82	23.93	23.50	31.29	18.47	21.46	-14.36	-2.08 *
E2WA7DC2	29.00	14	8	-5.99	-5.78	-0.21	25.82	23.93	23.50	29.94	24.01	30.30	-14.36	-1.56 *
E2WA7DC2	29.00	14	9	-5.58	-5.36	-0.22	25.82	23.93	23.50	31.43	29.19	29.80	-14.36	0.10 *
E2WA7DC2	29.00	14	10	-5.72	-5.47	-0.25	25.82	23.93	23.50	31.20	24.25	27.46	-14.36	-0.53 *
E2WA7DC2	29.00	16	1	-5.34	-5.50	0.16	25.79	23.48	23.94	32.54	37.17	36.25	-14.39	1.45 *
E2WA7DC2	29.00	16	2	-5.42	-5.51	0.09	25.79	23.48	23.94	32.05	37.55	35.63	-14.39	0.97 *
E2WA7DC2	29.00	16	3	-5.51	-6.08	0.57	25.79	23.48	23.94	31.66	33.69	32.23	-14.39	0.50 *
E2WA7DC2	29.00	16	4	-5.29	-8.07	2.78	25.79	23.48	23.94	35.43	26.14	21.41	-14.39	1.77 *
E2WA7DC2	29.00	16	5	-5.47	-6.02	0.55	25.79	23.48	23.94	32.90	25.03	24.83	-14.39	0.71 *
E2WA7DC2	29.00	16	6	-5.80	-5.94	0.14	25.79	23.48	23.94	30.36	32.48	31.64	-14.39	-0.78 *
E2WA7DC2	29.00	16	7	-5.68	-7.64	1.96	25.79	23.48	23.94	35.11	21.43	18.49	-14.39	-0.27 *
E2WA7DC2	29.00	16	8	-5.52	-7.51	1.99	25.79	23.48	23.94	32.29	30.28	24.04	-14.39	0.47 *
E2WA7DC2	29.00	16	9	-5.32	-5.78	0.46	25.79	23.48	23.94	33.07	29.77	29.22	-14.39	1.60 *
E2WA7DC2	29.00	16	10	-5.41	-6.33	0.92	25.79	23.48	23.94	33.15	27.43	24.28	-14.39	1.06 *
E2WA7DC2	29.00	18	1	-5.60	-5.26	-0.34	25.82	23.93	23.50	31.06	36.23	37.18	-14.36	0.00 *
E2WA7DC2	29.00	18	2	-5.61	-5.27	-0.34	25.82	23.93	23.50	31.00	35.60	37.58	-14.36	-0.06 *
E2WA7DC2	29.00	18	3	-5.66	-5.32	-0.34	25.82	23.93	23.50	30.86	32.20	33.71	-14.36	-0.28 *
E2WA7DC2	29.00	18	4	-5.66	-5.30	-0.36	25.82	23.93	23.50	32.17	21.38	26.17	-14.36	-0.29 *
E2WA7DC2	29.00	18	5	-5.74	-5.35	-0.39	25.82	23.93	23.50	31.24	24.80	25.06	-14.36	-0.61 *
E2WA7DC2	29.00	18	6	-6.12	-5.81	-0.31	25.82	23.93	23.50	29.11	31.61	32.51	-14.36	-2.00 *
E2WA7DC2	29.00	18	7	-6.15	-5.68	-0.47	25.82	23.93	23.50	31.25	18.47	21.46	-14.36	-2.09 *
E2WA7DC2	29.00	18	8	-6.00	-5.65	-0.35	25.82	23.93	23.50	29.92	24.01	30.30	-14.36	-1.58 *
E2WA7DC2	29.00	18	9	-5.58	-5.23	-0.35	25.82	23.93	23.50	31.42	29.19	29.80	-14.36	0.09 *
E2WA7DC2	29.00	18	10	-5.72	-5.33	-0.39	25.82	23.93	23.50	31.19	24.25	27.46	-14.36	-0.55 *
E2WA7DC2	29.00	20	1	1.14	0.00	1.14	38.35	23.48	43.24	32.98	37.16	42.84	-3.08	1.93 *
E2WA7DC2	29.00	20	2	0.80	0.00	0.80	38.35	23.48	43.24	32.47	37.55	45.23	-3.08	1.43 *
E2WA7DC2	29.00	20	3	0.51	-0.21	0.72	38.35	23.48	43.24	32.15	33.68	34.53	-3.08	1.01 *
E2WA7DC2	29.00	20	4	2.64	-6.65	9.29	38.35	23.48	43.24	38.65	26.15	24.59	-3.08	4.45 *
E2WA7DC2	29.00	20	5	0.68	-0.20	0.88	38.35	23.48	43.24	33.55	25.03	25.31	-3.08	1.26 *
E2WA7DC2	29.00	20	6	-0.51	-0.30	-0.21	38.35	23.48	43.24	30.75	32.48	34.05	-3.08	-0.37 *
E2WA7DC2	29.00	20	7	0.79	-5.91	6.70	38.35	23.48	43.24	37.54	21.43	20.63	-3.08	1.41 *
E2WA7DC2	29.00	20	8	1.14	-4.97	6.11	38.35	23.48	43.24	33.39	30.28	29.82	-3.08	1.94 *
E2WA7DC2	29.00	20	9	1.28	0.00	1.28	38.35	23.48	43.24	33.64	29.77	29.91	-3.08	2.14 *
E2WA7DC2	29.00	20	10	1.21	-1.84	3.05	38.35	23.48	43.24	33.91	27.43	27.41	-3.08	2.03 *
E2WA7DC2	29.00	22	1	-9.95	-9.94	-0.01	20.50	43.22	47.58	30.15	42.81	36.29	-19.50	-0.88 *
E2WA7DC2	29.00	22	2	-9.93	-9.93	0.00	20.50	43.22	47.58	30.32	45.20	35.32	-19.50	-0.72 *
E2WA7DC2	29.00	22	3	-10.09	-10.08	-0.01	20.50	43.22	47.58	28.91	34.50	40.51	-19.50	-2.12 *
E2WA7DC2	29.00	22	4	-10.24	-10.31	0.07	20.50	43.22	47.58	28.04	24.56	39.95	-19.50	-3.20 *
E2WA7DC2	29.00	22	5	-10.10	-10.11	0.01	20.50	43.22	47.58	29.04	25.28	37.05	-19.50	-2.23 *
E2WA7DC2	29.00	22	6	-10.13	-10.12	-0.01	20.50	43.22	47.58	28.65	34.03	31.57	-19.50	-2.44 *
E2WA7DC2	29.00	22	7	-10.26	-10.36	0.10	20.50	43.22	47.58	28.28	20.60	35.85	-19.50	-3.33 *
E2WA7DC2	29.00	22	8	-10.43	-10.44	0.01	20.50	43.22	47.58	26.77	29.79	45.06	-19.50	-4.29 *
E2WA7DC2	29.00	22	9	-10.02	-10.02	0.00	20.50	43.22	47.58	29.57	29.89	38.68	-19.50	-1.54 *
E2WA7DC2	29.00	22	10	-10.14	-10.15	0.01	20.50	43.22	47.58	28.61	27.38	41.45	-19.50	-2.53 *
E2WA7DC2	29.00	24	1	-9.91	-9.92	0.01	20.50	47.56	43.22	30.52	36.27	42.86	-19.50	-0.51 *
E2WA7DC2	29.00	24	2	-9.86	-9.86	0.00	20.50	47.56	43.22	31.22	35.29	45.26	-19.50	0.17 *
E2WA7DC2	29.00	24	3	-10.05	-10.06	0.01	20.50	47.56	43.22	29.27	40.48	34.53	-19.50	-1.77 *
E2WA7DC2	29.00	24	4	-10.50	-10.64	0.14	20.50	47.56	43.22	26.52	39.92	24.59	-19.50	-4.65 *
E2WA7DC2	29.00	24	5	-10.15	-10.18	0.03	20.50	47.56	43.22	28.69	37.03	25.30	-19.50	-2.55 *
E2WA7DC2	29.00	24	6	-10.15	-10.15	0.00	20.50	47.56	43.22	28.49	31.54	34.05	-19.50	-2.60 *
E2WA7DC2	29.00	24	7	-10.52	-10.67	0.15	20.50	47.56	43.22	26.68	35.82	20.63	-19.50	-4.75 *
E2WA7DC2	29.00	24	8	-10.48	-10.56	0.08	20.50	47.56	43.22	26.50	45.04	29.82	-19.50	-4.55 *
E2WA7DC2	29.00	24	9	-10.03	-10.04	0.01	20.50	47.56	43.22	29.52	38.66	29.91	-19.50	-1.59 *
E2WA7DC2	29.00	24	10	-10.17	-10.20	0.03	20.50	47.56	43.22	28.45	41.43	27.41	-19.50	-2.70 *
E2WA7DC2	29.00	26	1	-9.98	-9.99	0.01	20.48	43.20	47.92	30.05	42.83	36.39	-19.52	-0.98 *
E2WA7DC2	29.00	26	2	-9.95	-9.95	0.00	20.48	43.20	47.92	30.33	45.24	35.40	-19.52	-0.71 *
E2WA7DC2	29.00	26	3	-10.19	-10.21	0.02	20.48	43.20	47.92	28.30	34.51	40.71	-19.52	-2.73 *

E2WA7DC2	29.00	26	4	-10.83	-10.90	0.07	20.48	43.20	47.92	25.15	24.56	41.45	-19.52	-5.98 |*
E2WA7DC2	29.00	26	5	-10.20	-10.22	0.02	20.48	43.20	47.92	28.38	25.28	37.45	-19.52	-2.85 |*
E2WA7DC2	29.00	26	6	-10.15	-10.17	0.02	20.48	43.20	47.92	28.61	34.02	31.69	-19.52	-2.47 |*
E2WA7DC2	29.00	26	7	-10.71	-10.76	0.05	20.48	43.20	47.92	25.86	20.60	36.48	-19.52	-5.50 |*
E2WA7DC2	29.00	26	8	-10.82	-10.88	0.06	20.48	43.20	47.92	25.08	29.79	45.83	-19.52	-5.96 |*
E2WA7DC2	29.00	26	9	-10.10	-10.12	0.02	20.48	43.20	47.92	29.04	29.88	38.93	-19.52	-2.06 |*
E2WA7DC2	29.00	26	10	-10.32	-10.34	0.02	20.48	43.20	47.92	27.56	27.38	41.84	-19.52	-3.56 |*
E2WA7DC2	29.00	28	1	-9.90	-9.92	0.02	20.49	47.90	43.23	30.86	36.36	42.99	-19.51	-0.17 |*
E2WA7DC2	29.00	28	2	-9.84	-9.86	0.02	20.49	47.90	43.23	31.61	35.37	45.52	-19.51	0.56 |*
E2WA7DC2	29.00	28	3	-10.06	-10.11	0.05	20.49	47.90	43.23	29.25	40.68	34.54	-19.51	-1.79 |*
E2WA7DC2	29.00	28	4	-10.80	-10.93	0.13	20.49	47.90	43.23	25.24	41.42	24.59	-19.51	-5.88 |*
E2WA7DC2	29.00	28	5	-10.16	-10.20	0.04	20.49	47.90	43.23	28.69	37.43	25.31	-19.51	-2.55 |*
E2WA7DC2	29.00	28	6	-10.12	-10.15	0.03	20.49	47.90	43.23	28.86	31.67	34.26	-19.51	-2.23 |*
E2WA7DC2	29.00	28	7	-10.74	-10.82	0.08	20.49	47.90	43.23	25.71	36.46	20.63	-19.51	-5.63 |*
E2WA7DC2	29.00	28	8	-10.65	-10.76	0.11	20.49	47.90	43.23	25.76	45.81	29.82	-19.51	-5.29 |*
E2WA7DC2	29.00	28	9	-10.03	-10.07	0.04	20.49	47.90	43.23	29.60	38.90	29.92	-19.51	-1.52 |*
E2WA7DC2	29.00	28	10	-10.22	-10.27	0.05	20.49	47.90	43.23	28.16	41.82	27.41	-19.51	-2.98 |*
E2WA7DC2	29.00	30	1	-9.95	-9.97	0.02	20.48	43.22	47.92	30.32	42.96	36.33	-19.52	-0.71 |*
E2WA7DC2	29.00	30	2	-9.93	-9.94	0.01	20.48	43.22	47.92	30.55	45.50	35.32	-19.52	-0.49 |*
E2WA7DC2	29.00	30	3	-10.15	-10.18	0.03	20.48	43.22	47.92	28.55	34.51	40.64	-19.52	-2.48 |*
E2WA7DC2	29.00	30	4	-10.79	-10.85	0.06	20.48	43.22	47.92	25.31	24.56	41.43	-19.52	-5.82 |*
E2WA7DC2	29.00	30	5	-10.17	-10.19	0.02	20.48	43.22	47.92	28.67	25.28	37.41	-19.52	-2.57 |*
E2WA7DC2	29.00	30	6	-10.11	-10.14	0.03	20.48	43.22	47.92	28.91	34.23	31.64	-19.52	-2.18 |*
E2WA7DC2	29.00	30	7	-10.67	-10.69	0.02	20.48	43.22	47.92	26.05	20.60	36.48	-19.52	-5.33 |*
E2WA7DC2	29.00	30	8	-10.77	-10.83	0.06	20.48	43.22	47.92	25.28	29.79	45.75	-19.52	-5.76 |*
E2WA7DC2	29.00	30	9	-10.06	-10.09	0.03	20.48	43.22	47.92	29.32	29.89	38.87	-19.52	-1.78 |*
E2WA7DC2	29.00	30	10	-10.28	-10.30	0.02	20.48	43.22	47.92	27.81	27.38	41.79	-19.52	-3.31 |*
E2WA7DC2	29.00	32	1	-10.44	-10.46	0.02	20.49	47.90	43.23	26.76	36.30	42.87	-19.52	-4.26 |*
E2WA7DC2	29.00	32	2	-10.29	-10.30	0.01	20.49	47.90	43.23	27.63	35.29	45.32	-19.52	-3.39 |*
E2WA7DC2	29.00	32	3	-10.79	-10.84	0.05	20.49	47.90	43.23	25.16	40.61	34.53	-19.52	-5.86 |*
E2WA7DC2	29.00	32	4	-11.64	-11.75	0.11	20.49	47.90	43.23	22.56	41.40	24.59	-19.52	-8.51 |*
E2WA7DC2	29.00	32	5	-10.94	-10.97	0.03	20.49	47.90	43.23	24.70	37.38	25.30	-19.52	-6.40 |*
E2WA7DC2	29.00	32	6	-10.89	-10.92	0.03	20.49	47.90	43.23	24.81	31.61	34.07	-19.52	-6.23 |*
E2WA7DC2	29.00	32	7	-11.56	-11.62	0.06	20.49	47.90	43.23	22.89	36.45	20.63	-19.52	-8.30 |*
E2WA7DC2	29.00	32	8	-11.70	-11.79	0.09	20.49	47.90	43.23	22.35	45.72	29.82	-19.52	-8.67 |*
E2WA7DC2	29.00	32	9	-10.72	-10.75	0.03	20.49	47.90	43.23	25.49	38.85	29.91	-19.52	-5.55 |*
E2WA7DC2	29.00	32	10	-11.03	-11.07	0.04	20.49	47.90	43.23	24.33	41.76	27.41	-19.52	-6.72 |*
E2WA7DC2	29.00	34	1	-9.88	-9.89	0.01	20.48	43.22	47.92	31.18	42.84	36.35	-19.52	0.14 |*
E2WA7DC2	29.00	34	2	-9.79	-9.80	0.01	20.48	43.22	47.92	32.45	45.29	35.35	-19.52	1.39 |*
E2WA7DC2	29.00	34	3	-10.16	-10.18	0.02	20.48	43.22	47.92	28.53	34.51	40.67	-19.52	-2.51 |*
E2WA7DC2	29.00	34	4	-10.44	-10.51	0.07	20.48	43.22	47.92	26.96	24.56	41.42	-19.52	-4.23 |*
E2WA7DC2	29.00	34	5	-10.18	-10.20	0.02	20.48	43.22	47.92	28.59	25.28	37.41	-19.52	-2.65 |*
E2WA7DC2	29.00	34	6	-10.07	-10.10	0.03	20.48	43.22	47.92	29.27	34.04	31.64	-19.52	-1.83 |*
E2WA7DC2	29.00	34	7	-10.38	-10.41	0.03	20.48	43.22	47.92	27.63	20.60	36.47	-19.52	-3.91 |*
E2WA7DC2	29.00	34	8	-10.64	-10.70	0.06	20.48	43.22	47.92	25.84	29.79	45.76	-19.52	-5.21 |*
E2WA7DC2	29.00	34	9	-10.08	-10.10	0.02	20.48	43.22	47.92	29.18	29.88	38.88	-19.52	-1.93 |*
E2WA7DC2	29.00	34	10	-10.27	-10.29	0.02	20.48	43.22	47.92	27.87	27.38	41.80	-19.52	-3.26 |*
E2WA7DC2	29.00	36	1	-10.00	-10.02	0.02	20.49	47.90	43.23	29.83	36.32	42.75	-19.51	-1.20 |*
E2WA7DC2	29.00	36	2	-9.92	-9.94	0.02	20.49	47.90	43.23	30.63	35.32	45.08	-19.51	-0.42 |*
E2WA7DC2	29.00	36	3	-10.19	-10.25	0.06	20.49	47.90	43.23	28.23	40.64	34.53	-19.51	-2.81 |*
E2WA7DC2	29.00	36	4	-10.95	-11.09	0.14	20.49	47.90	43.23	24.66	41.39	24.59	-19.51	-6.45 |*
E2WA7DC2	29.00	36	5	-10.30	-10.35	0.05	20.49	47.90	43.23	27.70	37.38	25.30	-19.51	-3.50 |*
E2WA7DC2	29.00	36	6	-10.26	-10.30	0.04	20.49	47.90	43.23	27.85	31.61	33.88	-19.51	-3.23 |*
E2WA7DC2	29.00	36	7	-10.89	-10.97	0.08	20.49	47.90	43.23	25.09	36.45	20.63	-19.51	-6.21 |*
E2WA7DC2	29.00	36	8	-10.85	-10.96	0.11	20.49	47.90	43.23	24.96	45.74	29.82	-19.51	-6.08 |*
E2WA7DC2	29.00	36	9	-10.16	-10.20	0.04	20.49	47.90	43.23	28.56	38.85	29.90	-19.51	-2.53 |*
E2WA7DC2	29.00	36	10	-10.37	-10.43	0.06	20.49	47.90	43.23	27.22	41.77	27.41	-19.51	-3.89 |*
E2WA7DC2	29.00	38	1	-9.98	-10.00	0.02	20.48	43.22	47.91	29.99	42.72	36.28	-19.52	-1.04 |*
E2WA7DC2	29.00	38	2	-9.98	-9.99	0.01	20.48	43.22	47.91	30.05	45.06	35.26	-19.52	-0.99 |*
E2WA7DC2	29.00	38	3	-10.18	-10.21	0.03	20.48	43.22	47.91	28.33	34.50	40.55	-19.52	-2.70 |*
E2WA7DC2	29.00	38	4	-10.51	-10.58	0.07	20.48	43.22	47.91	26.56	24.56	41.30	-19.52	-4.61 |*
E2WA7DC2	29.00	38	5	-10.03	-10.05	0.02	20.48	43.22	47.91	29.82	25.27	37.34	-19.52	-1.50 |*
E2WA7DC2	29.00	38	6	-10.05	-10.08	0.03	20.48	43.22	47.91	29.44	33.86	31.58	-19.52	-1.66 |*
E2WA7DC2	29.00	38	7	-10.39	-10.42	0.03	20.48	43.22	47.91	27.53	20.60	36.44	-19.52	-3.99 |*
E2WA7DC2	29.00	38	8	-10.67	-10.73	0.06	20.48	43.22	47.91	25.70	29.79	45.39	-19.52	-5.34 |*
E2WA7DC2	29.00	38	9	-10.03	-10.05	0.02	20.48	43.22	47.91	29.67	29.88	38.81	-19.52	-1.45 |*
E2WA7DC2	29.00	38	10	-10.21	-10.23	0.02	20.48	43.22	47.91	28.25	27.38	41.69	-19.52	-2.88 |*
E2WA7DC2	29.00	40	1	-10.68	-10.70	0.02	20.49	47.89	47.91	25.62	36.25		-19.51	-5.39 |*
E2WA7DC2	29.00	40	2	-10.49	-10.50	0.01	20.49	47.89	47.91	26.50	35.23		-19.51	-4.52 |*
E2WA7DC2	29.00	40	3	-11.08	-11.13	0.05	20.49	47.89	47.91	24.09	40.53		-19.51	-6.91 |*
E2WA7DC2	29.00	40	4	-11.81	-11.94	0.13	20.49	47.89	47.91	22.05	41.27		-19.51	-8.95 |*
E2WA7DC2	29.00	40	5	-11.23	-11.28	0.05	20.49	47.89	47.91	23.64	37.32		-19.51	-7.36 |*
E2WA7DC2	29.00	40	6	-11.22	-11.25	0.03	20.49	47.89	47.91	23.67	31.55		-19.51	-7.35 |*
E2WA7DC2	29.00	40	7	-11.73	-11.84	0.11	20.49	47.89	47.91	22.26	36.41		-19.51	-8.74 |*
E2WA7DC2	29.00	40	8	-12.03	-12.11	0.08	20.49	47.89	47.91	21.54	45.36		-19.51	-9.46 |*
E2WA7DC2	29.00	40	9	-10.99	-11.03	0.04	20.49	47.89	47.91	24.40	38.78		-19.51	-6.60 |*
E2WA7DC2	29.00	40	10	-11.32	-11.38	0.06	20.49	47.89	47.91	23.36	41.67		-19.51	-7.64 |*
E2WA7DD1	29.00	1	1	-8.49	-6.82	-1.67	25.69		24.79	24.24		16.83	-14.38	-7.32 |*
E2WA7DD1	29.00	1	2	-7.85	-7.68	-0.17	25.69		24.79	24.96		23.03	-14.38	-6.21 |*
E2WA7DD1	29.00	1	3	-7.46	-7.10	-0.36	25.69		24.79	25.64		25.96	-14.38	-5.46 |*
E2WA7DD1	29.00	1	4	-10.71	-10.62	-0.09	25.69		24.79	20.49		26.81	-14.38	-10.53 |*
E2WA7DD1	29.00	1	5	-7.65	-7.33	-0.32	25.69		24.79	25.54		19.92	-14.38	-5.84 |*
E2WA7DD1	29.00	1	6	-7.84	-7.67	-0.17	25.69		24.79	24.99		22.82	-14.38	-6.19 |*
E2WA7DD1	29.00	1	7	-8.03	-7.66	-0.37	25.69		24.79	24.87		18.97	-14.38	-6.54 |*
E2WA7DD1	29.00	1	8	-11.25	-10.86	-0.39	25.69		24.79	19.80		24.53	-14.38	-11.24 |*
E2WA7DD1	29.00	1	9	-8.90	-7.48	-1.42	25.69		24.79	24.11		13.56	-14.38	-7.98 |*
E2WA7DD1	29.00	1	10	-11.40	-10.25	-1.15	25.69		24.79	19.70		19.00	-14.38	-11.43 |*
E2WA7DD1	29.00	3	1	-7.13	-6.52	-0.61	25.71	24.77	23.95	27.95	16.80	21.86	-14.44	-4.60 |*
E2WA7DD1	29.00	3	2	-7.86	-7.79	-0.07	25.71	24.77	23.95	25.16	23.00	26.42	-14.44	-6.10 |*
E2WA7DD1	29.00	3	3	-6.70	-6.73	0.03	25.71	24.77	23.95	27.74	25.93	26.16	-14.44	-3.57 |*
E2WA7DD1	29.00	3	4	-8.16	-8.20	0.04	25.71	24.77	23.95	24.45	26.78	28.18	-14.44	-6.66 |*
E2WA7DD1	29.00	3	5	-7.74	-7.56	-0.18	25.71	24.77	23.95	25.59	19.89	27.01	-14.44	-5.87 |*
E2WA7DD1	29.00	3	6	-7.85	-7.78	-0.07	25.71	24.77	23.95	25.17	22.79	26.44	-14.44	-6.09 |*

E2WA7DD1	29.00	3	7	-8.36	-8.03	-0.33	25.71	24.77	23.95	24.44	18.94	25.47	-14.44	-7.01
E2WA7DD1	29.00	3	8	-8.72	-8.76	0.04	25.71	24.77	23.95	23.66	24.50	21.44	-14.44	-7.60
E2WA7DD1	29.00	3	9	-9.17	-8.21	-0.96	25.71	24.77	23.95	23.78	13.53	24.38	-14.44	-8.32
E2WA7DD1	29.00	3	10	-8.64	-8.12	-0.52	25.71	24.77	23.95	24.68	18.98	15.38	-14.44	-7.48
E2WA7DD1	29.00	5	1	-8.66	-6.97	-1.69	25.69	23.93	24.79	24.22	21.83	16.83	-14.46	-7.50
E2WA7DD1	29.00	5	2	-8.00	-7.85	-0.15	25.69	23.93	24.79	24.89	26.39	23.03	-14.46	-6.34
E2WA7DD1	29.00	5	3	-7.60	-7.25	-0.35	25.69	23.93	24.79	25.61	26.13	25.95	-14.46	-5.58
E2WA7DD1	29.00	5	4	-10.88	-10.80	-0.08	25.69	23.93	24.79	20.33	28.16	26.77	-14.46	-10.72
E2WA7DD1	29.00	5	5	-7.80	-7.49	-0.31	25.69	23.93	24.79	25.48	26.98	19.92	-14.46	-5.97
E2WA7DD1	29.00	5	6	-7.99	-7.83	-0.16	25.69	23.93	24.79	24.92	26.41	22.81	-14.46	-6.33
E2WA7DD1	29.00	5	7	-8.18	-7.85	-0.33	25.69	23.93	24.79	24.80	25.44	18.97	-14.46	-6.68
E2WA7DD1	29.00	5	8	-11.45	-11.05	-0.40	25.69	23.93	24.79	19.66	21.41	24.47	-14.46	-11.45
E2WA7DD1	29.00	5	9	-9.03	-7.68	-1.35	25.69	23.93	24.79	24.06	24.35	13.56	-14.46	-8.09
E2WA7DD1	29.00	5	10	-11.72	-10.40	-1.32	25.69	23.93	24.79	19.62	15.35	18.99	-14.46	-11.78
E2WA7DD1	29.00	7	1	-7.15	-6.54	-0.61	25.71	24.77	23.95	27.89	16.80	21.85	-14.44	-4.64
E2WA7DD1	29.00	7	2	-7.90	-7.84	-0.06	25.71	24.77	23.95	25.07	23.00	26.33	-14.44	-6.18
E2WA7DD1	29.00	7	3	-6.72	-6.75	0.03	25.71	24.77	23.95	27.68	25.93	26.13	-14.44	-3.63
E2WA7DD1	29.00	7	4	-8.17	-8.21	0.04	25.71	24.77	23.95	24.44	26.74	28.12	-14.44	-6.67
E2WA7DD1	29.00	7	5	-7.78	-7.61	-0.17	25.71	24.77	23.95	25.50	19.89	26.92	-14.44	-5.95
E2WA7DD1	29.00	7	6	-7.90	-7.83	-0.07	25.71	24.77	23.95	25.09	22.79	26.35	-14.44	-6.17
E2WA7DD1	29.00	7	7	-8.41	-8.08	-0.33	25.71	24.77	23.95	24.36	18.94	25.38	-14.44	-7.09
E2WA7DD1	29.00	7	8	-8.73	-8.77	0.04	25.71	24.77	23.95	23.64	24.44	21.40	-14.44	-7.62
E2WA7DD1	29.00	7	9	-9.21	-8.26	-0.95	25.71	24.77	23.95	23.70	13.53	24.30	-14.44	-8.38
E2WA7DD1	29.00	7	10	-8.65	-8.14	-0.51	25.71	24.77	23.95	24.66	18.96	15.37	-14.44	-7.50
E2WA7DD1	29.00	9	1	-8.68	-6.99	-1.69	25.69	23.93	24.79	24.19	21.82	16.83	-14.46	-7.53
E2WA7DD1	29.00	9	2	-8.01	-7.86	-0.15	25.69	23.93	24.79	24.86	26.30	23.00	-14.46	-6.38
E2WA7DD1	29.00	9	3	-7.63	-7.28	-0.35	25.69	23.93	24.79	25.56	26.11	25.90	-14.46	-5.64
E2WA7DD1	29.00	9	4	-10.92	-10.85	-0.07	25.69	23.93	24.79	20.27	28.09	26.71	-14.46	-10.77
E2WA7DD1	29.00	9	5	-7.81	-7.51	-0.30	25.69	23.93	24.79	25.45	26.89	19.91	-14.46	-6.00
E2WA7DD1	29.00	9	6	-8.00	-7.85	-0.15	25.69	23.93	24.79	24.89	26.32	22.79	-14.46	-6.36
E2WA7DD1	29.00	9	7	-8.20	-7.86	-0.34	25.69	23.93	24.79	24.77	25.35	18.96	-14.46	-6.71
E2WA7DD1	29.00	9	8	-11.50	-11.09	-0.41	25.69	23.93	24.79	19.60	21.37	24.45	-14.46	-11.50
E2WA7DD1	29.00	9	9	-9.05	-7.70	-1.35	25.69	23.93	24.79	24.04	24.27	13.55	-14.46	-8.12
E2WA7DD1	29.00	9	10	-11.75	-10.45	-1.30	25.69	23.93	24.79	19.58	15.34	18.98	-14.46	-11.82
E2WA7DD1	29.00	11	1	-7.15	-6.51	-0.64	25.71	24.77	23.95	27.89	16.80	21.84	-14.44	-4.65
E2WA7DD1	29.00	11	2	-7.90	-7.82	-0.08	25.71	24.77	23.95	25.06	22.97	26.33	-14.44	-6.19
E2WA7DD1	29.00	11	3	-6.73	-6.72	-0.01	25.71	24.77	23.95	27.68	25.87	26.09	-14.44	-3.63
E2WA7DD1	29.00	11	4	-8.17	-8.19	0.02	25.71	24.77	23.95	24.44	26.69	28.12	-14.44	-6.67
E2WA7DD1	29.00	11	5	-7.78	-7.59	-0.19	25.71	24.77	23.95	25.50	19.88	26.91	-14.44	-5.96
E2WA7DD1	29.00	11	6	-7.90	-7.81	-0.09	25.71	24.77	23.95	25.08	22.76	26.34	-14.44	-6.18
E2WA7DD1	29.00	11	7	-8.41	-8.06	-0.35	25.71	24.77	23.95	24.35	18.94	25.35	-14.44	-7.09
E2WA7DD1	29.00	11	8	-8.73	-8.75	0.02	25.71	24.77	23.95	23.64	24.42	21.42	-14.44	-7.62
E2WA7DD1	29.00	11	9	-9.22	-8.24	-0.98	25.71	24.77	23.95	23.70	13.53	24.25	-14.44	-8.39
E2WA7DD1	29.00	11	10	-8.66	-8.12	-0.54	25.71	24.77	23.95	24.66	18.96	15.38	-14.44	-7.50
E2WA7DD1	29.00	13	1	-8.70	-7.03	-1.67	25.69	23.93	24.79	24.14	21.81	16.83	-14.46	-7.57
E2WA7DD1	29.00	13	2	-8.05	-7.90	-0.15	25.69	23.93	24.79	24.79	26.30	23.01	-14.46	-6.44
E2WA7DD1	29.00	13	3	-7.66	-7.31	-0.35	25.69	23.93	24.79	25.49	26.07	25.91	-14.46	-5.70
E2WA7DD1	29.00	13	4	-10.99	-10.91	-0.08	25.69	23.93	24.79	20.19	28.09	26.68	-14.46	-10.85
E2WA7DD1	29.00	13	5	-7.85	-7.54	-0.31	25.69	23.93	24.79	25.38	26.88	19.91	-14.46	-6.06
E2WA7DD1	29.00	13	6	-8.04	-7.88	-0.16	25.69	23.93	24.79	24.82	26.32	22.80	-14.46	-6.43
E2WA7DD1	29.00	13	7	-8.24	-7.90	-0.34	25.69	23.93	24.79	24.70	25.32	18.97	-14.46	-6.78
E2WA7DD1	29.00	13	8	-11.55	-11.16	-0.39	25.69	23.93	24.79	19.53	21.40	24.41	-14.46	-11.58
E2WA7DD1	29.00	13	9	-9.08	-7.74	-1.34	25.69	23.93	24.79	23.98	24.22	13.56	-14.46	-8.16
E2WA7DD1	29.00	13	10	-11.80	-10.51	-1.29	25.69	23.93	24.79	19.51	15.35	18.97	-14.46	-11.88
E2WA7DD1	29.00	15	1	-7.16	-6.54	-0.62	25.71	24.77	23.95	27.87	16.80	21.83	-14.44	-4.66
E2WA7DD1	29.00	15	2	-7.95	-7.88	-0.07	25.71	24.77	23.95	24.97	22.98	26.26	-14.44	-6.27
E2WA7DD1	29.00	15	3	-6.73	-6.75	0.02	25.71	24.77	23.95	27.67	25.88	26.02	-14.44	-3.65
E2WA7DD1	29.00	15	4	-8.11	-8.14	0.03	25.71	24.77	23.95	24.55	26.65	28.03	-14.44	-6.57
E2WA7DD1	29.00	15	5	-7.82	-7.65	-0.17	25.71	24.77	23.95	25.41	19.88	26.85	-14.44	-6.04
E2WA7DD1	29.00	15	6	-7.95	-7.87	-0.08	25.71	24.77	23.95	24.99	22.77	26.28	-14.44	-6.26
E2WA7DD1	29.00	15	7	-8.46	-8.12	-0.34	25.71	24.77	23.95	24.27	18.94	25.31	-14.44	-7.17
E2WA7DD1	29.00	15	8	-8.69	-8.73	0.04	25.71	24.77	23.95	23.72	24.38	21.39	-14.44	-7.55
E2WA7DD1	29.00	15	9	-9.25	-8.30	-0.95	25.71	24.77	23.95	23.63	13.53	24.22	-14.44	-8.44
E2WA7DD1	29.00	15	10	-8.62	-8.10	-0.52	25.71	24.77	23.95	24.73	18.95	15.37	-14.44	-7.45
E2WA7DD1	29.00	17	1	-8.71	-7.02	-1.69	25.69	23.93	24.79	24.14	21.80	16.83	-14.46	-7.57
E2WA7DD1	29.00	17	2	-8.06	-7.90	-0.16	25.69	23.93	24.79	24.77	26.24	22.98	-14.46	-6.46
E2WA7DD1	29.00	17	3	-7.66	-7.31	-0.35	25.69	23.93	24.79	25.48	25.99	25.92	-14.46	-5.71
E2WA7DD1	29.00	17	4	-11.00	-10.92	-0.08	25.69	23.93	24.79	20.17	28.00	26.64	-14.46	-10.87
E2WA7DD1	29.00	17	5	-7.85	-7.54	-0.31	25.69	23.93	24.79	25.36	26.82	19.90	-14.46	-6.08
E2WA7DD1	29.00	17	6	-8.05	-7.88	-0.17	25.69	23.93	24.79	24.80	26.25	22.77	-14.46	-6.45
E2WA7DD1	29.00	17	7	-8.24	-7.90	-0.34	25.69	23.93	24.79	24.69	25.28	18.96	-14.46	-6.79
E2WA7DD1	29.00	17	8	-11.57	-11.16	-0.41	25.69	23.93	24.79	19.51	21.36	24.39	-14.46	-11.59
E2WA7DD1	29.00	17	9	-9.08	-7.73	-1.35	25.69	23.93	24.79	23.97	24.20	13.56	-14.46	-8.17
E2WA7DD1	29.00	17	10	-11.81	-10.52	-1.29	25.69	23.93	24.79	19.50	15.34	18.97	-14.46	-11.89
E2WA7DD1	29.00	19	1	-7.05	-2.44	-4.61	25.71	24.77	38.62	27.92	16.80	22.10	-14.36	-4.60
E2WA7DD1	29.00	19	2	-7.87	-5.27	-2.60	25.71	24.77	38.62	24.97	22.95	28.08	-14.36	-6.25
E2WA7DD1	29.00	19	3	-6.60	-2.86	-3.74	25.71	24.77	38.62	27.72	25.89	27.16	-14.36	-3.56
E2WA7DD1	29.00	19	4	-7.89	-5.49	-2.40	25.71	24.77	38.62	24.82	26.62	30.11	-14.36	-6.28
E2WA7DD1	29.00	19	5	-7.74	-4.85	-2.89	25.71	24.77	38.62	25.41	19.87	28.58	-14.36	-6.01
E2WA7DD1	29.00	19	6	-7.86	-5.25	-2.61	25.71	24.77	38.62	24.99	22.75	28.08	-14.36	-6.24
E2WA7DD1	29.00	19	7	-8.38	-5.69	-2.69	25.71	24.77	38.62	24.27	18.93	26.52	-14.36	-7.15
E2WA7DD1	29.00	19	8	-8.48	-6.51	-1.97	25.71	24.77	38.62	23.96	24.36	21.71	-14.36	-7.31
E2WA7DD1	29.00	19	9	-9.19	-5.99	-3.20	25.71	24.77	38.62	23.64	13.53	24.99	-14.36	-8.42
E2WA7DD1	29.00	19	10	-8.47	-5.52	-2.95	25.71	24.77	38.62	24.92	18.94	15.45	-14.36	-7.29
E2WA7DD1	29.00	21	1	-19.61	-19.69	0.08	43.00	38.60	-5.60	40.43	22.08	26.97	-26.60	4.28
E2WA7DD1	29.00	21	2	-19.61	-19.64	0.03	43.00	38.60	-5.60	43.15	28.06	31.16	-26.60	8.71
E2WA7DD1	29.00	21	3	-19.61	-19.65	0.04	43.00	38.60	-5.60	39.02	27.13	27.36	-26.60	5.57
E2WA7DD1	29.00	21	4	-19.67	-19.69	0.02	43.00	38.60	-5.60	28.47	30.08	26.92	-26.60	-2.75
E2WA7DD1	29.00	21	5	-19.60	-19.65	0.05	43.00	38.60	-5.60	43.49	28.56	31.14	-26.60	9.04
E2WA7DD1	29.00	21	6	-19.61	-19.64	0.03	43.00	38.60	-5.60	43.17	28.05	31.18	-26.60	8.72
E2WA7DD1	29.00	21	7	-19.61	-19.67	0.06	43.00	38.60	-5.60	42.77	26.49	30.26	-26.60	7.76
E2WA7DD1	29.00	21	8	-19.72	-19.78	0.06	43.00	38.60	-5.60	26.21	21.68	25.55	-26.60	-5.21
E2WA7DD1	29.00	21	9	-19.61	-19.73	0.12	43.00	38.60	-5.60	41.25	24.96	26.32	-26.60	5.70
E2WA7DD1	29.00	21	10	-19.71	-19.78	0.07	43.00	38.60	-5.60	27.84	15.42	26.32	-26.60	-4.84

E2WA7DD1	29.00	23	1	-22.67	-22.69	0.02	47.46	-5.62	-5.60	26.96	26.95	27.80	-29.62	-4.24
E2WA7DD1	29.00	23	2	-22.63	-22.65	0.02	47.46	-5.62	-5.60	32.51	31.14	31.09	-29.62	1.22
E2WA7DD1	29.00	23	3	-22.67	-22.68	0.01	47.46	-5.62	-5.60	27.20	27.34	26.00	-29.62	-4.05
E2WA7DD1	29.00	23	4	-22.71	-22.72	0.01	47.46	-5.62	-5.60	24.14	26.89	25.42	-29.62	-7.00
E2WA7DD1	29.00	23	5	-22.63	-22.66	0.03	47.46	-5.62	-5.60	31.77	31.11	30.92	-29.62	0.52
E2WA7DD1	29.00	23	6	-22.63	-22.65	0.02	47.46	-5.62	-5.60	32.47	31.16	31.12	-29.62	1.18
E2WA7DD1	29.00	23	7	-22.64	-22.67	0.03	47.46	-5.62	-5.60	30.70	30.24	30.91	-29.62	-0.52
E2WA7DD1	29.00	23	8	-22.70	-22.73	0.03	47.46	-5.62	-5.60	24.74	25.52	25.76	-29.62	-6.43
E2WA7DD1	29.00	23	9	-22.67	-22.70	0.03	47.46	-5.62	-5.60	26.67	26.30	29.43	-29.62	-4.51
E2WA7DD1	29.00	23	10	-22.70	-22.74	0.04	47.46	-5.62	-5.60	24.61	26.29	25.85	-29.62	-6.55
E2WA7DD1	29.00	25	1	-22.62	-22.67	0.05	40.87	-5.62	-5.60	39.09	27.77	26.97	-29.62	5.66
E2WA7DD1	29.00	25	2	-22.63	-22.65	0.02	40.87	-5.62	-5.60	35.97	31.06	31.17	-29.62	4.35
E2WA7DD1	29.00	25	3	-22.62	-22.64	0.02	40.87	-5.62	-5.60	38.55	25.97	27.33	-29.62	5.03
E2WA7DD1	29.00	25	4	-22.66	-22.67	0.01	40.87	-5.62	-5.60	28.32	25.39	26.87	-29.62	-3.03
E2WA7DD1	29.00	25	5	-22.62	-22.65	0.03	40.87	-5.62	-5.60	36.92	30.89	31.15	-29.62	5.14
E2WA7DD1	29.00	25	6	-22.63	-22.65	0.02	40.87	-5.62	-5.60	35.92	31.09	31.19	-29.62	4.31
E2WA7DD1	29.00	25	7	-22.63	-22.66	0.03	40.87	-5.62	-5.60	34.35	30.89	30.27	-29.62	2.85
E2WA7DD1	29.00	25	8	-22.68	-22.71	0.03	40.87	-5.62	-5.60	26.04	25.73	25.54	-29.62	-5.19
E2WA7DD1	29.00	25	9	-22.63	-22.69	0.06	40.87	-5.62	-5.60	34.57	29.41	26.33	-29.62	2.60
E2WA7DD1	29.00	25	10	-22.66	-22.72	0.06	40.87	-5.62	-5.60	27.52	25.83	26.32	-29.62	-3.78
E2WA7DD1	29.00	27	1	-22.66	-22.68	0.02	42.59	-5.62	-5.60	27.66	26.94	27.73	-29.62	-3.57
E2WA7DD1	29.00	27	2	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.14	31.14	31.07	-29.62	1.81
E2WA7DD1	29.00	27	3	-22.64	-22.65	0.01	42.59	-5.62	-5.60	31.72	27.31	25.93	-29.62	0.06
E2WA7DD1	29.00	27	4	-22.73	-22.74	0.01	42.59	-5.62	-5.60	23.19	26.84	25.33	-29.62	-7.92
E2WA7DD1	29.00	27	5	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.20	31.12	30.89	-29.62	1.85
E2WA7DD1	29.00	27	6	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.06	31.16	31.10	-29.62	1.73
E2WA7DD1	29.00	27	7	-22.64	-22.69	0.05	42.59	-5.62	-5.60	30.52	30.25	30.89	-29.62	-0.69
E2WA7DD1	29.00	27	8	-22.68	-22.71	0.03	42.59	-5.62	-5.60	25.97	25.51	25.69	-29.62	-5.26
E2WA7DD1	29.00	27	9	-22.67	-22.72	0.05	42.59	-5.62	-5.60	26.80	26.30	29.39	-29.62	-4.38
E2WA7DD1	29.00	27	10	-22.70	-22.74	0.04	42.59	-5.62	-5.60	24.50	26.29	25.78	-29.62	-6.65
E2WA7DD1	29.00	29	1	-22.62	-22.67	0.05	40.53	-5.62	-5.60	38.45	27.70	26.88	-29.62	5.25
E2WA7DD1	29.00	29	2	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.30	31.05	31.08	-29.62	2.87
E2WA7DD1	29.00	29	3	-22.63	-22.65	0.02	40.53	-5.62	-5.60	38.28	25.90	27.27	-29.62	4.85
E2WA7DD1	29.00	29	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	28.30	25.30	26.83	-29.62	-3.06
E2WA7DD1	29.00	29	5	-22.63	-22.65	0.02	40.53	-5.62	-5.60	35.30	30.86	31.06	-29.62	3.75
E2WA7DD1	29.00	29	6	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.25	31.07	31.10	-29.62	2.82
E2WA7DD1	29.00	29	7	-22.63	-22.68	0.05	40.53	-5.62	-5.60	32.59	30.87	30.18	-29.62	1.25
E2WA7DD1	29.00	29	8	-22.68	-22.71	0.03	40.53	-5.62	-5.60	26.03	25.66	25.47	-29.62	-5.20
E2WA7DD1	29.00	29	9	-22.63	-22.71	0.08	40.53	-5.62	-5.60	32.93	29.37	26.23	-29.62	1.23
E2WA7DD1	29.00	29	10	-22.66	-22.72	0.06	40.53	-5.62	-5.60	27.48	25.76	26.25	-29.62	-3.81
E2WA7DD1	29.00	31	1	-22.66	-22.69	0.03	42.59	-5.62	-5.60	27.62	26.85	27.71	-29.62	-3.61
E2WA7DD1	29.00	31	2	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.14	31.06	30.99	-29.62	1.80
E2WA7DD1	29.00	31	3	-22.64	-22.65	0.01	42.59	-5.62	-5.60	31.69	27.24	25.91	-29.62	0.02
E2WA7DD1	29.00	31	4	-22.74	-22.75	0.01	42.59	-5.62	-5.60	23.12	26.80	25.30	-29.62	-7.99
E2WA7DD1	29.00	31	5	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.19	31.03	30.82	-29.62	1.84
E2WA7DD1	29.00	31	6	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.05	31.08	31.02	-29.62	1.72
E2WA7DD1	29.00	31	7	-22.64	-22.69	0.05	42.59	-5.62	-5.60	30.52	30.16	30.83	-29.62	-0.70
E2WA7DD1	29.00	31	8	-22.68	-22.71	0.03	42.59	-5.62	-5.60	25.92	25.44	25.45	-29.62	-5.31
E2WA7DD1	29.00	31	9	-22.67	-22.72	0.05	42.59	-5.62	-5.60	26.79	26.21	29.34	-29.62	-4.40
E2WA7DD1	29.00	31	10	-22.71	-22.74	0.03	42.59	-5.62	-5.60	24.45	26.22	25.58	-29.62	-6.71
E2WA7DD1	29.00	33	1	-22.62	-22.67	0.05	40.53	-5.62	-5.60	38.44	27.68	26.87	-29.62	5.24
E2WA7DD1	29.00	33	2	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.30	30.97	31.08	-29.62	2.86
E2WA7DD1	29.00	33	3	-22.63	-22.65	0.02	40.53	-5.62	-5.60	38.27	25.88	27.24	-29.62	4.83
E2WA7DD1	29.00	33	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	28.26	25.27	26.75	-29.62	-3.10
E2WA7DD1	29.00	33	5	-22.63	-22.65	0.02	40.53	-5.62	-5.60	35.30	30.80	31.06	-29.62	3.74
E2WA7DD1	29.00	33	6	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.24	30.99	31.10	-29.62	2.81
E2WA7DD1	29.00	33	7	-22.63	-22.68	0.05	40.53	-5.62	-5.60	32.58	30.80	30.18	-29.62	1.24
E2WA7DD1	29.00	33	8	-22.68	-22.71	0.03	40.53	-5.62	-5.60	25.96	25.43	25.43	-29.62	-5.28
E2WA7DD1	29.00	33	9	-22.63	-22.71	0.08	40.53	-5.62	-5.60	32.92	29.32	26.23	-29.62	1.22
E2WA7DD1	29.00	33	10	-22.67	-22.72	0.05	40.53	-5.62	-5.60	27.42	25.55	26.20	-29.62	-3.89
E2WA7DD1	29.00	35	1	-22.66	-22.69	0.03	42.59	-5.62	-5.60	27.62	26.84	27.64	-29.62	-3.62
E2WA7DD1	29.00	35	2	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.13	31.05	30.97	-29.62	1.79
E2WA7DD1	29.00	35	3	-22.64	-22.65	0.01	42.59	-5.62	-5.60	31.66	27.21	25.84	-29.62	-0.01
E2WA7DD1	29.00	35	4	-22.74	-22.75	0.01	42.59	-5.62	-5.60	23.10	26.72	25.23	-29.62	-8.02
E2WA7DD1	29.00	35	5	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.19	31.03	30.79	-29.62	1.83
E2WA7DD1	29.00	35	6	-22.63	-22.66	0.03	42.59	-5.62	-5.60	33.05	31.07	30.99	-29.62	1.72
E2WA7DD1	29.00	35	7	-22.64	-22.70	0.06	42.59	-5.62	-5.60	30.51	30.15	30.80	-29.62	-0.70
E2WA7DD1	29.00	35	8	-22.68	-22.71	0.03	42.59	-5.62	-5.60	25.89	25.40	25.56	-29.62	-5.35
E2WA7DD1	29.00	35	9	-22.67	-22.73	0.06	42.59	-5.62	-5.60	26.78	26.21	29.30	-29.62	-4.40
E2WA7DD1	29.00	35	10	-22.71	-22.75	0.04	42.59	-5.62	-5.60	24.43	26.17	25.65	-29.62	-6.72
E2WA7DD1	29.00	37	1	-22.63	-22.67	0.04	40.53	-5.62	-5.60	38.38	27.62	26.31	-29.62	5.07
E2WA7DD1	29.00	37	2	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.29	30.94	28.65	-29.62	2.69
E2WA7DD1	29.00	37	3	-22.63	-22.65	0.02	40.53	-5.62	-5.60	38.19	25.81	26.88	-29.62	4.70
E2WA7DD1	29.00	37	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	28.21	25.20	27.48	-29.62	-3.13
E2WA7DD1	29.00	37	5	-22.63	-22.65	0.02	40.53	-5.62	-5.60	35.29	30.76	28.85	-29.62	3.56
E2WA7DD1	29.00	37	6	-22.63	-22.65	0.02	40.53	-5.62	-5.60	34.23	30.97	28.69	-29.62	2.65
E2WA7DD1	29.00	37	7	-22.63	-22.68	0.05	40.53	-5.62	-5.60	32.58	30.77	28.38	-29.62	1.15
E2WA7DD1	29.00	37	8	-22.68	-22.71	0.03	40.53	-5.62	-5.60	25.94	25.53	25.48	-29.62	-5.30
E2WA7DD1	29.00	37	9	-22.63	-22.71	0.08	40.53	-5.62	-5.60	32.91	29.27	25.49	-29.62	1.13
E2WA7DD1	29.00	37	10	-22.67	-22.72	0.05	40.53	-5.62	-5.60	27.39	25.63	26.09	-29.62	-3.91
E2WA7DD1	29.00	39	1	-22.66	-22.69	0.03	42.58	-5.62	-5.60	27.57	26.29	27.61	-29.62	-3.68
E2WA7DD1	29.00	39	2	-22.63	-22.66	0.03	42.58	-5.62	-5.60	33.10	28.62	30.87	-29.62	1.64
E2WA7DD1	29.00	39	3	-22.64	-22.65	0.01	42.58	-5.62	-5.60	31.58	26.85	25.81	-29.62	-0.10
E2WA7DD1	29.00	39	4	-22.74	-22.75	0.01	42.58	-5.62	-5.60	22.94	27.46	25.19	-29.62	-8.16
E2WA7DD1	29.00	39	5	-22.63	-22.66	0.03	42.58	-5.62	-5.60	33.15	28.83	30.71	-29.62	1.69
E2WA7DD1	29.00	39	6	-22.63	-22.67	0.04	42.58	-5.62	-5.60	33.02	28.66	30.90	-29.62	1.56
E2WA7DD1	29.00	39	7	-22.64	-22.70	0.06	42.58	-5.62	-5.60	30.49	28.36	30.71	-29.62	-0.78
E2WA7DD1	29.00	39	8	-22.69	-22.71	0.02	42.58	-5.62	-5.60	25.69	25.45	25.25	-29.62	-5.54
E2WA7DD1	29.00	39	9	-22.67	-22.73	0.06	42.58	-5.62	-5.60	26.76	25.47	29.24	-29.62	-4.44
E2WA7DD1	29.00	39	10	-22.71	-22.75	0.04	42.58	-5.62	-5.60	24.30	26.06	25.39	-29.62	-6.86
E2WA7DD2	29.00	2	1	-8.04	-5.70	-2.34	25.82	23.93	23.50	25.31	16.66	27.47	-14.36	-6.48
E2WA7DD2	29.00	2	2	-6.80	-6.08	-0.72	25.82	23.93	23.50	27.55	24.16	24.18	-14.36	-3.90
E2WA7DD2	29.00	2	3	-6.84	-6.49	-0.35	25.82	23.93	23.50	27.45	22.06	27.50	-14.36	-4.01

E2WA7DD2	29.00	2	4	-8.45	-8.31	-0.14	25.82	23.93	23.50	23.97	23.23	27.80	-14.36	-7.20 |*
E2WA7DD2	29.00	2	5	-7.29	-5.89	-1.40	25.82	23.93	23.50	26.30	24.02	24.75	-14.36	-5.03 |*
E2WA7DD2	29.00	2	6	-6.82	-6.06	-0.76	25.82	23.93	23.50	27.50	24.15	24.18	-14.36	-3.95 |*
E2WA7DD2	29.00	2	7	-7.60	-5.92	-1.68	25.82	23.93	23.50	25.73	22.98	23.06	-14.36	-5.66 |*
E2WA7DD2	29.00	2	8	-9.10	-8.78	-0.32	25.82	23.93	23.50	23.16	18.02	26.16	-14.36	-8.24 |*
E2WA7DD2	29.00	2	9	-9.93	-5.79	-4.14	25.82	23.93	23.50	21.88	18.33	22.43	-14.36	-9.45 |*
E2WA7DD2	29.00	2	10	-9.28	-8.16	-1.12	25.82	23.93	23.50	23.35	14.23	26.23	-14.36	-8.51 |*
E2WA7DD2	29.00	4	1	-6.97	-6.09	-0.88	25.79	23.48	23.94	28.13	27.44	16.68	-14.39	-4.27 |*
E2WA7DD2	29.00	4	2	-6.94	-7.01	0.07	25.79	23.48	23.94	27.21	24.15	24.13	-14.39	-4.21 |*
E2WA7DD2	29.00	4	3	-7.01	-6.92	-0.09	25.79	23.48	23.94	27.05	27.47	22.07	-14.39	-4.37 |*
E2WA7DD2	29.00	4	4	-8.03	-8.01	-0.02	25.79	23.48	23.94	24.77	27.77	23.22	-14.39	-6.44 |*
E2WA7DD2	29.00	4	5	-6.74	-6.77	0.03	25.79	23.48	23.94	27.75	24.72	24.00	-14.39	-3.70 |*
E2WA7DD2	29.00	4	6	-6.94	-7.00	0.06	25.79	23.48	23.94	27.22	24.15	24.12	-14.39	-4.20 |*
E2WA7DD2	29.00	4	7	-7.49	-7.55	0.06	25.79	23.48	23.94	26.01	23.03	22.96	-14.39	-5.41 |*
E2WA7DD2	29.00	4	8	-9.31	-8.98	-0.33	25.79	23.48	23.94	22.81	26.13	18.03	-14.39	-8.55 |*
E2WA7DD2	29.00	4	9	-8.08	-7.93	-0.15	25.79	23.48	23.94	25.14	22.40	18.35	-14.39	-6.53 |*
E2WA7DD2	29.00	4	10	-9.91	-8.30	-1.61	25.79	23.48	23.94	22.26	26.20	14.25	-14.39	-9.42 |*
E2WA7DD2	29.00	6	1	-8.04	-5.70	-2.34	25.82	23.93	23.50	25.30	16.65	27.41	-14.36	-6.49 |*
E2WA7DD2	29.00	6	2	-6.81	-6.08	-0.73	25.82	23.93	23.50	27.54	24.10	24.11	-14.36	-3.92 |*
E2WA7DD2	29.00	6	3	-6.85	-6.49	-0.36	25.82	23.93	23.50	27.44	22.04	27.44	-14.36	-4.02 |*
E2WA7DD2	29.00	6	4	-8.46	-8.33	-0.13	25.82	23.93	23.50	23.95	23.19	27.77	-14.36	-7.22 |*
E2WA7DD2	29.00	6	5	-7.30	-5.89	-1.41	25.82	23.93	23.50	26.29	23.97	24.68	-14.36	-5.04 |*
E2WA7DD2	29.00	6	6	-6.82	-6.06	-0.76	25.82	23.93	23.50	27.49	24.09	24.11	-14.36	-3.96 |*
E2WA7DD2	29.00	6	7	-7.61	-5.92	-1.69	25.82	23.93	23.50	25.72	22.94	23.00	-14.36	-5.67 |*
E2WA7DD2	29.00	6	8	-9.13	-8.81	-0.32	25.82	23.93	23.50	23.11	18.00	26.12	-14.36	-8.28 |*
E2WA7DD2	29.00	6	9	-9.93	-5.80	-4.13	25.82	23.93	23.50	21.88	18.32	22.37	-14.36	-9.45 |*
E2WA7DD2	29.00	6	10	-9.30	-8.19	-1.11	25.82	23.93	23.50	23.31	14.23	26.20	-14.36	-8.54 |*
E2WA7DD2	29.00	8	1	-6.98	-6.10	-0.88	25.79	23.48	23.94	28.09	27.38	16.67	-14.39	-4.30 |*
E2WA7DD2	29.00	8	2	-6.98	-7.04	0.06	25.79	23.48	23.94	27.12	24.08	24.10	-14.39	-4.30 |*
E2WA7DD2	29.00	8	3	-7.02	-6.94	-0.08	25.79	23.48	23.94	27.02	27.41	22.05	-14.39	-4.40 |*
E2WA7DD2	29.00	8	4	-8.04	-8.02	-0.02	25.79	23.48	23.94	24.74	27.75	23.22	-14.39	-6.46 |*
E2WA7DD2	29.00	8	5	-6.77	-6.80	0.03	25.79	23.48	23.94	27.66	24.65	23.97	-14.39	-3.79 |*
E2WA7DD2	29.00	8	6	-6.98	-7.04	0.06	25.79	23.48	23.94	27.13	24.08	24.09	-14.39	-4.29 |*
E2WA7DD2	29.00	8	7	-7.53	-7.60	0.07	25.79	23.48	23.94	25.92	22.97	22.95	-14.39	-5.49 |*
E2WA7DD2	29.00	8	8	-9.34	-9.01	-0.33	25.79	23.48	23.94	22.77	26.10	18.03	-14.39	-8.59 |*
E2WA7DD2	29.00	8	9	-8.12	-7.98	-0.14	25.79	23.48	23.94	25.05	22.35	18.34	-14.39	-6.61 |*
E2WA7DD2	29.00	8	10	-9.94	-8.34	-1.60	25.79	23.48	23.94	22.22	26.17	14.25	-14.39	-9.45 |*
E2WA7DD2	29.00	10	1	-8.05	-5.72	-2.33	25.82	23.93	23.50	25.28	16.65	27.40	-14.36	-6.51 |*
E2WA7DD2	29.00	10	2	-6.83	-6.11	-0.72	25.82	23.93	23.50	27.48	24.07	24.09	-14.36	-3.98 |*
E2WA7DD2	29.00	10	3	-6.87	-6.52	-0.35	25.82	23.93	23.50	27.37	22.02	27.43	-14.36	-4.08 |*
E2WA7DD2	29.00	10	4	-8.48	-8.34	-0.14	25.82	23.93	23.50	23.92	23.19	27.76	-14.36	-7.25 |*
E2WA7DD2	29.00	10	5	-7.32	-5.92	-1.40	25.82	23.93	23.50	26.25	23.95	24.66	-14.36	-5.08 |*
E2WA7DD2	29.00	10	6	-6.85	-6.09	-0.76	25.82	23.93	23.50	27.43	24.06	24.09	-14.36	-4.02 |*
E2WA7DD2	29.00	10	7	-7.62	-5.95	-1.67	25.82	23.93	23.50	25.69	22.92	22.98	-14.36	-5.70 |*
E2WA7DD2	29.00	10	8	-9.13	-8.82	-0.31	25.82	23.93	23.50	23.10	18.00	26.12	-14.36	-8.29 |*
E2WA7DD2	29.00	10	9	-9.94	-5.82	-4.12	25.82	23.93	23.50	21.87	18.31	22.36	-14.36	-9.46 |*
E2WA7DD2	29.00	10	10	-9.31	-8.20	-1.11	25.82	23.93	23.50	23.29	14.23	26.19	-14.36	-8.55 |*
E2WA7DD2	29.00	12	1	-6.99	-6.12	-0.87	25.79	23.48	23.94	28.07	27.38	16.67	-14.39	-4.32 |*
E2WA7DD2	29.00	12	2	-6.99	-7.05	0.06	25.79	23.48	23.94	27.11	24.06	24.03	-14.39	-4.31 |*
E2WA7DD2	29.00	12	3	-7.05	-6.96	-0.09	25.79	23.48	23.94	26.97	27.40	22.02	-14.39	-4.45 |*
E2WA7DD2	29.00	12	4	-8.04	-8.02	-0.02	25.79	23.48	23.94	24.74	27.73	23.17	-14.39	-6.47 |*
E2WA7DD2	29.00	12	5	-6.78	-6.82	0.04	25.79	23.48	23.94	27.64	24.63	23.92	-14.39	-3.81 |*
E2WA7DD2	29.00	12	6	-6.98	-7.05	0.07	25.79	23.48	23.94	27.12	24.06	24.03	-14.39	-4.30 |*
E2WA7DD2	29.00	12	7	-7.55	-7.62	0.07	25.79	23.48	23.94	25.87	22.95	22.89	-14.39	-5.54 |*
E2WA7DD2	29.00	12	8	-9.33	-9.00	-0.33	25.79	23.48	23.94	22.80	26.09	18.02	-14.39	-8.57 |*
E2WA7DD2	29.00	12	9	-8.16	-8.02	-0.14	25.79	23.48	23.94	24.99	22.33	18.32	-14.39	-6.67 |*
E2WA7DD2	29.00	12	10	-9.92	-8.31	-1.61	25.79	23.48	23.94	22.25	26.16	14.25	-14.39	-9.42 |*
E2WA7DD2	29.00	14	1	-8.05	-5.72	-2.33	25.82	23.93	23.50	25.29	16.64	27.38	-14.36	-6.50 |*
E2WA7DD2	29.00	14	2	-6.83	-6.11	-0.72	25.82	23.93	23.50	27.47	24.01	24.00	-14.36	-3.99 |*
E2WA7DD2	29.00	14	3	-6.88	-6.52	-0.36	25.82	23.93	23.50	27.37	21.99	27.42	-14.36	-4.09 |*
E2WA7DD2	29.00	14	4	-8.44	-8.30	-0.14	25.82	23.93	23.50	24.00	23.14	27.73	-14.36	-7.18 |*
E2WA7DD2	29.00	14	5	-7.32	-5.92	-1.40	25.82	23.93	23.50	26.25	23.89	24.58	-14.36	-5.08 |*
E2WA7DD2	29.00	14	6	-6.85	-6.10	-0.75	25.82	23.93	23.50	27.43	24.00	24.00	-14.36	-4.03 |*
E2WA7DD2	29.00	14	7	-7.63	-5.95	-1.68	25.82	23.93	23.50	25.69	22.86	22.90	-14.36	-5.71 |*
E2WA7DD2	29.00	14	8	-9.11	-8.79	-0.32	25.82	23.93	23.50	23.14	17.99	26.07	-14.36	-8.25 |*
E2WA7DD2	29.00	14	9	-9.94	-5.82	-4.12	25.82	23.93	23.50	21.87	18.29	22.30	-14.36	-9.46 |*
E2WA7DD2	29.00	14	10	-9.30	-8.18	-1.12	25.82	23.93	23.50	23.31	14.22	26.16	-14.36	-8.54 |*
E2WA7DD2	29.00	16	1	-7.00	-6.13	-0.87	25.79	23.48	23.94	28.03	27.35	16.66	-14.39	-4.35 |*
E2WA7DD2	29.00	16	2	-7.01	-7.08	0.07	25.79	23.48	23.94	27.06	23.97	24.02	-14.39	-4.37 |*
E2WA7DD2	29.00	16	3	-7.08	-6.99	-0.09	25.79	23.48	23.94	26.89	27.39	22.01	-14.39	-4.52 |*
E2WA7DD2	29.00	16	4	-8.06	-8.04	-0.02	25.79	23.48	23.94	24.70	27.70	23.14	-14.39	-6.50 |*
E2WA7DD2	29.00	16	5	-6.80	-6.84	0.04	25.79	23.48	23.94	27.59	24.55	23.91	-14.39	-3.86 |*
E2WA7DD2	29.00	16	6	-7.01	-7.07	0.06	25.79	23.48	23.94	27.06	23.97	24.01	-14.39	-4.36 |*
E2WA7DD2	29.00	16	7	-7.57	-7.64	0.07	25.79	23.48	23.94	25.84	22.87	22.89	-14.39	-5.57 |*
E2WA7DD2	29.00	16	8	-9.36	-9.03	-0.33	25.79	23.48	23.94	22.75	26.05	18.01	-14.39	-8.61 |*
E2WA7DD2	29.00	16	9	-8.17	-8.03	-0.14	25.79	23.48	23.94	24.97	22.27	18.32	-14.39	-6.69 |*
E2WA7DD2	29.00	16	10	-9.94	-8.34	-1.60	25.79	23.48	23.94	22.22	26.13	14.24	-14.39	-9.46 |*
E2WA7DD2	29.00	18	1	-8.05	-5.58	-2.47	25.82	23.93	23.50	25.29	16.64	27.43	-14.36	-6.50 |*
E2WA7DD2	29.00	18	2	-6.85	-6.02	-0.83	25.82	23.93	23.50	27.43	23.99	24.00	-14.36	-4.03 |*
E2WA7DD2	29.00	18	3	-6.87	-6.41	-0.46	25.82	23.93	23.50	27.39	21.99	27.47	-14.36	-4.07 |*
E2WA7DD2	29.00	18	4	-8.36	-8.14	-0.22	25.82	23.93	23.50	24.14	23.11	27.71	-14.36	-7.04 |*
E2WA7DD2	29.00	18	5	-7.33	-5.82	-1.51	25.82	23.93	23.50	26.22	23.88	24.57	-14.36	-5.11 |*
E2WA7DD2	29.00	18	6	-6.87	-6.00	-0.87	25.82	23.93	23.50	27.38	23.98	24.00	-14.36	-4.07 |*
E2WA7DD2	29.00	18	7	-7.64	-5.85	-1.79	25.82	23.93	23.50	25.66	22.86	22.90	-14.36	-5.73 |*
E2WA7DD2	29.00	18	8	-9.04	-8.65	-0.39	25.82	23.93	23.50	23.26	17.98	26.07	-14.36	-8.14 |*
E2WA7DD2	29.00	18	9	-9.94	-5.71	-4.23	25.82	23.93	23.50	21.86	18.29	22.30	-14.36	-9.47 |*
E2WA7DD2	29.00	18	10	-9.26	-8.06	-1.20	25.82	23.93	23.50	23.38	14.21	26.15	-14.36	-8.48 |*
E2WA7DD2	29.00	20	1	-2.13	0.00	-2.13	38.35	23.48	43.24	28.78	27.41	39.59	-3.08	-2.38 |*
E2WA7DD2	29.00	20	2	-2.85	-2.90	0.05	38.35	23.48	43.24	28.06	23.97	41.05	-3.08	-3.22 |*
E2WA7DD2	29.00	20	3	-2.99	0.00	-2.99	38.35	23.48	43.24	27.75	27.44	38.16	-3.08	-3.38 |*
E2WA7DD2	29.00	20	4	-4.73	-4.58	-0.15	38.35	23.48	43.24	25.79	27.68	29.07	-3.08	-5.33 |*
E2WA7DD2	29.00	20	5	-2.41	-2.40	-0.01	38.35	23.48	43.24	28.57	24.55	41.47	-3.08	-2.70 |*
E2WA7DD2	29.00	20	6	-2.85	-2.90	0.05	38.35	23.48	43.24	28.05	23.97	41.08	-3.08	-3.22 |*
E2WA7DD2	29.00	20	7	-4.20	-4.28	0.08	38.35	23.48	43.24	26.50	22.87	40.86	-3.08	-4.75 |*

E2WA7DD2	29.00	20	8	-6.97	-6.60	-0.37	38.35	23.48	43.24	23.37	26.04	26.57	-3.08	-7.74	*
E2WA7DD2	29.00	20	9	-5.14	-5.12	-0.02	38.35	23.48	43.24	25.45	22.28	39.89	-3.08	-5.78	*
E2WA7DD2	29.00	20	10	-7.60	-5.47	-2.13	38.35	23.48	43.24	22.68	26.12	28.07	-3.08	-8.40	*
E2WA7DD2	29.00	22	1	-10.35	-10.37	0.02	20.50	43.22	47.58	27.25	39.56	27.01	-19.50	-3.87	*
E2WA7DD2	29.00	22	2	-9.70	-9.74	0.04	20.50	43.22	47.58	33.98	41.02	32.78	-19.50	2.82	*
E2WA7DD2	29.00	22	3	-10.27	-10.27	0.00	20.50	43.22	47.58	27.74	38.13	27.28	-19.50	-3.39	*
E2WA7DD2	29.00	22	4	-10.40	-10.40	0.00	20.50	43.22	47.58	27.12	29.04	24.47	-19.50	-4.14	*
E2WA7DD2	29.00	22	5	-9.73	-9.76	0.03	20.50	43.22	47.58	33.26	41.45	31.97	-19.50	2.10	*
E2WA7DD2	29.00	22	6	-9.70	-9.74	0.04	20.50	43.22	47.58	33.97	41.05	32.73	-19.50	2.81	*
E2WA7DD2	29.00	22	7	-9.80	-9.83	0.03	20.50	43.22	47.58	32.15	40.83	30.87	-19.50	1.00	*
E2WA7DD2	29.00	22	8	-10.70	-10.71	0.01	20.50	43.22	47.58	25.70	26.54	25.06	-19.50	-5.51	*
E2WA7DD2	29.00	22	9	-10.43	-10.45	0.02	20.50	43.22	47.58	26.86	39.86	26.74	-19.50	-4.26	*
E2WA7DD2	29.00	22	10	-10.51	-10.53	0.02	20.50	43.22	47.58	26.55	28.04	24.67	-19.50	-4.69	*
E2WA7DD2	29.00	24	1	-10.26	-10.29	0.03	20.50	47.56	43.22	27.80	26.99	39.63	-19.50	-3.34	*
E2WA7DD2	29.00	24	2	-9.89	-9.94	0.05	20.50	47.56	43.22	30.82	32.75	41.19	-19.50	-0.26	*
E2WA7DD2	29.00	24	3	-10.59	-10.60	0.01	20.50	47.56	43.22	26.03	27.25	38.21	-19.50	-5.06	*
E2WA7DD2	29.00	24	4	-11.26	-11.26	0.00	20.50	47.56	43.22	23.64	24.44	29.02	-19.50	-7.48	*
E2WA7DD2	29.00	24	5	-9.90	-9.94	0.04	20.50	47.56	43.22	30.72	31.94	41.60	-19.50	-0.37	*
E2WA7DD2	29.00	24	6	-9.89	-9.94	0.05	20.50	47.56	43.22	30.83	32.70	41.22	-19.50	-0.25	*
E2WA7DD2	29.00	24	7	-9.94	-10.01	0.07	20.50	47.56	43.22	30.30	30.84	40.98	-19.50	-0.80	*
E2WA7DD2	29.00	24	8	-11.22	-11.24	0.02	20.50	47.56	43.22	23.78	25.03	26.49	-19.50	-7.36	*
E2WA7DD2	29.00	24	9	-10.10	-10.17	0.07	20.50	47.56	43.22	29.02	26.71	39.98	-19.50	-2.17	*
E2WA7DD2	29.00	24	10	-11.05	-11.08	0.03	20.50	47.56	43.22	24.32	24.65	27.99	-19.50	-6.82	*
E2WA7DD2	29.00	26	1	-10.39	-10.41	0.02	20.48	43.20	47.92	27.14	39.60	27.85	-19.52	-3.96	*
E2WA7DD2	29.00	26	2	-9.86	-9.95	0.09	20.48	43.20	47.92	31.43	41.16	38.92	-19.52	0.40	*
E2WA7DD2	29.00	26	3	-10.29	-10.30	0.01	20.48	43.20	47.92	27.66	38.18	32.07	-19.52	-3.39	*
E2WA7DD2	29.00	26	4	-10.44	-10.44	0.00	20.48	43.20	47.92	27.04	29.00	23.46	-19.52	-4.26	*
E2WA7DD2	29.00	26	5	-9.86	-9.93	0.07	20.48	43.20	47.92	31.43	41.57	37.01	-19.52	0.39	*
E2WA7DD2	29.00	26	6	-9.86	-9.95	0.09	20.48	43.20	47.92	31.39	41.19	38.75	-19.52	0.36	*
E2WA7DD2	29.00	26	7	-10.03	-10.15	0.12	20.48	43.20	47.92	29.57	40.95	34.49	-19.52	-1.47	*
E2WA7DD2	29.00	26	8	-10.71	-10.73	0.02	20.48	43.20	47.92	25.66	26.46	26.42	-19.52	-5.52	*
E2WA7DD2	29.00	26	9	-10.60	-10.70	0.10	20.48	43.20	47.92	26.03	39.95	27.90	-19.52	-5.04	*
E2WA7DD2	29.00	26	10	-10.54	-10.58	0.04	20.48	43.20	47.92	26.47	27.96	24.61	-19.52	-4.77	*
E2WA7DD2	29.00	28	1	-10.30	-10.34	0.04	20.49	47.90	43.23	27.64	27.83	39.57	-19.51	-3.47	*
E2WA7DD2	29.00	28	2	-9.99	-10.09	0.10	20.49	47.90	43.23	29.83	38.89	41.17	-19.51	-1.19	*
E2WA7DD2	29.00	28	3	-10.61	-10.63	0.02	20.49	47.90	43.23	25.93	32.04	38.15	-19.51	-5.10	*
E2WA7DD2	29.00	28	4	-11.30	-11.30	0.00	20.49	47.90	43.23	23.57	23.43	28.98	-19.51	-7.57	*
E2WA7DD2	29.00	28	5	-9.98	-10.07	0.09	20.49	47.90	43.23	29.94	36.98	41.58	-19.51	-1.09	*
E2WA7DD2	29.00	28	6	-10.00	-10.10	0.10	20.49	47.90	43.23	29.83	38.73	41.20	-19.51	-1.19	*
E2WA7DD2	29.00	28	7	-10.09	-10.27	0.18	20.49	47.90	43.23	29.01	34.46	40.96	-19.51	-2.03	*
E2WA7DD2	29.00	28	8	-11.24	-11.27	0.03	20.49	47.90	43.23	23.72	26.39	26.48	-19.51	-7.40	*
E2WA7DD2	29.00	28	9	-10.22	-10.43	0.21	20.49	47.90	43.23	28.12	27.88	39.94	-19.51	-3.00	*
E2WA7DD2	29.00	28	10	-11.08	-11.14	0.06	20.49	47.90	43.23	24.24	24.58	27.98	-19.51	-6.90	*
E2WA7DD2	29.00	30	1	-10.40	-10.44	0.04	20.48	43.22	47.92	27.05	39.54	27.81	-19.52	-4.05	*
E2WA7DD2	29.00	30	2	-9.86	-9.96	0.10	20.48	43.22	47.92	31.39	41.14	38.90	-19.52	0.36	*
E2WA7DD2	29.00	30	3	-10.30	-10.31	0.01	20.48	43.22	47.92	27.60	38.12	32.03	-19.52	-3.45	*
E2WA7DD2	29.00	30	4	-10.45	-10.45	0.00	20.48	43.22	47.92	27.00	28.96	23.38	-19.52	-4.31	*
E2WA7DD2	29.00	30	5	-9.86	-9.94	0.08	20.48	43.22	47.92	31.38	41.55	37.00	-19.52	0.34	*
E2WA7DD2	29.00	30	6	-9.86	-9.97	0.11	20.48	43.22	47.92	31.35	41.17	38.74	-19.52	0.32	*
E2WA7DD2	29.00	30	7	-10.03	-10.18	0.15	20.48	43.22	47.92	29.53	40.93	34.48	-19.52	-1.52	*
E2WA7DD2	29.00	30	8	-10.73	-10.75	0.02	20.48	43.22	47.92	25.59	26.45	26.37	-19.52	-5.59	*
E2WA7DD2	29.00	30	9	-10.62	-10.77	0.15	20.48	43.22	47.92	25.95	39.92	27.89	-19.52	-5.12	*
E2WA7DD2	29.00	30	10	-10.56	-10.61	0.05	20.48	43.22	47.92	26.40	27.95	24.55	-19.52	-4.84	*
E2WA7DD2	29.00	32	1	-10.30	-10.35	0.05	20.49	47.90	43.23	27.62	27.79	39.56	-19.52	-3.49	*
E2WA7DD2	29.00	32	2	-10.00	-10.10	0.10	20.49	47.90	43.23	29.77	38.88	41.14	-19.52	-1.25	*
E2WA7DD2	29.00	32	3	-10.62	-10.63	0.01	20.49	47.90	43.23	25.91	32.00	38.13	-19.52	-5.12	*
E2WA7DD2	29.00	32	4	-11.31	-11.31	0.00	20.49	47.90	43.23	23.55	23.36	28.93	-19.52	-7.59	*
E2WA7DD2	29.00	32	5	-9.99	-10.08	0.09	20.49	47.90	43.23	29.89	36.97	41.56	-19.52	-1.14	*
E2WA7DD2	29.00	32	6	-10.00	-10.10	0.10	20.49	47.90	43.23	29.77	38.71	41.17	-19.52	-1.25	*
E2WA7DD2	29.00	32	7	-10.10	-10.28	0.18	20.49	47.90	43.23	28.97	34.46	40.94	-19.52	-2.07	*
E2WA7DD2	29.00	32	8	-11.29	-11.32	0.03	20.49	47.90	43.23	23.57	26.34	26.39	-19.52	-7.55	*
E2WA7DD2	29.00	32	9	-10.23	-10.44	0.21	20.49	47.90	43.23	28.08	27.86	39.92	-19.52	-3.04	*
E2WA7DD2	29.00	32	10	-11.13	-11.19	0.06	20.49	47.90	43.23	24.10	24.53	27.89	-19.52	-7.05	*
E2WA7DD2	29.00	34	1	-10.40	-10.44	0.04	20.48	43.22	47.92	27.04	39.53	27.81	-19.52	-4.06	*
E2WA7DD2	29.00	34	2	-9.86	-9.97	0.11	20.48	43.22	47.92	31.39	41.12	38.88	-19.52	0.36	*
E2WA7DD2	29.00	34	3	-10.30	-10.31	0.01	20.48	43.22	47.92	27.56	38.11	32.00	-19.52	-3.49	*
E2WA7DD2	29.00	34	4	-10.47	-10.47	0.00	20.48	43.22	47.92	26.92	28.90	23.36	-19.52	-4.38	*
E2WA7DD2	29.00	34	5	-9.86	-9.94	0.08	20.48	43.22	47.92	31.37	41.53	36.98	-19.52	0.33	*
E2WA7DD2	29.00	34	6	-9.86	-9.97	0.11	20.48	43.22	47.92	31.35	41.15	38.72	-19.52	0.32	*
E2WA7DD2	29.00	34	7	-10.03	-10.19	0.16	20.48	43.22	47.92	29.52	40.91	34.47	-19.52	-1.52	*
E2WA7DD2	29.00	34	8	-10.74	-10.77	0.03	20.48	43.22	47.92	25.54	26.37	26.33	-19.52	-5.63	*
E2WA7DD2	29.00	34	9	-10.62	-10.78	0.16	20.48	43.22	47.92	25.95	39.89	27.89	-19.52	-5.12	*
E2WA7DD2	29.00	34	10	-10.57	-10.62	0.05	20.48	43.22	47.92	26.35	27.87	24.54	-19.52	-4.89	*
E2WA7DD2	29.00	36	1	-10.31	-10.36	0.05	20.49	47.90	43.23	27.56	27.78	39.48	-19.51	-3.55	*
E2WA7DD2	29.00	36	2	-10.00	-10.11	0.11	20.49	47.90	43.23	29.76	38.85	41.10	-19.51	-1.26	*
E2WA7DD2	29.00	36	3	-10.63	-10.65	0.02	20.49	47.90	43.23	25.84	31.97	38.06	-19.51	-5.19	*
E2WA7DD2	29.00	36	4	-11.32	-11.33	0.01	20.49	47.90	43.23	23.50	23.34	28.88	-19.51	-7.64	*
E2WA7DD2	29.00	36	5	-9.99	-10.09	0.10	20.49	47.90	43.23	29.86	36.95	41.51	-19.51	-1.17	*
E2WA7DD2	29.00	36	6	-10.00	-10.11	0.11	20.49	47.90	43.23	29.75	38.69	41.13	-19.51	-1.27	*
E2WA7DD2	29.00	36	7	-10.10	-10.29	0.19	20.49	47.90	43.23	28.95	34.45	40.89	-19.51	-2.09	*
E2WA7DD2	29.00	36	8	-11.27	-11.30	0.03	20.49	47.90	43.23	23.63	26.31	26.37	-19.51	-7.48	*
E2WA7DD2	29.00	36	9	-10.23	-10.45	0.22	20.49	47.90	43.23	28.05	27.86	39.86	-19.51	-3.07	*
E2WA7DD2	29.00	36	10	-11.11	-11.17	0.06	20.49	47.90	43.23	24.15	24.51	27.88	-19.51	-6.99	*
E2WA7DD2	29.00	38	1	-10.51	-10.55	0.04	20.48	43.22	47.91	26.47	39.45	27.76	-19.52	-4.62	*
E2WA7DD2	29.00	38	2	-10.11	-10.21	0.10	20.48	43.22	47.91	28.84	41.07	38.75	-19.52	-2.17	*
E2WA7DD2	29.00	38	3	-10.37	-10.38	0.01	20.48	43.22	47.91	27.18	38.03	31.92	-19.52	-3.86	*
E2WA7DD2	29.00	38	4	-10.33	-10.34	0.01	20.48	43.22	47.91	27.70	28.86	23.26	-19.52	-3.67	*
E2WA7DD2	29.00	38	5	-10.09	-10.17	0.08	20.48	43.22	47.91	29.06	41.48	36.90	-19.52	-1.96	*
E2WA7DD2	29.00	38	6	-10.11	-10.21	0.10	20.48	43.22	47.91	28.85	41.10	38.59	-19.52	-2.17	*
E2WA7DD2	29.00	38	7	-10.24	-10.39	0.15	20.48	43.22	47.91	27.96	40.86	34.42	-19.52	-3.07	*
E2WA7DD2	29.00	38	8	-10.73	-10.75	0.02	20.48	43.22	47.91	25.60	26.35	26.24	-19.52	-5.58	*
E2WA7DD2	29.00	38	9	-10.78	-10.93	0.15	20.48	43.22	47.91	25.26	39.83	27.86	-19.52	-5.80	*
E2WA7DD2	29.00	38	10	-10.59	-10.65	0.06	20.48	43.22	47.91	26.25	27.85	24.46	-19.52	-4.99	*
E2WA7DD2	29.00	40	1	-10.31	-10.33	0.02	20.49	47.89	47.91	27.57	27.73		-19.51	-3.53	*

E2WA7DD2	29.00	40	2	-9.96	-10.05	0.09	20.49	47.89	47.91	30.19	38.72		-19.51	-0.83
E2WA7DD2	29.00	40	3	-10.63	-10.64	0.01	20.49	47.89	47.91	25.83	31.89		-19.51	-5.20
E2WA7DD2	29.00	40	4	-11.32	-11.32	0.00	20.49	47.89	47.91	23.48	23.23		-19.51	-7.64
E2WA7DD2	29.00	40	5	-9.96	-10.03	0.07	20.49	47.89	47.91	30.19	36.88		-19.51	-0.83
E2WA7DD2	29.00	40	6	-9.96	-10.05	0.09	20.49	47.89	47.91	30.19	38.57		-19.51	-0.82
E2WA7DD2	29.00	40	7	-10.02	-10.17	0.15	20.49	47.89	47.91	29.56	34.40		-19.51	-1.48
E2WA7DD2	29.00	40	8	-11.31	-11.33	0.02	20.49	47.89	47.91	23.44	26.21		-19.51	-7.62
E2WA7DD2	29.00	40	9	-10.17	-10.31	0.14	20.49	47.89	47.91	28.46	27.83		-19.51	-2.66
E2WA7DD2	29.00	40	10	-11.15	-11.18	0.03	20.49	47.89	47.91	23.97	24.44		-19.51	-7.12
E2WA7DE1	29.00	1	1	-5.54	-5.45	-0.09	25.69		24.79	30.97		37.68	-14.38	-0.05
E2WA7DE1	29.00	1	2	-5.81	-5.72	-0.09	25.69		24.79	29.90		35.22	-14.38	-1.13
E2WA7DE1	29.00	1	3	-5.89	-5.80	-0.09	25.69		24.79	29.62		34.53	-14.38	-1.41
E2WA7DE1	29.00	1	4	-6.17	-6.09	-0.08	25.69		24.79	28.69		35.69	-14.38	-2.34
E2WA7DE1	29.00	1	5	-6.35	-6.27	-0.08	25.69		24.79	28.20		31.13	-14.38	-2.86
E2WA7DE1	29.00	1	6	-6.61	-6.54	-0.07	25.69		24.79	27.46		34.94	-14.38	-3.56
E2WA7DE1	29.00	1	7	-6.75	-6.68	-0.07	25.69		24.79	27.10		35.14	-14.38	-3.91
E2WA7DE1	29.00	1	8	-6.77	-6.70	-0.07	25.69		24.79	27.08		31.26	-14.38	-3.96
E2WA7DE1	29.00	1	9	-7.81	-7.75	-0.06	25.69		24.79	24.90		30.43	-14.38	-6.13
E2WA7DE1	29.00	1	10	-6.69	-6.62	-0.07	25.69		24.79	27.26		32.99	-14.38	-3.77
E2WA7DE1	29.00	3	1	-5.50	-5.59	0.09	25.71	24.77	23.95	31.76	37.65	36.10	-14.44	0.69
E2WA7DE1	29.00	3	2	-5.73	-5.82	0.09	25.71	24.77	23.95	30.67	35.20	35.03	-14.44	-0.40
E2WA7DE1	29.00	3	3	-5.77	-5.86	0.09	25.71	24.77	23.95	30.51	34.50	34.52	-14.44	-0.58
E2WA7DE1	29.00	3	4	-5.84	-5.93	0.09	25.71	24.77	23.95	30.22	35.66	34.74	-14.44	-0.85
E2WA7DE1	29.00	3	5	-5.98	-6.06	0.08	25.71	24.77	23.95	29.76	31.10	31.99	-14.44	-1.38
E2WA7DE1	29.00	3	6	-5.97	-6.05	0.08	25.71	24.77	23.95	29.73	34.91	33.47	-14.44	-1.35
E2WA7DE1	29.00	3	7	-6.05	-6.14	0.09	25.71	24.77	23.95	29.43	35.11	33.43	-14.44	-1.65
E2WA7DE1	29.00	3	8	-6.14	-6.22	0.08	25.71	24.77	23.95	29.19	31.23	31.28	-14.44	-1.94
E2WA7DE1	29.00	3	9	-6.66	-6.73	0.07	25.71	24.77	23.95	27.65	30.40	30.13	-14.44	-3.47
E2WA7DE1	29.00	3	10	-6.51	-6.59	0.08	25.71	24.77	23.95	28.02	32.97	31.16	-14.44	-3.07
E2WA7DE1	29.00	5	1	-5.68	-5.60	-0.08	25.69	23.93	24.79	30.95	36.07	37.67	-14.46	-0.11
E2WA7DE1	29.00	5	2	-5.94	-5.87	-0.07	25.69	23.93	24.79	29.89	35.00	35.22	-14.46	-1.18
E2WA7DE1	29.00	5	3	-6.01	-5.94	-0.07	25.69	23.93	24.79	29.61	34.50	34.53	-14.46	-1.46
E2WA7DE1	29.00	5	4	-6.29	-6.22	-0.07	25.69	23.93	24.79	28.67	34.71	35.68	-14.46	-2.38
E2WA7DE1	29.00	5	5	-6.47	-6.41	-0.06	25.69	23.93	24.79	28.17	31.96	31.13	-14.46	-2.93
E2WA7DE1	29.00	5	6	-6.72	-6.66	-0.06	25.69	23.93	24.79	27.45	33.44	34.94	-14.46	-3.60
E2WA7DE1	29.00	5	7	-6.86	-6.81	-0.05	25.69	23.93	24.79	27.09	33.40	35.14	-14.46	-3.96
E2WA7DE1	29.00	5	8	-6.90	-6.84	-0.06	25.69	23.93	24.79	27.03	31.25	31.25	-14.46	-4.05
E2WA7DE1	29.00	5	9	-7.96	-7.91	-0.05	25.69	23.93	24.79	24.79	30.10	30.43	-14.46	-6.27
E2WA7DE1	29.00	5	10	-6.81	-6.76	-0.05	25.69	23.93	24.79	27.24	31.13	32.99	-14.46	-3.83
E2WA7DE1	29.00	7	1	-5.50	-5.59	0.09	25.71	24.77	23.95	31.76	37.64	36.04	-14.44	0.69
E2WA7DE1	29.00	7	2	-5.73	-5.82	0.09	25.71	24.77	23.95	30.67	35.19	34.99	-14.44	-0.41
E2WA7DE1	29.00	7	3	-5.77	-5.86	0.09	25.71	24.77	23.95	30.51	34.50	34.49	-14.44	-0.58
E2WA7DE1	29.00	7	4	-5.84	-5.93	0.09	25.71	24.77	23.95	30.22	35.66	34.69	-14.44	-0.85
E2WA7DE1	29.00	7	5	-5.98	-6.06	0.08	25.71	24.77	23.95	29.76	31.10	31.96	-14.44	-1.38
E2WA7DE1	29.00	7	6	-5.97	-6.05	0.08	25.71	24.77	23.95	29.73	34.91	33.41	-14.44	-1.35
E2WA7DE1	29.00	7	7	-6.05	-6.14	0.09	25.71	24.77	23.95	29.43	35.11	33.37	-14.44	-1.65
E2WA7DE1	29.00	7	8	-6.14	-6.22	0.08	25.71	24.77	23.95	29.19	31.23	31.25	-14.44	-1.95
E2WA7DE1	29.00	7	9	-6.66	-6.73	0.07	25.71	24.77	23.95	27.64	30.40	30.10	-14.44	-3.48
E2WA7DE1	29.00	7	10	-6.51	-6.59	0.08	25.71	24.77	23.95	28.02	32.96	31.12	-14.44	-3.07
E2WA7DE1	29.00	9	1	-5.68	-5.60	-0.08	25.69	23.93	24.79	30.95	36.02	37.58	-14.46	-0.11
E2WA7DE1	29.00	9	2	-5.94	-5.87	-0.07	25.69	23.93	24.79	29.88	34.96	35.13	-14.46	-1.18
E2WA7DE1	29.00	9	3	-6.02	-5.95	-0.07	25.69	23.93	24.79	29.60	34.46	34.44	-14.46	-1.47
E2WA7DE1	29.00	9	4	-6.30	-6.23	-0.07	25.69	23.93	24.79	28.65	34.66	35.60	-14.46	-2.40
E2WA7DE1	29.00	9	5	-6.48	-6.42	-0.06	25.69	23.93	24.79	28.15	31.93	31.04	-14.46	-2.95
E2WA7DE1	29.00	9	6	-6.74	-6.68	-0.06	25.69	23.93	24.79	27.41	33.38	34.86	-14.46	-3.64
E2WA7DE1	29.00	9	7	-6.88	-6.82	-0.06	25.69	23.93	24.79	27.05	33.35	35.05	-14.46	-4.00
E2WA7DE1	29.00	9	8	-6.92	-6.86	-0.06	25.69	23.93	24.79	27.00	31.22	31.16	-14.46	-4.09
E2WA7DE1	29.00	9	9	-7.99	-7.94	-0.05	25.69	23.93	24.79	24.74	30.07	30.34	-14.46	-6.33
E2WA7DE1	29.00	9	10	-6.81	-6.76	-0.05	25.69	23.93	24.79	27.24	31.09	32.92	-14.46	-3.83
E2WA7DE1	29.00	11	1	-5.50	-5.56	0.06	25.71	24.77	23.95	31.75	37.56	36.01	-14.44	0.68
E2WA7DE1	29.00	11	2	-5.73	-5.79	0.06	25.71	24.77	23.95	30.67	35.10	34.96	-14.44	-0.41
E2WA7DE1	29.00	11	3	-5.77	-5.83	0.06	25.71	24.77	23.95	30.51	34.41	34.45	-14.44	-0.58
E2WA7DE1	29.00	11	4	-5.84	-5.89	0.05	25.71	24.77	23.95	30.22	35.57	34.66	-14.44	-0.85
E2WA7DE1	29.00	11	5	-5.98	-6.03	0.05	25.71	24.77	23.95	29.76	31.01	31.91	-14.44	-1.39
E2WA7DE1	29.00	11	6	-5.97	-6.02	0.05	25.71	24.77	23.95	29.72	34.83	33.40	-14.44	-1.36
E2WA7DE1	29.00	11	7	-6.06	-6.11	0.05	25.71	24.77	23.95	29.42	35.02	33.35	-14.44	-1.65
E2WA7DE1	29.00	11	8	-6.14	-6.19	0.05	25.71	24.77	23.95	29.19	31.13	31.20	-14.44	-1.95
E2WA7DE1	29.00	11	9	-6.67	-6.71	0.04	25.71	24.77	23.95	27.64	30.31	30.05	-14.44	-3.48
E2WA7DE1	29.00	11	10	-6.52	-6.56	0.04	25.71	24.77	23.95	28.01	32.89	31.07	-14.44	-3.08
E2WA7DE1	29.00	13	1	-5.68	-5.60	-0.08	25.69	23.93	24.79	30.93	35.99	37.60	-14.46	-0.13
E2WA7DE1	29.00	13	2	-5.94	-5.87	-0.07	25.69	23.93	24.79	29.86	34.93	35.11	-14.46	-1.21
E2WA7DE1	29.00	13	3	-6.02	-5.95	-0.07	25.69	23.93	24.79	29.58	34.42	34.41	-14.46	-1.49
E2WA7DE1	29.00	13	4	-6.31	-6.24	-0.07	25.69	23.93	24.79	28.61	34.64	35.61	-14.46	-2.44
E2WA7DE1	29.00	13	5	-6.50	-6.43	-0.07	25.69	23.93	24.79	28.11	31.88	30.99	-14.46	-2.99
E2WA7DE1	29.00	13	6	-6.76	-6.69	-0.07	25.69	23.93	24.79	27.36	33.37	34.93	-14.46	-3.69
E2WA7DE1	29.00	13	7	-6.90	-6.84	-0.06	25.69	23.93	24.79	27.00	33.33	35.07	-14.46	-4.05
E2WA7DE1	29.00	13	8	-6.94	-6.88	-0.06	25.69	23.93	24.79	26.95	31.17	31.12	-14.46	-4.14
E2WA7DE1	29.00	13	9	-8.02	-7.97	-0.05	25.69	23.93	24.79	24.67	30.02	30.30	-14.46	-6.39
E2WA7DE1	29.00	13	10	-6.82	-6.76	-0.06	25.69	23.93	24.79	27.22	31.04	32.94	-14.46	-3.85
E2WA7DE1	29.00	15	1	-5.50	-5.59	0.09	25.71	24.77	23.95	31.75	37.58	35.92	-14.44	0.68
E2WA7DE1	29.00	15	2	-5.73	-5.81	0.08	25.71	24.77	23.95	30.67	35.08	34.86	-14.44	-0.41
E2WA7DE1	29.00	15	3	-5.77	-5.85	0.08	25.71	24.77	23.95	30.51	34.39	34.36	-14.44	-0.58
E2WA7DE1	29.00	15	4	-5.84	-5.92	0.08	25.71	24.77	23.95	30.22	35.58	34.57	-14.44	-0.85
E2WA7DE1	29.00	15	5	-5.98	-6.05	0.07	25.71	24.77	23.95	29.77	30.96	31.83	-14.44	-1.38
E2WA7DE1	29.00	15	6	-5.97	-6.04	0.07	25.71	24.77	23.95	29.75	34.90	33.31	-14.44	-1.33
E2WA7DE1	29.00	15	7	-6.05	-6.12	0.07	25.71	24.77	23.95	29.45	35.05	33.27	-14.44	-1.63
E2WA7DE1	29.00	15	8	-6.14	-6.21	0.07	25.71	24.77	23.95	29.21	31.09	31.13	-14.44	-1.93
E2WA7DE1	29.00	15	9	-6.64	-6.70	0.06	25.71	24.77	23.95	27.70	30.27	29.99	-14.44	-3.42
E2WA7DE1	29.00	15	10	-6.52	-6.58	0.06	25.71	24.77	23.95	28.01	32.91	30.97	-14.44	-3.08
E2WA7DE1	29.00	17	1	-5.68	-5.59	-0.09	25.69	23.93	24.79	30.93	35.89	37.53	-14.46	-0.13
E2WA7DE1	29.00	17	2	-5.94	-5.86	-0.08	25.69	23.93	24.79	29.86	34.83	35.07	-14.46	-1.20
E2WA7DE1	29.00	17	3	-6.02	-5.94	-0.08	25.69	23.93	24.79	29.58	34.33	34.37	-14.46	-1.49
E2WA7DE1	29.00	17	4	-6.31	-6.23	-0.08	25.69	23.93	24.79	28.62	34.55	35.55	-14.46	-2.43

E2WA7DE1	29.00	17	5	-6.50	-6.42	-0.08	25.69	23.93	24.79	28.11	31.80	30.96	-14.46	-2.99
E2WA7DE1	29.00	17	6	-6.76	-6.68	-0.08	25.69	23.93	24.79	27.36	33.29	35.34	-14.46	-3.68
E2WA7DE1	29.00	17	7	-6.90	-6.83	-0.07	25.69	23.93	24.79	27.00	33.24	35.01	-14.46	-4.04
E2WA7DE1	29.00	17	8	-6.94	-6.87	-0.07	25.69	23.93	24.79	26.95	31.10	31.09	-14.46	-4.14
E2WA7DE1	29.00	17	9	-8.02	-7.97	-0.05	25.69	23.93	24.79	24.67	29.96	30.27	-14.46	-6.39
E2WA7DE1	29.00	17	10	-6.82	-6.75	-0.07	25.69	23.93	24.79	27.22	30.94	32.88	-14.46	-3.85
E2WA7DE1	29.00	19	1	-5.38	0.00	-5.38	25.71	24.77	38.62	31.75	37.50	38.89	-14.36	0.70
E2WA7DE1	29.00	19	2	-5.61	-0.48	-5.13	25.71	24.77	38.62	30.67	35.04	36.91	-14.36	-0.40
E2WA7DE1	29.00	19	3	-5.65	-0.61	-5.04	25.71	24.77	38.62	30.51	34.35	36.24	-14.36	-0.56
E2WA7DE1	29.00	19	4	-5.72	-0.79	-4.93	25.71	24.77	38.62	30.24	35.52	37.04	-14.36	-0.81
E2WA7DE1	29.00	19	5	-5.86	-1.20	-4.66	25.71	24.77	38.62	29.79	30.93	33.31	-14.36	-1.34
E2WA7DE1	29.00	19	6	-5.84	-1.14	-4.70	25.71	24.77	38.62	29.78	35.31	35.48	-14.36	-1.28
E2WA7DE1	29.00	19	7	-5.92	-1.38	-4.54	25.71	24.77	38.62	29.50	34.98	35.28	-14.36	-1.56
E2WA7DE1	29.00	19	8	-6.01	-1.61	-4.40	25.71	24.77	38.62	29.27	31.06	32.45	-14.36	-1.85
E2WA7DE1	29.00	19	9	-6.49	-2.80	-3.69	25.71	24.77	38.62	27.85	30.24	31.32	-14.36	-3.26
E2WA7DE1	29.00	19	10	-6.41	-2.61	-3.80	25.71	24.77	38.62	28.01	32.85	32.89	-14.36	-3.06
E2WA7DE1	29.00	21	1	-19.63	-19.64	0.01	43.00	38.60	-5.60	31.90	38.86	38.98	-26.60	0.86
E2WA7DE1	29.00	21	2	-19.64	-19.65	0.01	43.00	38.60	-5.60	30.45	36.88	40.32	-26.60	-0.58
E2WA7DE1	29.00	21	3	-19.65	-19.65	0.00	43.00	38.60	-5.60	30.21	36.22	40.11	-26.60	-0.82
E2WA7DE1	29.00	21	4	-19.65	-19.66	0.01	43.00	38.60	-5.60	29.81	37.01	38.83	-26.60	-1.23
E2WA7DE1	29.00	21	5	-19.63	-19.64	0.01	43.00	38.60	-5.60	31.87	33.29	37.62	-26.60	0.76
E2WA7DE1	29.00	21	6	-19.65	-19.66	0.01	43.00	38.60	-5.60	29.64	35.45	36.88	-26.60	-1.41
E2WA7DE1	29.00	21	7	-19.66	-19.66	0.00	43.00	38.60	-5.60	29.35	35.25	36.88	-26.60	-1.70
E2WA7DE1	29.00	21	8	-19.63	-19.64	0.01	43.00	38.60	-5.60	31.82	32.43	36.17	-26.60	0.68
E2WA7DE1	29.00	21	9	-19.65	-19.65	0.00	43.00	38.60	-5.60	30.32	31.29	32.44	-26.60	-0.83
E2WA7DE1	29.00	21	10	-19.68	-19.68	0.00	43.00	38.60	-5.60	28.03	32.87	32.11	-26.60	-3.05
E2WA7DE1	29.00	23	1	-22.62	-22.62	0.00	47.46	-5.62	-5.60	41.77	38.95	43.97	-29.62	10.50
E2WA7DE1	29.00	23	2	-22.63	-22.64	0.01	47.46	-5.62	-5.60	32.69	40.29	44.73	-29.62	1.67
E2WA7DE1	29.00	23	3	-22.63	-22.64	0.01	47.46	-5.62	-5.60	31.84	40.08	44.53	-29.62	0.82
E2WA7DE1	29.00	23	4	-22.64	-22.64	0.00	47.46	-5.62	-5.60	31.01	38.80	41.36	-29.62	-0.02
E2WA7DE1	29.00	23	5	-22.64	-22.65	0.01	47.46	-5.62	-5.60	29.94	37.59	41.99	-29.62	-1.08
E2WA7DE1	29.00	23	6	-22.64	-22.65	0.01	47.46	-5.62	-5.60	30.24	36.85	38.51	-29.62	-0.80
E2WA7DE1	29.00	23	7	-22.64	-22.65	0.01	47.46	-5.62	-5.60	29.86	36.85	43.36	-29.62	-1.16
E2WA7DE1	29.00	23	8	-22.65	-22.65	0.00	47.46	-5.62	-5.60	29.31	36.14	40.46	-29.62	-1.72
E2WA7DE1	29.00	23	9	-22.66	-22.66	0.00	47.46	-5.62	-5.60	27.90	32.41	35.57	-29.62	-3.16
E2WA7DE1	29.00	23	10	-22.65	-22.66	0.01	47.46	-5.62	-5.60	28.12	32.09	33.60	-29.62	-2.96
E2WA7DE1	29.00	25	1	-22.63	-22.64	0.01	40.87	-5.62	-5.60	31.81	43.94	38.92	-29.62	0.79
E2WA7DE1	29.00	25	2	-22.64	-22.64	0.00	40.87	-5.62	-5.60	30.45	44.70	40.30	-29.62	-0.57
E2WA7DE1	29.00	25	3	-22.64	-22.64	0.00	40.87	-5.62	-5.60	30.21	44.50	40.09	-29.62	-0.81
E2WA7DE1	29.00	25	4	-22.64	-22.65	0.01	40.87	-5.62	-5.60	29.80	41.33	38.82	-29.62	-1.22
E2WA7DE1	29.00	25	5	-22.63	-22.64	0.01	40.87	-5.62	-5.60	31.84	41.96	37.59	-29.62	0.80
E2WA7DE1	29.00	25	6	-22.65	-22.65	0.00	40.87	-5.62	-5.60	29.63	38.48	36.87	-29.62	-1.40
E2WA7DE1	29.00	25	7	-22.65	-22.65	0.00	40.87	-5.62	-5.60	29.32	43.34	36.87	-29.62	-1.70
E2WA7DE1	29.00	25	8	-22.64	-22.64	0.00	40.87	-5.62	-5.60	31.77	40.43	36.13	-29.62	0.72
E2WA7DE1	29.00	25	9	-22.64	-22.64	0.00	40.87	-5.62	-5.60	30.26	35.54	32.40	-29.62	-0.84
E2WA7DE1	29.00	25	10	-22.66	-22.66	0.00	40.87	-5.62	-5.60	28.01	33.57	32.03	-29.62	-3.07
E2WA7DE1	29.00	27	1	-22.62	-22.62	0.00	42.59	-5.62	-5.60	41.64	38.90	44.00	-29.62	10.38
E2WA7DE1	29.00	27	2	-22.63	-22.63	0.00	42.59	-5.62	-5.60	32.58	40.27	44.82	-29.62	1.55
E2WA7DE1	29.00	27	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	31.73	40.07	44.62	-29.62	0.71
E2WA7DE1	29.00	27	4	-22.64	-22.64	0.00	42.59	-5.62	-5.60	30.90	38.79	41.41	-29.62	-0.12
E2WA7DE1	29.00	27	5	-22.64	-22.64	0.00	42.59	-5.62	-5.60	29.88	37.56	42.04	-29.62	-1.14
E2WA7DE1	29.00	27	6	-22.64	-22.64	0.00	42.59	-5.62	-5.60	30.13	36.84	38.55	-29.62	-0.91
E2WA7DE1	29.00	27	7	-22.64	-22.65	0.01	42.59	-5.62	-5.60	29.76	36.84	43.48	-29.62	-1.27
E2WA7DE1	29.00	27	8	-22.65	-22.65	0.00	42.59	-5.62	-5.60	29.34	36.11	40.48	-29.62	-1.69
E2WA7DE1	29.00	27	9	-22.65	-22.66	0.01	42.59	-5.62	-5.60	28.26	32.37	35.53	-29.62	-2.80
E2WA7DE1	29.00	27	10	-22.66	-22.66	0.00	42.59	-5.62	-5.60	28.11	32.01	33.61	-29.62	-2.97
E2WA7DE1	29.00	29	1	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.79	43.97	38.87	-29.62	0.76
E2WA7DE1	29.00	29	2	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.34	44.79	40.23	-29.62	-0.67
E2WA7DE1	29.00	29	3	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.11	44.59	40.02	-29.62	-0.91
E2WA7DE1	29.00	29	4	-22.64	-22.65	0.01	40.53	-5.62	-5.60	29.70	41.39	38.76	-29.62	-1.32
E2WA7DE1	29.00	29	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.74	42.02	37.53	-29.62	0.70
E2WA7DE1	29.00	29	6	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.53	38.52	36.82	-29.62	-1.51
E2WA7DE1	29.00	29	7	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.22	43.45	36.83	-29.62	-1.80
E2WA7DE1	29.00	29	8	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.68	40.45	36.09	-29.62	0.63
E2WA7DE1	29.00	29	9	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.21	35.50	32.36	-29.62	-0.89
E2WA7DE1	29.00	29	10	-22.66	-22.66	0.00	40.53	-5.62	-5.60	27.92	33.58	32.01	-29.62	-3.16
E2WA7DE1	29.00	31	1	-22.62	-22.62	0.00	42.59	-5.62	-5.60	41.56	38.84	43.54	-29.62	10.30
E2WA7DE1	29.00	31	2	-22.63	-22.63	0.00	42.59	-5.62	-5.60	32.58	40.20	44.32	-29.62	1.55
E2WA7DE1	29.00	31	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	31.73	40.00	44.13	-29.62	0.71
E2WA7DE1	29.00	31	4	-22.64	-22.64	0.00	42.59	-5.62	-5.60	30.90	38.73	41.11	-29.62	-0.13
E2WA7DE1	29.00	31	5	-22.64	-22.65	0.01	42.59	-5.62	-5.60	29.88	37.51	41.67	-29.62	-1.14
E2WA7DE1	29.00	31	6	-22.64	-22.64	0.00	42.59	-5.62	-5.60	30.13	36.80	38.33	-29.62	-0.91
E2WA7DE1	29.00	31	7	-22.64	-22.65	0.01	42.59	-5.62	-5.60	29.76	36.80	42.88	-29.62	-1.27
E2WA7DE1	29.00	31	8	-22.65	-22.65	0.00	42.59	-5.62	-5.60	29.34	36.06	40.19	-29.62	-1.69
E2WA7DE1	29.00	31	9	-22.65	-22.66	0.01	42.59	-5.62	-5.60	28.25	32.33	35.40	-29.62	-2.81
E2WA7DE1	29.00	31	10	-22.66	-22.66	0.00	42.59	-5.62	-5.60	28.01	31.98	33.44	-29.62	-3.07
E2WA7DE1	29.00	33	1	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.71	43.51	38.87	-29.62	0.68
E2WA7DE1	29.00	33	2	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.27	44.29	40.22	-29.62	-0.74
E2WA7DE1	29.00	33	3	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.04	44.10	40.01	-29.62	-0.98
E2WA7DE1	29.00	33	4	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.61	41.08	38.75	-29.62	-1.41
E2WA7DE1	29.00	33	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.73	41.65	37.51	-29.62	0.69
E2WA7DE1	29.00	33	6	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.44	38.31	36.83	-29.62	-1.60
E2WA7DE1	29.00	33	7	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.14	42.85	36.83	-29.62	-1.89
E2WA7DE1	29.00	33	8	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.67	40.16	36.05	-29.62	0.61
E2WA7DE1	29.00	33	9	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.17	35.37	32.30	-29.62	-0.92
E2WA7DE1	29.00	33	10	-22.66	-22.66	0.00	40.53	-5.62	-5.60	27.90	33.41	31.95	-29.62	-3.17
E2WA7DE1	29.00	35	1	-22.62	-22.62	0.00	42.59	-5.62	-5.60	41.48	38.85	43.84	-29.62	10.22
E2WA7DE1	29.00	35	2	-22.63	-22.64	0.01	42.59	-5.62	-5.60	32.48	40.20	44.65	-29.62	1.46
E2WA7DE1	29.00	35	3	-22.63	-22.64	0.01	42.59	-5.62	-5.60	31.63	39.98	44.45	-29.62	0.61
E2WA7DE1	29.00	35	4	-22.64	-22.64	0.00	42.59	-5.62	-5.60	30.81	38.73	41.32	-29.62	-0.22
E2WA7DE1	29.00	35	5	-22.64	-22.65	0.01	42.59	-5.62	-5.60	29.79	37.48	41.89	-29.62	-1.24
E2WA7DE1	29.00	35	6	-22.64	-22.65	0.01	42.59	-5.62	-5.60	30.03	36.80	38.48	-29.62	-1.01
E2WA7DE1	29.00	35	7	-22.64	-22.65	0.01	42.59	-5.62	-5.60	29.66	36.80	43.30	-29.62	-1.36
E2WA7DE1	29.00	35	8	-22.65	-22.65	0.00	42.59	-5.62	-5.60	29.25	36.02	40.34	-29.62	-1.79

E2WA7DE1	29.00	35	9	-22.66	-22.66	0.00	42.59	-5.62	-5.60	28.17	32.28	35.41	-29.62	-2.90
E2WA7DE1	29.00	35	10	-22.66	-22.66	0.00	42.59	-5.62	-5.60	27.91	31.92	33.49	-29.62	-3.16
E2WA7DE1	29.00	37	1	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.69	43.81	35.70	-29.62	0.64
E2WA7DE1	29.00	37	2	-22.64	-22.64	0.00	40.53	-5.62	-5.60	30.24	44.62	34.96	-29.62	-0.80
E2WA7DE1	29.00	37	3	-22.64	-22.65	0.01	40.53	-5.62	-5.60	30.00	44.43	34.53	-29.62	-1.04
E2WA7DE1	29.00	37	4	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.60	41.29	35.16	-29.62	-1.44
E2WA7DE1	29.00	37	5	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.64	41.87	32.12	-29.62	0.54
E2WA7DE1	29.00	37	6	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.43	38.46	34.45	-29.62	-1.62
E2WA7DE1	29.00	37	7	-22.65	-22.65	0.00	40.53	-5.62	-5.60	29.12	43.27	34.13	-29.62	-1.92
E2WA7DE1	29.00	37	8	-22.64	-22.64	0.00	40.53	-5.62	-5.60	31.58	40.31	32.03	-29.62	0.47
E2WA7DE1	29.00	37	9	-22.64	-22.65	0.01	40.53	-5.62	-5.60	30.11	35.39	30.86	-29.62	-1.01
E2WA7DE1	29.00	37	10	-22.66	-22.66	0.00	40.53	-5.62	-5.60	27.82	33.47	29.83	-29.62	-3.28
E2WA7DE1	29.00	39	1	-22.62	-22.62	0.00	42.58	-5.62	-5.60	41.47	35.68	43.27	-29.62	10.01
E2WA7DE1	29.00	39	2	-22.63	-22.64	0.01	42.58	-5.62	-5.60	32.38	34.94	44.03	-29.62	1.32
E2WA7DE1	29.00	39	3	-22.64	-22.64	0.00	42.58	-5.62	-5.60	31.53	34.51	43.84	-29.62	0.47
E2WA7DE1	29.00	39	4	-22.64	-22.64	0.00	42.58	-5.62	-5.60	30.71	35.13	40.93	-29.62	-0.34
E2WA7DE1	29.00	39	5	-22.64	-22.65	0.01	42.58	-5.62	-5.60	29.68	32.09	41.43	-29.62	-1.39
E2WA7DE1	29.00	39	6	-22.64	-22.65	0.01	42.58	-5.62	-5.60	29.92	34.42	42.34	-29.62	-1.12
E2WA7DE1	29.00	39	7	-22.64	-22.65	0.01	42.58	-5.62	-5.60	29.56	34.10	42.55	-29.62	-1.49
E2WA7DE1	29.00	39	8	-22.65	-22.65	0.00	42.58	-5.62	-5.60	29.13	32.01	39.97	-29.62	-1.93
E2WA7DE1	29.00	39	9	-22.66	-22.66	0.00	42.58	-5.62	-5.60	28.02	30.83	35.25	-29.62	-3.05
E2WA7DE1	29.00	39	10	-22.66	-22.66	0.00	42.58	-5.62	-5.60	27.91	29.81	33.30	-29.62	-3.19
E2WA7DE2	29.00	2	1	-4.83	-4.60	-0.23	25.82	23.93	23.50	37.73	30.92	31.64	-14.36	5.86
E2WA7DE2	29.00	2	2	-5.02	-4.80	-0.22	25.82	23.93	23.50	35.29	29.83	30.60	-14.36	3.63
E2WA7DE2	29.00	2	3	-5.10	-4.88	-0.22	25.82	23.93	23.50	34.57	29.54	30.45	-14.36	2.98
E2WA7DE2	29.00	2	4	-5.01	-4.78	-0.23	25.82	23.93	23.50	35.65	28.59	30.12	-14.36	3.80
E2WA7DE2	29.00	2	5	-5.69	-5.50	-0.19	25.82	23.93	23.50	30.94	28.12	29.90	-14.36	-0.40
E2WA7DE2	29.00	2	6	-5.07	-4.85	-0.22	25.82	23.93	23.50	35.10	27.37	30.00	-14.36	3.20
E2WA7DE2	29.00	2	7	-5.14	-4.92	-0.22	25.82	23.93	23.50	34.49	27.03	29.80	-14.36	2.65
E2WA7DE2	29.00	2	8	-5.77	-5.58	-0.19	25.82	23.93	23.50	30.54	29.05	29.70	-14.36	-0.74
E2WA7DE2	29.00	2	9	-6.34	-6.17	-0.17	25.82	23.93	23.50	28.52	28.31	29.13	-14.36	-2.68
E2WA7DE2	29.00	2	10	-5.34	-5.13	-0.21	25.82	23.93	23.50	33.02	27.22	27.90	-14.36	1.31
E2WA7DE2	29.00	4	1	-4.96	-5.00	0.04	25.79	23.48	23.94	36.12	31.61	30.93	-14.39	4.49
E2WA7DE2	29.00	4	2	-5.06	-5.10	0.04	25.79	23.48	23.94	35.12	30.57	29.84	-14.39	3.49
E2WA7DE2	29.00	4	3	-5.12	-5.16	0.04	25.79	23.48	23.94	34.62	30.42	29.56	-14.39	3.02
E2WA7DE2	29.00	4	4	-5.12	-5.16	0.04	25.79	23.48	23.94	34.72	30.09	28.61	-14.39	3.02
E2WA7DE2	29.00	4	5	-5.52	-5.56	0.04	25.79	23.48	23.94	31.90	29.88	28.13	-14.39	0.49
E2WA7DE2	29.00	4	6	-5.27	-5.31	0.04	25.79	23.48	23.94	33.58	29.97	27.38	-14.39	1.93
E2WA7DE2	29.00	4	7	-5.35	-5.39	0.04	25.79	23.48	23.94	33.02	29.77	27.04	-14.39	1.40
E2WA7DE2	29.00	4	8	-5.76	-5.79	0.03	25.79	23.48	23.94	30.69	29.67	29.06	-14.39	-0.60
E2WA7DE2	29.00	4	9	-6.39	-6.42	0.03	25.79	23.48	23.94	28.44	29.10	28.31	-14.39	-2.76
E2WA7DE2	29.00	4	10	-5.69	-5.73	0.04	25.79	23.48	23.94	31.16	27.88	27.23	-14.39	-0.32
E2WA7DE2	29.00	6	1	-4.83	-4.60	-0.23	25.82	23.93	23.50	37.73	30.90	31.64	-14.36	5.85
E2WA7DE2	29.00	6	2	-5.02	-4.80	-0.22	25.82	23.93	23.50	35.28	29.81	30.60	-14.36	3.63
E2WA7DE2	29.00	6	3	-5.10	-4.88	-0.22	25.82	23.93	23.50	34.57	29.53	30.45	-14.36	2.98
E2WA7DE2	29.00	6	4	-5.01	-4.78	-0.23	25.82	23.93	23.50	35.65	28.58	30.12	-14.36	3.79
E2WA7DE2	29.00	6	5	-5.69	-5.50	-0.19	25.82	23.93	23.50	30.93	28.10	29.90	-14.36	-0.40
E2WA7DE2	29.00	6	6	-5.07	-4.85	-0.22	25.82	23.93	23.50	35.09	27.35	30.00	-14.36	3.19
E2WA7DE2	29.00	6	7	-5.14	-4.92	-0.22	25.82	23.93	23.50	34.49	27.02	29.80	-14.36	2.64
E2WA7DE2	29.00	6	8	-5.77	-5.58	-0.19	25.82	23.93	23.50	30.54	29.03	29.70	-14.36	-0.74
E2WA7DE2	29.00	6	9	-6.34	-6.18	-0.16	25.82	23.93	23.50	28.52	28.28	29.13	-14.36	-2.69
E2WA7DE2	29.00	6	10	-5.34	-5.14	-0.20	25.82	23.93	23.50	33.02	27.20	27.90	-14.36	1.31
E2WA7DE2	29.00	8	1	-4.97	-5.01	0.04	25.79	23.48	23.94	36.06	31.61	30.93	-14.39	4.45
E2WA7DE2	29.00	8	2	-5.07	-5.11	0.04	25.79	23.48	23.94	35.08	30.57	29.84	-14.39	3.45
E2WA7DE2	29.00	8	3	-5.12	-5.16	0.04	25.79	23.48	23.94	34.58	30.42	29.55	-14.39	2.99
E2WA7DE2	29.00	8	4	-5.12	-5.16	0.04	25.79	23.48	23.94	34.67	30.09	28.59	-14.39	2.97
E2WA7DE2	29.00	8	5	-5.52	-5.56	0.04	25.79	23.48	23.94	31.87	29.87	28.11	-14.39	0.46
E2WA7DE2	29.00	8	6	-5.27	-5.32	0.05	25.79	23.48	23.94	33.52	29.97	27.35	-14.39	1.87
E2WA7DE2	29.00	8	7	-5.36	-5.40	0.04	25.79	23.48	23.94	32.97	29.77	27.01	-14.39	1.36
E2WA7DE2	29.00	8	8	-5.76	-5.80	0.04	25.79	23.48	23.94	30.66	29.67	29.06	-14.39	-0.62
E2WA7DE2	29.00	8	9	-6.39	-6.42	0.03	25.79	23.48	23.94	28.42	29.10	28.31	-14.39	-2.78
E2WA7DE2	29.00	8	10	-5.70	-5.74	0.04	25.79	23.48	23.94	31.12	27.87	27.23	-14.39	-0.35
E2WA7DE2	29.00	10	1	-4.83	-4.60	-0.23	25.82	23.93	23.50	37.64	30.90	31.63	-14.36	5.78
E2WA7DE2	29.00	10	2	-5.03	-4.81	-0.22	25.82	23.93	23.50	35.19	29.81	30.59	-14.36	3.55
E2WA7DE2	29.00	10	3	-5.11	-4.89	-0.22	25.82	23.93	23.50	34.48	29.52	30.45	-14.36	2.90
E2WA7DE2	29.00	10	4	-5.01	-4.79	-0.22	25.82	23.93	23.50	35.56	28.56	30.11	-14.36	3.72
E2WA7DE2	29.00	10	5	-5.71	-5.52	-0.19	25.82	23.93	23.50	30.85	28.08	29.89	-14.36	-0.48
E2WA7DE2	29.00	10	6	-5.08	-4.86	-0.22	25.82	23.93	23.50	35.01	27.32	29.99	-14.36	3.12
E2WA7DE2	29.00	10	7	-5.15	-4.93	-0.22	25.82	23.93	23.50	34.41	26.98	29.79	-14.36	2.58
E2WA7DE2	29.00	10	8	-5.79	-5.60	-0.19	25.82	23.93	23.50	30.46	29.03	29.69	-14.36	-0.81
E2WA7DE2	29.00	10	9	-6.36	-6.19	-0.17	25.82	23.93	23.50	28.46	28.28	29.12	-14.36	-2.74
E2WA7DE2	29.00	10	10	-5.35	-5.15	-0.20	25.82	23.93	23.50	32.95	27.20	27.90	-14.36	1.25
E2WA7DE2	29.00	12	1	-4.97	-5.01	0.04	25.79	23.48	23.94	36.03	31.60	30.90	-14.39	4.42
E2WA7DE2	29.00	12	2	-5.07	-5.11	0.04	25.79	23.48	23.94	35.04	30.56	29.82	-14.39	3.42
E2WA7DE2	29.00	12	3	-5.13	-5.17	0.04	25.79	23.48	23.94	34.54	30.42	29.53	-14.39	2.95
E2WA7DE2	29.00	12	4	-5.13	-5.17	0.04	25.79	23.48	23.94	34.64	30.08	28.55	-14.39	2.95
E2WA7DE2	29.00	12	5	-5.53	-5.57	0.04	25.79	23.48	23.94	31.82	29.87	28.07	-14.39	0.41
E2WA7DE2	29.00	12	6	-5.28	-5.32	0.04	25.79	23.48	23.94	33.51	29.96	27.30	-14.39	1.86
E2WA7DE2	29.00	12	7	-5.36	-5.40	0.04	25.79	23.48	23.94	32.95	29.76	26.96	-14.39	1.33
E2WA7DE2	29.00	12	8	-5.77	-5.81	0.04	25.79	23.48	23.94	30.71	29.66	26.96	-14.39	-0.67
E2WA7DE2	29.00	12	9	-6.40	-6.44	0.04	25.79	23.48	23.94	28.39	29.09	28.28	-14.39	-2.81
E2WA7DE2	29.00	12	10	-5.71	-5.75	0.04	25.79	23.48	23.94	31.07	27.87	27.21	-14.39	-0.40
E2WA7DE2	29.00	14	1	-4.83	-4.60	-0.23	25.82	23.93	23.50	37.65	30.88	31.62	-14.36	5.78
E2WA7DE2	29.00	14	2	-5.03	-4.81	-0.22	25.82	23.93	23.50	35.16	29.79	30.59	-14.36	3.52
E2WA7DE2	29.00	14	3	-5.11	-4.89	-0.22	25.82	23.93	23.50	34.44	29.50	30.44	-14.36	2.87
E2WA7DE2	29.00	14	4	-5.01	-4.79	-0.22	25.82	23.93	23.50	35.57	28.52	30.12	-14.36	3.72
E2WA7DE2	29.00	14	5	-5.72	-5.53	-0.19	25.82	23.93	23.50	30.81	28.04	29.89	-14.36	-0.52
E2WA7DE2	29.00	14	6	-5.08	-4.85	-0.23	25.82	23.93	23.50	35.06	27.27	29.98	-14.36	3.16
E2WA7DE2	29.00	14	7	-5.15	-4.93	-0.22	25.82	23.93	23.50	34.46	26.93	29.79	-14.36	2.61
E2WA7DE2	29.00	14	8	-5.79	-5.60	-0.19	25.82	23.93	23.50	30.55	26.94	29.68	-14.36	-0.82
E2WA7DE2	29.00	14	9	-6.35	-6.18	-0.17	25.82	23.93	23.50	28.51	28.25	29.10	-14.36	-2.69
E2WA7DE2	29.00	14	10	-5.35	-5.15	-0.20	25.82	23.93	23.50	32.95	27.18	27.89	-14.36	1.25
E2WA7DE2	29.00	16	1	-4.98	-5.02	0.04	25.79	23.48	23.94	35.94	31.59	30.91	-14.39	4.34

E2WA7DE2	29.00	16	2	-5.08	-5.12	0.04	25.79	23.48	23.94	34.94	30.56	29.82	-14.39	3.33 |*
E2WA7DE2	29.00	16	3	-5.14	-5.18	0.04	25.79	23.48	23.94	34.45	30.41	29.53	-14.39	2.87 |*
E2WA7DE2	29.00	16	4	-5.14	-5.18	0.04	25.79	23.48	23.94	34.55	30.09	28.56	-14.39	2.87 |*
E2WA7DE2	29.00	16	5	-5.55	-5.59	0.04	25.79	23.48	23.94	31.74	29.86	28.07	-14.39	0.34 |*
E2WA7DE2	29.00	16	6	-5.29	-5.33	0.04	25.79	23.48	23.94	33.42	29.96	27.30	-14.39	1.78 |*
E2WA7DE2	29.00	16	7	-5.37	-5.41	0.04	25.79	23.48	23.94	32.87	29.76	26.96	-14.39	1.27 |*
E2WA7DE2	29.00	16	8	-5.79	-5.82	0.03	25.79	23.48	23.94	30.65	29.66	26.96	-14.39	-0.73 |*
E2WA7DE2	29.00	16	9	-6.42	-6.45	0.03	25.79	23.48	23.94	28.35	29.08	28.28	-14.39	-2.85 |*
E2WA7DE2	29.00	16	10	-5.73	-5.77	0.04	25.79	23.48	23.94	30.97	27.86	27.21	-14.39	-0.48 |*
E2WA7DE2	29.00	18	1	-4.84	-4.44	-0.40	25.82	23.93	23.50	37.58	30.88	31.62	-14.36	5.73 |*
E2WA7DE2	29.00	18	2	-5.04	-4.66	-0.38	25.82	23.93	23.50	35.12	29.79	30.59	-14.36	3.49 |*
E2WA7DE2	29.00	18	3	-5.12	-4.74	-0.38	25.82	23.93	23.50	34.41	29.50	30.44	-14.36	2.84 |*
E2WA7DE2	29.00	18	4	-5.02	-4.63	-0.39	25.82	23.93	23.50	35.52	28.53	30.26	-14.36	3.69 |*
E2WA7DE2	29.00	18	5	-5.72	-5.39	-0.33	25.82	23.93	23.50	30.81	28.04	29.88	-14.36	-0.52 |*
E2WA7DE2	29.00	18	6	-5.08	-4.70	-0.38	25.82	23.93	23.50	35.05	27.27	29.98	-14.36	3.15 |*
E2WA7DE2	29.00	18	7	-5.14	-4.77	-0.37	25.82	23.93	23.50	34.48	26.93	29.79	-14.36	2.63 |*
E2WA7DE2	29.00	18	8	-5.78	-5.46	-0.32	25.82	23.93	23.50	30.58	26.94	29.68	-14.36	-0.79 |*
E2WA7DE2	29.00	18	9	-6.31	-6.03	-0.28	25.82	23.93	23.50	28.62	28.25	29.09	-14.36	-2.60 |*
E2WA7DE2	29.00	18	10	-5.36	-5.00	-0.36	25.82	23.93	23.50	32.90	27.18	27.89	-14.36	1.21 |*
E2WA7DE2	29.00	20	1	3.75	0.00	3.75	38.35	23.48	43.24	38.93	31.59	31.91	-3.08	6.92 |*
E2WA7DE2	29.00	20	2	2.97	0.00	2.97	38.35	23.48	43.24	36.98	30.56	30.46	-3.08	5.11 |*
E2WA7DE2	29.00	20	3	2.66	0.00	2.66	38.35	23.48	43.24	36.28	30.41	30.22	-3.08	4.50 |*
E2WA7DE2	29.00	20	4	2.90	0.00	2.90	38.35	23.48	43.24	36.95	30.23	29.81	-3.08	4.98 |*
E2WA7DE2	29.00	20	5	0.94	0.00	0.94	38.35	23.48	43.24	32.98	29.86	31.88	-3.08	1.63 |*
E2WA7DE2	29.00	20	6	2.32	0.00	2.32	38.35	23.48	43.24	35.63	29.95	29.64	-3.08	3.86 |*
E2WA7DE2	29.00	20	7	1.78	0.00	1.78	38.35	23.48	43.24	34.59	29.76	29.35	-3.08	2.95 |*
E2WA7DE2	29.00	20	8	0.05	0.00	0.05	38.35	23.48	43.24	31.64	29.65	31.88	-3.08	0.37 |*
E2WA7DE2	29.00	20	9	-1.72	-1.47	-0.25	38.35	23.48	43.24	29.31	29.07	30.55	-3.08	-1.88 |*
E2WA7DE2	29.00	20	10	0.69	0.00	0.69	38.35	23.48	43.24	32.90	27.86	28.04	-3.08	1.27 |*
E2WA7DE2	29.00	22	1	-9.57	-9.56	-0.01	20.50	43.22	47.58	38.81	31.88	41.95	-19.50	7.25 |*
E2WA7DE2	29.00	22	2	-9.57	-9.56	-0.01	20.50	43.22	47.58	40.05	30.43	32.74	-19.50	7.69 |*
E2WA7DE2	29.00	22	3	-9.57	-9.56	-0.01	20.50	43.22	47.58	39.83	30.19	31.88	-19.50	7.41 |*
E2WA7DE2	29.00	22	4	-9.59	-9.58	-0.01	20.50	43.22	47.58	38.59	29.78	31.05	-19.50	6.34 |*
E2WA7DE2	29.00	22	5	-9.61	-9.60	-0.01	20.50	43.22	47.58	37.47	31.85	30.00	-19.50	5.56 |*
E2WA7DE2	29.00	22	6	-9.63	-9.62	-0.01	20.50	43.22	47.58	36.69	29.61	30.28	-19.50	4.76 |*
E2WA7DE2	29.00	22	7	-9.63	-9.62	-0.01	20.50	43.22	47.58	36.69	29.32	29.93	-19.50	4.70 |*
E2WA7DE2	29.00	22	8	-9.64	-9.63	-0.01	20.50	43.22	47.58	36.12	31.85	29.41	-19.50	4.38 |*
E2WA7DE2	29.00	22	9	-9.79	-9.78	-0.01	20.50	43.22	47.58	32.50	30.53	28.09	-19.50	1.05 |*
E2WA7DE2	29.00	22	10	-9.83	-9.82	-0.01	20.50	43.22	47.58	32.02	28.01	28.15	-19.50	0.51 |*
E2WA7DE2	29.00	24	1	-9.53	-9.52	-0.01	20.50	47.56	43.22	43.82	41.93	31.83	-19.50	11.25 |*
E2WA7DE2	29.00	24	2	-9.54	-9.53	-0.01	20.50	47.56	43.22	44.21	32.71	30.46	-19.50	10.31 |*
E2WA7DE2	29.00	24	3	-9.54	-9.53	-0.01	20.50	47.56	43.22	43.66	31.85	30.22	-19.50	9.79 |*
E2WA7DE2	29.00	24	4	-9.56	-9.55	-0.01	20.50	47.56	43.22	41.33	31.02	29.81	-19.50	8.22 |*
E2WA7DE2	29.00	24	5	-9.58	-9.57	-0.01	20.50	47.56	43.22	39.35	29.98	31.88	-19.50	7.02 |*
E2WA7DE2	29.00	24	6	-9.59	-9.59	0.00	20.50	47.56	43.22	38.49	30.25	29.64	-19.50	6.15 |*
E2WA7DE2	29.00	24	7	-9.60	-9.60	0.00	20.50	47.56	43.22	37.88	29.90	29.35	-19.50	5.62 |*
E2WA7DE2	29.00	24	8	-9.63	-9.62	-0.01	20.50	47.56	43.22	36.55	29.38	31.87	-19.50	4.74 |*
E2WA7DE2	29.00	24	9	-9.84	-9.84	0.00	20.50	47.56	43.22	31.73	28.07	30.52	-19.50	0.35 |*
E2WA7DE2	29.00	24	10	-9.75	-9.74	-0.01	20.50	47.56	43.22	33.56	28.12	28.02	-19.50	1.85 |*
E2WA7DE2	29.00	26	1	-9.59	-9.58	-0.01	20.48	43.20	47.92	38.67	31.81	41.99	-19.52	7.12 |*
E2WA7DE2	29.00	26	2	-9.59	-9.58	-0.01	20.48	43.20	47.92	39.91	30.43	32.64	-19.52	7.59 |*
E2WA7DE2	29.00	26	3	-9.59	-9.58	-0.01	20.48	43.20	47.92	39.70	30.19	31.79	-19.52	7.30 |*
E2WA7DE2	29.00	26	4	-9.61	-9.60	-0.01	20.48	43.20	47.92	38.48	29.78	30.96	-19.52	6.24 |*
E2WA7DE2	29.00	26	5	-9.63	-9.62	-0.01	20.48	43.20	47.92	37.35	31.85	29.96	-19.52	5.46 |*
E2WA7DE2	29.00	26	6	-9.65	-9.64	-0.01	20.48	43.20	47.92	36.60	29.61	30.18	-19.52	4.68 |*
E2WA7DE2	29.00	26	7	-9.65	-9.64	-0.01	20.48	43.20	47.92	36.61	29.33	29.83	-19.52	4.62 |*
E2WA7DE2	29.00	26	8	-9.66	-9.65	-0.01	20.48	43.20	47.92	36.01	31.84	29.45	-19.52	4.30 |*
E2WA7DE2	29.00	26	9	-9.82	-9.81	-0.01	20.48	43.20	47.92	32.42	30.50	28.48	-19.52	1.00 |*
E2WA7DE2	29.00	26	10	-9.86	-9.85	-0.01	20.48	43.20	47.92	31.90	28.00	28.15	-19.52	0.41 |*
E2WA7DE2	29.00	28	1	-9.54	-9.54	0.00	20.49	47.90	43.23	43.67	41.96	31.81	-19.51	11.14 |*
E2WA7DE2	29.00	28	2	-9.55	-9.55	0.00	20.49	47.90	43.23	44.09	32.62	30.36	-19.51	10.20 |*
E2WA7DE2	29.00	28	3	-9.56	-9.55	-0.01	20.49	47.90	43.23	43.55	31.76	30.12	-19.51	9.69 |*
E2WA7DE2	29.00	28	4	-9.57	-9.57	0.00	20.49	47.90	43.23	41.25	30.93	29.71	-19.51	8.13 |*
E2WA7DE2	29.00	28	5	-9.59	-9.59	0.00	20.49	47.90	43.23	39.29	29.93	31.78	-19.51	6.96 |*
E2WA7DE2	29.00	28	6	-9.61	-9.60	-0.01	20.49	47.90	43.23	38.44	30.16	29.54	-19.51	6.09 |*
E2WA7DE2	29.00	28	7	-9.62	-9.62	0.00	20.49	47.90	43.23	37.84	29.81	29.25	-19.51	5.57 |*
E2WA7DE2	29.00	28	8	-9.64	-9.64	0.00	20.49	47.90	43.23	36.50	29.43	31.78	-19.51	4.70 |*
E2WA7DE2	29.00	28	9	-9.86	-9.85	-0.01	20.49	47.90	43.23	31.69	28.45	30.46	-19.51	0.33 |*
E2WA7DE2	29.00	28	10	-9.76	-9.76	0.00	20.49	47.90	43.23	33.53	28.12	27.94	-19.51	1.82 |*
E2WA7DE2	29.00	30	1	-9.59	-9.59	0.00	20.48	43.22	47.92	38.62	31.78	41.90	-19.52	7.07 |*
E2WA7DE2	29.00	30	2	-9.59	-9.58	-0.01	20.48	43.22	47.92	39.85	30.33	32.64	-19.52	7.52 |*
E2WA7DE2	29.00	30	3	-9.59	-9.58	-0.01	20.48	43.22	47.92	39.63	30.10	31.79	-19.52	7.24 |*
E2WA7DE2	29.00	30	4	-9.61	-9.60	-0.01	20.48	43.22	47.92	38.42	29.68	30.96	-19.52	6.19 |*
E2WA7DE2	29.00	30	5	-9.63	-9.62	-0.01	20.48	43.22	47.92	37.30	31.76	29.96	-19.52	5.41 |*
E2WA7DE2	29.00	30	6	-9.65	-9.64	-0.01	20.48	43.22	47.92	36.55	29.51	30.18	-19.52	4.63 |*
E2WA7DE2	29.00	30	7	-9.65	-9.64	-0.01	20.48	43.22	47.92	36.56	29.23	29.83	-19.52	4.58 |*
E2WA7DE2	29.00	30	8	-9.66	-9.65	-0.01	20.48	43.22	47.92	35.97	31.76	29.45	-19.52	4.26 |*
E2WA7DE2	29.00	30	9	-9.82	-9.81	-0.01	20.48	43.22	47.92	32.38	30.43	28.47	-19.52	0.96 |*
E2WA7DE2	29.00	30	10	-9.86	-9.85	-0.01	20.48	43.22	47.92	31.88	27.91	28.05	-19.52	0.37 |*
E2WA7DE2	29.00	32	1	-9.55	-9.54	-0.01	20.49	47.90	43.23	43.24	41.87	31.73	-19.52	10.81 |*
E2WA7DE2	29.00	32	2	-9.55	-9.55	0.00	20.49	47.90	43.23	43.66	32.61	30.29	-19.52	9.95 |*
E2WA7DE2	29.00	32	3	-9.56	-9.55	-0.01	20.49	47.90	43.23	43.16	31.76	30.06	-19.52	9.46 |*
E2WA7DE2	29.00	32	4	-9.58	-9.57	-0.01	20.49	47.90	43.23	40.96	30.93	29.62	-19.52	7.93 |*
E2WA7DE2	29.00	32	5	-9.60	-9.59	-0.01	20.49	47.90	43.23	39.09	29.93	31.77	-19.52	6.81 |*
E2WA7DE2	29.00	32	6	-9.61	-9.61	0.00	20.49	47.90	43.23	38.23	30.16	29.45	-19.52	5.92 |*
E2WA7DE2	29.00	32	7	-9.62	-9.62	0.00	20.49	47.90	43.23	37.67	29.80	29.17	-19.52	5.43 |*
E2WA7DE2	29.00	32	8	-9.65	-9.64	-0.01	20.49	47.90	43.23	36.38	29.42	31.77	-19.52	4.60 |*
E2WA7DE2	29.00	32	9	-9.86	-9.86	0.00	20.49	47.90	43.23	31.63	28.45	30.43	-19.52	0.28 |*
E2WA7DE2	29.00	32	10	-9.77	-9.76	-0.01	20.49	47.90	43.23	33.37	28.02	27.92	-19.52	1.67 |*
E2WA7DE2	29.00	34	1	-9.59	-9.59	0.00	20.48	43.22	47.92	38.62	31.71	41.81	-19.52	7.07 |*
E2WA7DE2	29.00	34	2	-9.59	-9.58	-0.01	20.48	43.22	47.92	39.84	30.26	32.54	-19.52	7.50 |*
E2WA7DE2	29.00	34	3	-9.59	-9.58	-0.01	20.48	43.22	47.92	39.62	30.03	31.69	-19.52	7.21 |*
E2WA7DE2	29.00	34	4	-9.61	-9.60	-0.01	20.48	43.22	47.92	38.41	29.60	30.86	-19.52	6.16 |*
E2WA7DE2	29.00	34	5	-9.63	-9.62	-0.01	20.48	43.22	47.92	37.27	31.75	29.86	-19.52	5.38 |*

E2WA7DE2	29.00	34	6	-9.65	-9.64	-0.01	20.48	43.22	47.92	36.56	29.42	30.09	-19.52	4.62
E2WA7DE2	29.00	34	7	-9.65	-9.64	-0.01	20.48	43.22	47.92	36.57	29.14	29.73	-19.52	4.56
E2WA7DE2	29.00	34	8	-9.66	-9.65	-0.01	20.48	43.22	47.92	35.94	31.74	29.35	-19.52	4.22
E2WA7DE2	29.00	34	9	-9.82	-9.81	-0.01	20.48	43.22	47.92	32.32	30.40	28.38	-19.52	0.90
E2WA7DE2	29.00	34	10	-9.86	-9.86	0.00	20.48	43.22	47.92	31.82	27.90	27.95	-19.52	0.32
E2WA7DE2	29.00	36	1	-9.55	-9.55	0.00	20.49	47.90	43.23	43.52	41.79	31.71	-19.51	11.00
E2WA7DE2	29.00	36	2	-9.55	-9.55	0.00	20.49	47.90	43.23	43.95	32.52	30.26	-19.51	10.08
E2WA7DE2	29.00	36	3	-9.56	-9.56	0.00	20.49	47.90	43.23	43.42	31.66	30.02	-19.51	9.57
E2WA7DE2	29.00	36	4	-9.58	-9.57	-0.01	20.49	47.90	43.23	41.16	30.83	29.61	-19.51	8.04
E2WA7DE2	29.00	36	5	-9.59	-9.59	0.00	20.49	47.90	43.23	39.21	29.83	31.68	-19.51	6.87
E2WA7DE2	29.00	36	6	-9.61	-9.61	0.00	20.49	47.90	43.23	38.38	30.06	29.44	-19.51	6.02
E2WA7DE2	29.00	36	7	-9.62	-9.62	0.00	20.49	47.90	43.23	37.79	29.71	29.15	-19.51	5.51
E2WA7DE2	29.00	36	8	-9.65	-9.65	0.00	20.49	47.90	43.23	36.44	29.33	31.68	-19.51	4.64
E2WA7DE2	29.00	36	9	-9.86	-9.86	0.00	20.49	47.90	43.23	31.64	28.36	30.36	-19.51	0.28
E2WA7DE2	29.00	36	10	-9.77	-9.77	0.00	20.49	47.90	43.23	33.42	27.92	27.84	-19.51	1.70
E2WA7DE2	29.00	38	1	-9.66	-9.65	-0.01	20.48	43.22	47.91	35.57	31.68	41.80	-19.52	4.29
E2WA7DE2	29.00	38	2	-9.69	-9.68	-0.01	20.48	43.22	47.91	34.84	30.23	32.44	-19.52	3.36
E2WA7DE2	29.00	38	3	-9.71	-9.70	-0.01	20.48	43.22	47.91	34.41	29.99	31.59	-19.52	2.93
E2WA7DE2	29.00	38	4	-9.69	-9.68	-0.01	20.48	43.22	47.91	35.00	29.58	30.76	-19.52	3.38
E2WA7DE2	29.00	38	5	-9.83	-9.82	-0.01	20.48	43.22	47.91	32.04	31.66	29.76	-19.52	0.75
E2WA7DE2	29.00	38	6	-9.72	-9.71	-0.01	20.48	43.22	47.91	34.28	29.41	29.99	-19.52	2.70
E2WA7DE2	29.00	38	7	-9.74	-9.73	-0.01	20.48	43.22	47.91	33.98	29.13	29.63	-19.52	2.39
E2WA7DE2	29.00	38	8	-9.84	-9.83	-0.01	20.48	43.22	47.91	31.98	31.66	29.25	-19.52	0.67
E2WA7DE2	29.00	38	9	-9.93	-9.92	-0.01	20.48	43.22	47.91	30.87	30.33	28.28	-19.52	-0.44
E2WA7DE2	29.00	38	10	-10.04	-10.04	0.00	20.48	43.22	47.91	29.75	27.81	27.95	-19.52	-1.57
E2WA7DE2	29.00	40	1	-9.54	-9.53	-0.01	20.49	47.89	47.91	43.05	41.78		-19.51	11.90
E2WA7DE2	29.00	40	2	-9.54	-9.54	0.00	20.49	47.89	47.91	43.48	32.42		-19.51	11.27
E2WA7DE2	29.00	40	3	-9.54	-9.54	0.00	20.49	47.89	47.91	42.99	31.56		-19.51	10.69
E2WA7DE2	29.00	40	4	-9.56	-9.56	0.00	20.49	47.89	47.91	40.83	30.73		-19.51	8.84
E2WA7DE2	29.00	40	5	-9.59	-9.58	-0.01	20.49	47.89	47.91	38.98	29.73		-19.51	7.15
E2WA7DE2	29.00	40	6	-9.60	-9.60	0.00	20.49	47.89	47.91	38.14	29.96		-19.51	6.48
E2WA7DE2	29.00	40	7	-9.61	-9.61	0.00	20.49	47.89	47.91	37.60	29.61		-19.51	5.96
E2WA7DE2	29.00	40	8	-9.64	-9.64	0.00	20.49	47.89	47.91	36.31	29.22		-19.51	4.79
E2WA7DE2	29.00	40	9	-9.85	-9.85	0.00	20.49	47.89	47.91	31.58	28.25		-19.51	0.35
E2WA7DE2	29.00	40	10	-9.75	-9.75	0.00	20.49	47.89	47.91	33.25	27.92		-19.51	1.89
E2WA7DF1	29.00	1	1	-6.53	-6.71	0.18	25.69		24.79	27.72		30.47	-14.38	-3.34
E2WA7DF1	29.00	1	2	-7.13	-8.42	1.29	25.69		24.79	26.32		26.98	-14.38	-4.77
E2WA7DF1	29.00	1	3	-7.46	-7.08	-0.38	25.69		24.79	25.60		27.67	-14.38	-5.47
E2WA7DF1	29.00	1	4	-6.94	-7.07	0.13	25.69		24.79	26.74		27.98	-14.38	-4.34
E2WA7DF1	29.00	1	5	-8.14	-8.09	-0.05	25.69		24.79	24.32		27.76	-14.38	-6.73
E2WA7DF1	29.00	1	6	-7.58	-9.86	2.28	25.69		24.79	25.36		28.27	-14.38	-5.70
E2WA7DF1	29.00	1	7	-7.65	-9.69	2.04	25.69		24.79	25.27		25.62	-14.38	-5.83
E2WA7DF1	29.00	1	8	-7.51	-7.57	0.06	25.69		24.79	25.49		29.66	-14.38	-5.55
E2WA7DF1	29.00	1	9	-8.18	-11.62	3.44	25.69		24.79	24.27		26.89	-14.38	-6.79
E2WA7DF1	29.00	1	10	-7.74	-11.06	3.32	25.69		24.79	25.07		26.92	-14.38	-6.01
E2WA7DF1	29.00	3	1	-6.04	-5.97	-0.07	25.71	24.77	23.95	29.63	30.44	28.82	-14.44	-1.59
E2WA7DF1	29.00	3	2	-7.51	-7.43	-0.08	25.71	24.77	23.95	26.15	26.95	19.37	-14.44	-5.43
E2WA7DF1	29.00	3	3	-7.05	-7.11	0.06	25.71	24.77	23.95	26.81	27.64	25.58	-14.44	-4.42
E2WA7DF1	29.00	3	4	-6.75	-6.81	0.06	25.71	24.77	23.95	27.57	27.95	25.77	-14.44	-3.69
E2WA7DF1	29.00	3	5	-7.35	-7.38	0.03	25.71	24.77	23.95	26.12	27.73	24.83	-14.44	-5.09
E2WA7DF1	29.00	3	6	-8.20	-7.31	-0.89	25.71	24.77	23.95	24.42	28.24	24.66	-14.44	-6.72
E2WA7DF1	29.00	3	7	-8.93	-8.62	-0.31	25.71	24.77	23.95	23.87	25.59	15.13	-14.44	-7.94
E2WA7DF1	29.00	3	8	-8.25	-7.50	-0.75	25.71	24.77	23.95	24.33	29.63	23.99	-14.44	-6.82
E2WA7DF1	29.00	3	9	-9.41	-8.59	-0.82	25.71	24.77	23.95	22.80	26.86	16.54	-14.44	-8.68
E2WA7DF1	29.00	3	10	-9.08	-8.46	-0.62	25.71	24.77	23.95	23.95	26.89	13.43	-14.44	-8.18
E2WA7DF1	29.00	5	1	-6.69	-6.94	0.25	25.69	23.93	24.79	27.63	28.79	30.42	-14.46	-3.51
E2WA7DF1	29.00	5	2	-7.49	-8.64	1.15	25.69	23.93	24.79	26.23	19.34	26.92	-14.46	-5.36
E2WA7DF1	29.00	5	3	-7.63	-7.31	-0.32	25.69	23.93	24.79	25.52	25.55	27.61	-14.46	-5.65
E2WA7DF1	29.00	5	4	-7.12	-7.30	0.18	25.69	23.93	24.79	26.65	25.74	27.92	-14.46	-4.56
E2WA7DF1	29.00	5	5	-8.31	-8.27	-0.04	25.69	23.93	24.79	24.25	24.80	27.73	-14.46	-6.90
E2WA7DF1	29.00	5	6	-7.77	-10.18	2.41	25.69	23.93	24.79	25.26	24.64	28.22	-14.46	-5.91
E2WA7DF1	29.00	5	7	-8.30	-9.90	1.60	25.69	23.93	24.79	25.17	15.10	25.56	-14.46	-6.89
E2WA7DF1	29.00	5	8	-7.70	-7.83	0.13	25.69	23.93	24.79	25.41	23.96	29.63	-14.46	-5.78
E2WA7DF1	29.00	5	9	-8.64	-11.95	3.31	25.69	23.93	24.79	24.18	16.52	26.85	-14.46	-7.47
E2WA7DF1	29.00	5	10	-8.61	-11.28	2.67	25.69	23.93	24.79	24.97	13.40	26.87	-14.46	-7.42
E2WA7DF1	29.00	7	1	-6.05	-5.98	-0.07	25.71	24.77	23.95	29.60	30.39	28.72	-14.44	-1.62
E2WA7DF1	29.00	7	2	-7.52	-7.44	-0.08	25.71	24.77	23.95	26.14	26.89	19.35	-14.44	-5.43
E2WA7DF1	29.00	7	3	-7.07	-7.14	0.07	25.71	24.77	23.95	26.75	27.58	25.49	-14.44	-4.48
E2WA7DF1	29.00	7	4	-6.76	-6.83	0.07	25.71	24.77	23.95	27.54	27.89	25.69	-14.44	-3.72
E2WA7DF1	29.00	7	5	-7.39	-7.41	0.02	25.71	24.77	23.95	26.04	27.71	24.74	-14.44	-5.18
E2WA7DF1	29.00	7	6	-8.20	-7.32	-0.88	25.71	24.77	23.95	24.41	28.19	24.61	-14.44	-6.73
E2WA7DF1	29.00	7	7	-8.93	-8.63	-0.30	25.71	24.77	23.95	23.87	25.53	15.12	-14.44	-7.94
E2WA7DF1	29.00	7	8	-8.29	-7.53	-0.76	25.71	24.77	23.95	24.27	29.60	23.93	-14.44	-6.88
E2WA7DF1	29.00	7	9	-9.41	-8.61	-0.80	25.71	24.77	23.95	22.79	26.82	16.53	-14.44	-8.68
E2WA7DF1	29.00	7	10	-9.08	-8.47	-0.61	25.71	24.77	23.95	23.95	26.84	13.42	-14.44	-8.18
E2WA7DF1	29.00	9	1	-6.69	-6.95	0.26	25.69	23.93	24.79	27.62	28.70	30.33	-14.46	-3.53
E2WA7DF1	29.00	9	2	-7.49	-8.67	1.18	25.69	23.93	24.79	26.22	19.32	26.83	-14.46	-5.37
E2WA7DF1	29.00	9	3	-7.64	-7.32	-0.32	25.69	23.93	24.79	25.51	25.46	27.52	-14.46	-5.66
E2WA7DF1	29.00	9	4	-7.13	-7.32	0.19	25.69	23.93	24.79	26.64	25.66	27.83	-14.46	-4.57
E2WA7DF1	29.00	9	5	-8.32	-8.29	-0.03	25.69	23.93	24.79	24.22	24.71	27.65	-14.46	-6.92
E2WA7DF1	29.00	9	6	-7.77	-10.23	2.46	25.69	23.93	24.79	25.25	24.59	28.14	-14.46	-5.92
E2WA7DF1	29.00	9	7	-8.31	-9.94	1.63	25.69	23.93	24.79	25.17	15.09	25.47	-14.46	-6.90
E2WA7DF1	29.00	9	8	-7.71	-7.84	0.13	25.69	23.93	24.79	25.39	23.90	29.55	-14.46	-5.80
E2WA7DF1	29.00	9	9	-8.65	-12.01	3.36	25.69	23.93	24.79	24.17	16.51	26.76	-14.46	-7.48
E2WA7DF1	29.00	9	10	-8.62	-11.33	2.71	25.69	23.93	24.79	24.96	13.39	26.78	-14.46	-7.43
E2WA7DF1	29.00	11	1	-6.06	-5.96	-0.10	25.71	24.77	23.95	29.55	30.31	28.74	-14.44	-1.67
E2WA7DF1	29.00	11	2	-7.56	-7.46	-0.10	25.71	24.77	23.95	26.05	26.80	19.36	-14.44	-5.51
E2WA7DF1	29.00	11	3	-7.09	-7.13	0.04	25.71	24.77	23.95	26.71	27.49	25.50	-14.44	-4.52
E2WA7DF1	29.00	11	4	-6.78	-6.82	0.04	25.71	24.77	23.95	27.48	27.80	25.70	-14.44	-3.78
E2WA7DF1	29.00	11	5	-7.40	-7.39	-0.01	25.71	24.77	23.95	26.03	27.62	24.75	-14.44	-5.19
E2WA7DF1	29.00	11	6	-8.23	-7.33	-0.90	25.71	24.77	23.95	24.37	28.11	24.63	-14.44	-6.77
E2WA7DF1	29.00	11	7	-8.98	-8.66	-0.32	25.71	24.77	23.95	23.77	25.44	15.13	-14.44	-8.02
E2WA7DF1	29.00	11	8	-8.29	-7.52	-0.77	25.71	24.77	23.95	24.26	29.52	23.92	-14.44	-6.89

E2WA7DF1	29.00	11	9	-9.45	-8.64	-0.81	25.71	24.77	23.95	22.73	26.74	16.54	-14.44	-8.74 *
E2WA7DF1	29.00	11	10	-9.13	-8.50	-0.63	25.71	24.77	23.95	23.86	26.76	13.42	-14.44	-8.25 *
E2WA7DF1	29.00	13	1	-6.73	-6.98	0.25	25.69	23.93	24.79	27.53	28.71	30.32	-14.46	-3.61 *
E2WA7DF1	29.00	13	2	-7.53	-8.73	1.20	25.69	23.93	24.79	26.13	19.33	26.79	-14.46	-5.44 *
E2WA7DF1	29.00	13	3	-7.68	-7.36	-0.32	25.69	23.93	24.79	25.44	25.47	27.49	-14.46	-5.73 *
E2WA7DF1	29.00	13	4	-7.16	-7.35	0.19	25.69	23.93	24.79	26.56	25.68	27.79	-14.46	-4.65 *
E2WA7DF1	29.00	13	5	-8.36	-8.33	-0.03	25.69	23.93	24.79	24.15	24.72	27.66	-14.46	-7.00 *
E2WA7DF1	29.00	13	6	-7.82	-10.29	2.47	25.69	23.93	24.79	25.17	24.60	28.14	-14.46	-6.01 *
E2WA7DF1	29.00	13	7	-8.35	-10.01	1.66	25.69	23.93	24.79	25.08	15.10	25.44	-14.46	-6.97 *
E2WA7DF1	29.00	13	8	-7.75	-7.88	0.13	25.69	23.93	24.79	25.30	23.89	29.57	-14.46	-5.88 *
E2WA7DF1	29.00	13	9	-8.70	-12.09	3.39	25.69	23.93	24.79	24.08	16.51	26.77	-14.46	-7.55 *
E2WA7DF1	29.00	13	10	-8.66	-11.41	2.75	25.69	23.93	24.79	24.87	13.40	26.78	-14.46	-7.49 *
E2WA7DF1	29.00	15	1	-6.08	-6.00	-0.08	25.71	24.77	23.95	29.47	30.29	28.68	-14.44	-1.74 *
E2WA7DF1	29.00	15	2	-7.60	-7.52	-0.08	25.71	24.77	23.95	25.96	26.76	19.34	-14.44	-5.60 *
E2WA7DF1	29.00	15	3	-7.13	-7.19	0.06	25.71	24.77	23.95	26.62	27.46	25.44	-14.44	-4.61 *
E2WA7DF1	29.00	15	4	-6.82	-6.88	0.06	25.71	24.77	23.95	27.38	27.76	25.66	-14.44	-3.87 *
E2WA7DF1	29.00	15	5	-7.44	-7.46	0.02	25.71	24.77	23.95	25.93	27.63	24.68	-14.44	-5.28 *
E2WA7DF1	29.00	15	6	-8.25	-7.38	-0.87	25.71	24.77	23.95	24.33	28.11	24.60	-14.44	-6.82 *
E2WA7DF1	29.00	15	7	-9.03	-8.73	-0.30	25.71	24.77	23.95	23.68	25.41	15.12	-14.44	-8.10 *
E2WA7DF1	29.00	15	8	-8.33	-7.58	-0.75	25.71	24.77	23.95	24.20	29.54	23.89	-14.44	-6.95 *
E2WA7DF1	29.00	15	9	-9.49	-8.69	-0.80	25.71	24.77	23.95	22.67	26.75	16.53	-14.44	-8.79 *
E2WA7DF1	29.00	15	10	-9.17	-8.56	-0.61	25.71	24.77	23.95	23.78	26.75	13.42	-14.44	-8.31 *
E2WA7DF1	29.00	17	1	-6.72	-6.97	0.25	25.69	23.93	24.79	27.54	28.66	30.25	-14.46	-3.60 *
E2WA7DF1	29.00	17	2	-7.53	-8.71	1.18	25.69	23.93	24.79	26.15	19.32	26.74	-14.46	-5.43 *
E2WA7DF1	29.00	17	3	-7.67	-7.34	-0.33	25.69	23.93	24.79	25.45	25.42	27.43	-14.46	-5.73 *
E2WA7DF1	29.00	17	4	-7.16	-7.34	0.18	25.69	23.93	24.79	26.57	25.63	27.74	-14.46	-4.64 *
E2WA7DF1	29.00	17	5	-8.37	-8.33	-0.04	25.69	23.93	24.79	24.13	24.66	27.58	-14.46	-7.01 *
E2WA7DF1	29.00	17	6	-7.81	-10.25	2.44	25.69	23.93	24.79	25.18	24.57	28.05	-14.46	-6.00 *
E2WA7DF1	29.00	17	7	-8.34	-9.98	1.64	25.69	23.93	24.79	25.10	15.09	25.38	-14.46	-6.96 *
E2WA7DF1	29.00	17	8	-7.76	-7.87	0.11	25.69	23.93	24.79	25.30	23.86	29.48	-14.46	-5.89 *
E2WA7DF1	29.00	17	9	-8.69	-12.00	3.31	25.69	23.93	24.79	24.10	16.50	26.68	-14.46	-7.54 *
E2WA7DF1	29.00	17	10	-8.65	-11.36	2.71	25.69	23.93	24.79	24.89	13.39	26.70	-14.46	-7.48 *
E2WA7DF1	29.00	19	1	-5.96	-0.79	-5.17	25.71	24.77	38.62	29.49	30.22	30.50	-14.36	-1.68 *
E2WA7DF1	29.00	19	2	-7.50	-4.42	-3.08	25.71	24.77	38.62	25.97	26.71	19.74	-14.36	-5.55 *
E2WA7DF1	29.00	19	3	-7.03	-3.89	-3.14	25.71	24.77	38.62	26.63	27.40	26.85	-14.36	-4.56 *
E2WA7DF1	29.00	19	4	-6.71	-3.17	-3.54	25.71	24.77	38.62	27.40	27.71	26.99	-14.36	-3.82 *
E2WA7DF1	29.00	19	5	-7.35	-4.43	-2.92	25.71	24.77	38.62	25.93	27.55	26.22	-14.36	-5.25 *
E2WA7DF1	29.00	19	6	-8.17	-3.41	-4.76	25.71	24.77	38.62	24.34	28.03	25.98	-14.36	-6.78 *
E2WA7DF1	29.00	19	7	-8.95	-6.54	-2.41	25.71	24.77	38.62	23.69	25.36	15.34	-14.36	-8.06 *
E2WA7DF1	29.00	19	8	-8.25	-4.57	-3.68	25.71	24.77	38.62	24.20	29.46	24.66	-14.36	-6.93 *
E2WA7DF1	29.00	19	9	-9.41	-5.71	-3.70	25.71	24.77	38.62	22.69	26.65	16.83	-14.36	-8.75 *
E2WA7DF1	29.00	19	10	-9.09	-6.05	-3.04	25.71	24.77	38.62	23.79	26.67	13.55	-14.36	-8.28 *
E2WA7DF1	29.00	21	1	-19.63	-19.63	0.00	43.00	38.60	-5.60	32.31	30.47	28.04	-26.60	0.88 *
E2WA7DF1	29.00	21	2	-19.65	-19.61	-0.04	43.00	38.60	-5.60	32.96	19.71	20.01	-26.60	-1.11 *
E2WA7DF1	29.00	21	3	-19.70	-19.68	-0.02	43.00	38.60	-5.60	26.75	26.83	26.21	-26.60	-4.47 *
E2WA7DF1	29.00	21	4	-19.65	-19.63	-0.02	43.00	38.60	-5.60	30.65	26.96	24.28	-26.60	-1.02 *
E2WA7DF1	29.00	21	5	-19.64	-19.65	0.01	43.00	38.60	-5.60	30.95	26.19	29.78	-26.60	-0.50 *
E2WA7DF1	29.00	21	6	-19.64	-19.62	-0.02	43.00	38.60	-5.60	39.64	25.95	15.62	-26.60	-0.35 *
E2WA7DF1	29.00	21	7	-19.68	-19.62	-0.06	43.00	38.60	-5.60	32.69	15.31	18.95	-26.60	-3.03 *
E2WA7DF1	29.00	21	8	-19.61	-19.64	0.03	43.00	38.60	-5.60	43.51	24.63	31.74	-26.60	7.30 *
E2WA7DF1	29.00	21	9	-19.71	-19.62	-0.09	43.00	38.60	-5.60	39.29	16.81	11.96	-26.60	-4.50 *
E2WA7DF1	29.00	21	10	-19.71	-19.62	-0.09	43.00	38.60	-5.60	36.21	13.53	14.26	-26.60	-4.61 *
E2WA7DF1	29.00	23	1	-22.62	-22.68	0.06	47.46	-5.62	-5.60	37.45	28.01	33.08	-29.62	5.35 *
E2WA7DF1	29.00	23	2	-22.65	-22.97	0.32	47.46	-5.62	-5.60	31.88	19.98	16.47	-29.62	-2.66 *
E2WA7DF1	29.00	23	3	-22.64	-22.65	0.01	47.46	-5.62	-5.60	30.76	26.18	29.73	-29.62	-0.67 *
E2WA7DF1	29.00	23	4	-22.64	-22.71	0.07	47.46	-5.62	-5.60	31.76	24.25	25.14	-29.62	-0.23 *
E2WA7DF1	29.00	23	5	-22.63	-22.63	0.00	47.46	-5.62	-5.60	35.32	29.75	32.33	-29.62	3.75 *
E2WA7DF1	29.00	23	6	-22.64	-23.31	0.67	47.46	-5.62	-5.60	34.46	15.59	24.34	-29.62	-1.59 *
E2WA7DF1	29.00	23	7	-22.67	-23.25	0.58	47.46	-5.62	-5.60	30.16	18.92	14.20	-29.62	-4.50 *
E2WA7DF1	29.00	23	8	-22.63	-22.68	0.05	47.46	-5.62	-5.60	34.52	31.71	33.00	-29.62	3.17 *
E2WA7DF1	29.00	23	9	-22.69	-23.89	1.20	47.46	-5.62	-5.60	31.51	11.93	14.58	-29.62	-6.04 *
E2WA7DF1	29.00	23	10	-22.69	-23.74	1.05	47.46	-5.62	-5.60	30.37	14.24	12.86	-29.62	-6.01 *
E2WA7DF1	29.00	25	1	-22.65	-22.65	0.00	40.87	-5.62	-5.60	29.40	33.05	28.02	-29.62	-1.79 *
E2WA7DF1	29.00	25	2	-22.67	-22.65	-0.02	40.87	-5.62	-5.60	29.47	16.44	19.99	-29.62	-3.90 *
E2WA7DF1	29.00	25	3	-22.68	-22.69	0.01	40.87	-5.62	-5.60	25.83	29.71	26.15	-29.62	-5.31 *
E2WA7DF1	29.00	25	4	-22.66	-22.66	0.00	40.87	-5.62	-5.60	28.58	25.11	24.24	-29.62	-2.93 *
E2WA7DF1	29.00	25	5	-22.65	-22.66	0.01	40.87	-5.62	-5.60	29.12	32.30	29.77	-29.62	-2.03 *
E2WA7DF1	29.00	25	6	-22.69	-22.67	-0.02	40.87	-5.62	-5.60	26.72	24.31	15.62	-29.62	-5.64 *
E2WA7DF1	29.00	25	7	-22.68	-22.66	-0.02	40.87	-5.62	-5.60	29.17	14.18	18.94	-29.62	-4.97 *
E2WA7DF1	29.00	25	8	-22.64	-22.66	0.02	40.87	-5.62	-5.60	30.28	32.97	31.76	-29.62	-0.85 *
E2WA7DF1	29.00	25	9	-22.74	-22.69	-0.05	40.87	-5.62	-5.60	25.74	14.55	11.96	-29.62	-8.11 *
E2WA7DF1	29.00	25	10	-22.70	-22.66	-0.04	40.87	-5.62	-5.60	28.71	12.83	14.26	-29.62	-6.56 *
E2WA7DF1	29.00	27	1	-22.64	-22.69	0.05	42.59	-5.62	-5.60	30.14	28.00	33.08	-29.62	-1.09 *
E2WA7DF1	29.00	27	2	-22.67	-22.73	0.06	42.59	-5.62	-5.60	28.83	19.97	16.47	-29.62	-4.28 *
E2WA7DF1	29.00	27	3	-22.65	-22.70	0.05	42.59	-5.62	-5.60	28.49	26.12	29.70	-29.62	-2.77 *
E2WA7DF1	29.00	27	4	-22.65	-22.70	0.05	42.59	-5.62	-5.60	29.11	24.21	25.12	-29.62	-2.46 *
E2WA7DF1	29.00	27	5	-22.64	-22.67	0.03	42.59	-5.62	-5.60	31.07	29.74	32.37	-29.62	-0.15 *
E2WA7DF1	29.00	27	6	-22.72	-22.85	0.13	42.59	-5.62	-5.60	24.67	15.59	24.35	-29.62	-7.23 *
E2WA7DF1	29.00	27	7	-22.69	-22.76	0.07	42.59	-5.62	-5.60	27.88	18.91	14.20	-29.62	-5.63 *
E2WA7DF1	29.00	27	8	-22.66	-22.74	0.08	42.59	-5.62	-5.60	28.11	31.73	33.04	-29.62	-2.98 *
E2WA7DF1	29.00	27	9	-22.79	-22.93	0.14	42.59	-5.62	-5.60	23.27	11.93	14.58	-29.62	-9.57 *
E2WA7DF1	29.00	27	10	-22.73	-22.81	0.08	42.59	-5.62	-5.60	25.90	14.23	12.86	-29.62	-7.83 *
E2WA7DF1	29.00	29	1	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.28	33.05	28.00	-29.62	-2.87 *
E2WA7DF1	29.00	29	2	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	28.24	16.44	19.98	-29.62	-4.66 *
E2WA7DF1	29.00	29	3	-22.69	-22.69	0.00	40.53	-5.62	-5.60	25.31	29.68	26.12	-29.62	-5.82 *
E2WA7DF1	29.00	29	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	27.67	25.09	24.22	-29.62	-3.75 *
E2WA7DF1	29.00	29	5	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.28	32.34	29.69	-29.62	-2.84 *
E2WA7DF1	29.00	29	6	-22.72	-22.75	0.03	40.53	-5.62	-5.60	24.79	24.32	15.61	-29.62	-7.13 *
E2WA7DF1	29.00	29	7	-22.69	-22.67	-0.02	40.53	-5.62	-5.60	27.93	14.17	18.93	-29.62	-5.62 *
E2WA7DF1	29.00	29	8	-22.65	-22.71	0.06	40.53	-5.62	-5.60	28.35	33.01	31.67	-29.62	-2.74 *
E2WA7DF1	29.00	29	9	-22.77	-22.77	0.00	40.53	-5.62	-5.60	23.80	14.55	11.96	-29.62	-9.23 *
E2WA7DF1	29.00	29	10	-22.72	-22.68	-0.04	40.53	-5.62	-5.60	27.00	12.83	14.26	-29.62	-7.28 *
E2WA7DF1	29.00	31	1	-22.64	-22.69	0.05	42.59	-5.62	-5.60	30.13	27.97	33.02	-29.62	-1.10 *
E2WA7DF1	29.00	31	2	-22.67	-22.73	0.06	42.59	-5.62	-5.60	28.82	19.96	16.46	-29.62	-4.29 *

E2WA7DF1	29.00	31	3	-22.65	-22.70	0.05	42.59	-5.62	-5.60	28.45	26.09	29.66	-29.62	-2.81 |*
E2WA7DF1	29.00	31	4	-22.65	-22.70	0.05	42.59	-5.62	-5.60	29.08	24.20	25.11	-29.62	-2.49 |*
E2WA7DF1	29.00	31	5	-22.64	-22.67	0.03	42.59	-5.62	-5.60	31.07	29.67	32.24	-29.62	-0.16 |*
E2WA7DF1	29.00	31	6	-22.72	-22.85	0.13	42.59	-5.62	-5.60	24.67	15.58	24.33	-29.62	-7.23 |*
E2WA7DF1	29.00	31	7	-22.69	-22.76	0.07	42.59	-5.62	-5.60	27.87	18.90	14.20	-29.62	-5.64 |*
E2WA7DF1	29.00	31	8	-22.66	-22.74	0.08	42.59	-5.62	-5.60	28.10	31.64	32.94	-29.62	-2.98 |*
E2WA7DF1	29.00	31	9	-22.79	-22.93	0.14	42.59	-5.62	-5.60	23.27	11.93	14.58	-29.62	-9.57 |*
E2WA7DF1	29.00	31	10	-22.73	-22.81	0.08	42.59	-5.62	-5.60	25.90	14.23	12.86	-29.62	-7.83 |*
E2WA7DF1	29.00	33	1	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.28	32.99	27.98	-29.62	-2.87 |*
E2WA7DF1	29.00	33	2	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	28.24	16.44	19.97	-29.62	-4.66 |*
E2WA7DF1	29.00	33	3	-22.69	-22.69	0.00	40.53	-5.62	-5.60	25.31	29.63	26.06	-29.62	-5.82 |*
E2WA7DF1	29.00	33	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	27.67	25.08	24.19	-29.62	-3.75 |*
E2WA7DF1	29.00	33	5	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.28	32.22	29.68	-29.62	-2.85 |*
E2WA7DF1	29.00	33	6	-22.72	-22.75	0.03	40.53	-5.62	-5.60	24.79	24.30	15.61	-29.62	-7.13 |*
E2WA7DF1	29.00	33	7	-22.69	-22.67	-0.02	40.53	-5.62	-5.60	27.93	14.17	18.92	-29.62	-5.62 |*
E2WA7DF1	29.00	33	8	-22.65	-22.71	0.06	40.53	-5.62	-5.60	28.35	32.91	31.67	-29.62	-2.74 |*
E2WA7DF1	29.00	33	9	-22.77	-22.77	0.00	40.53	-5.62	-5.60	23.80	14.55	11.96	-29.62	-9.23 |*
E2WA7DF1	29.00	33	10	-22.72	-22.68	-0.04	40.53	-5.62	-5.60	27.00	12.83	14.26	-29.62	-7.28 |*
E2WA7DF1	29.00	35	1	-22.64	-22.69	0.05	42.59	-5.62	-5.60	30.13	27.95	32.99	-29.62	-1.10 |*
E2WA7DF1	29.00	35	2	-22.67	-22.73	0.06	42.59	-5.62	-5.60	28.82	19.94	16.46	-29.62	-4.29 |*
E2WA7DF1	29.00	35	3	-22.65	-22.70	0.05	42.59	-5.62	-5.60	28.45	26.03	29.60	-29.62	-2.82 |*
E2WA7DF1	29.00	35	4	-22.65	-22.71	0.06	42.59	-5.62	-5.60	29.08	24.16	25.08	-29.62	-2.49 |*
E2WA7DF1	29.00	35	5	-22.64	-22.67	0.03	42.59	-5.62	-5.60	31.07	29.65	32.25	-29.62	-0.16 |*
E2WA7DF1	29.00	35	6	-22.72	-22.86	0.14	42.59	-5.62	-5.60	24.67	15.58	24.33	-29.62	-7.23 |*
E2WA7DF1	29.00	35	7	-22.69	-22.77	0.08	42.59	-5.62	-5.60	27.87	18.89	14.19	-29.62	-5.64 |*
E2WA7DF1	29.00	35	8	-22.66	-22.74	0.08	42.59	-5.62	-5.60	28.10	31.64	32.96	-29.62	-2.98 |*
E2WA7DF1	29.00	35	9	-22.79	-22.94	0.15	42.59	-5.62	-5.60	23.27	11.93	14.57	-29.62	-9.57 |*
E2WA7DF1	29.00	35	10	-22.73	-22.81	0.08	42.59	-5.62	-5.60	25.90	14.23	12.85	-29.62	-7.83 |*
E2WA7DF1	29.00	37	1	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.24	32.97	27.59	-29.62	-2.92 |*
E2WA7DF1	29.00	37	2	-22.67	-22.66	-0.01	40.53	-5.62	-5.60	28.20	16.43	19.92	-29.62	-4.69 |*
E2WA7DF1	29.00	37	3	-22.69	-22.70	0.01	40.53	-5.62	-5.60	25.23	29.58	25.72	-29.62	-5.90 |*
E2WA7DF1	29.00	37	4	-22.66	-22.67	0.01	40.53	-5.62	-5.60	27.62	25.05	24.00	-29.62	-3.81 |*
E2WA7DF1	29.00	37	5	-22.66	-22.66	0.00	40.53	-5.62	-5.60	28.22	32.22	28.15	-29.62	-2.93 |*
E2WA7DF1	29.00	37	6	-22.72	-22.75	0.03	40.53	-5.62	-5.60	24.78	24.30	15.54	-29.62	-7.15 |*
E2WA7DF1	29.00	37	7	-22.69	-22.67	-0.02	40.53	-5.62	-5.60	27.89	14.17	18.91	-29.62	-5.64 |*
E2WA7DF1	29.00	37	8	-22.65	-22.71	0.06	40.53	-5.62	-5.60	28.35	32.93	30.07	-29.62	-2.76 |*
E2WA7DF1	29.00	37	9	-22.77	-22.77	0.00	40.53	-5.62	-5.60	23.80	14.55	11.89	-29.62	-9.24 |*
E2WA7DF1	29.00	37	10	-22.72	-22.68	-0.04	40.53	-5.62	-5.60	26.99	12.83	14.20	-29.62	-7.30 |*
E2WA7DF1	29.00	39	1	-22.64	-22.69	0.05	42.58	-5.62	-5.60	30.12	27.56	32.92	-29.62	-1.13 |*
E2WA7DF1	29.00	39	2	-22.67	-22.73	0.06	42.58	-5.62	-5.60	28.80	19.89	16.46	-29.62	-4.31 |*
E2WA7DF1	29.00	39	3	-22.65	-22.70	0.05	42.58	-5.62	-5.60	28.40	25.69	29.55	-29.62	-2.88 |*
E2WA7DF1	29.00	39	4	-22.65	-22.71	0.06	42.58	-5.62	-5.60	29.04	23.97	25.07	-29.62	-2.54 |*
E2WA7DF1	29.00	39	5	-22.64	-22.67	0.03	42.58	-5.62	-5.60	31.04	28.12	32.18	-29.62	-0.25 |*
E2WA7DF1	29.00	39	6	-22.72	-22.86	0.14	42.58	-5.62	-5.60	24.67	15.51	24.31	-29.62	-7.25 |*
E2WA7DF1	29.00	39	7	-22.69	-22.77	0.08	42.58	-5.62	-5.60	27.86	18.89	14.19	-29.62	-5.65 |*
E2WA7DF1	29.00	39	8	-22.66	-22.74	0.08	42.58	-5.62	-5.60	28.09	30.04	32.84	-29.62	-3.01 |*
E2WA7DF1	29.00	39	9	-22.79	-22.94	0.15	42.58	-5.62	-5.60	23.27	11.87	14.57	-29.62	-9.59 |*
E2WA7DF1	29.00	39	10	-22.73	-22.81	0.08	42.58	-5.62	-5.60	25.89	14.17	12.85	-29.62	-7.85 |*
E2WA7DF2	29.00	2	1	-5.88	-5.74	-0.14	25.82	23.93	23.50	30.74	26.93	22.31	-14.36	-1.18 |*
E2WA7DF2	29.00	2	2	-7.38	-7.52	0.14	25.82	23.93	23.50	27.10	24.84	16.19	-14.36	-5.21 |*
E2WA7DF2	29.00	2	3	-6.81	-6.66	-0.15	25.82	23.93	23.50	27.82	24.71	20.39	-14.36	-3.93 |*
E2WA7DF2	29.00	2	4	-6.79	-6.70	-0.09	25.82	23.93	23.50	28.03	25.63	19.16	-14.36	-3.89 |*
E2WA7DF2	29.00	2	5	-6.53	-6.35	-0.18	25.82	23.93	23.50	28.42	23.68	23.25	-14.36	-3.22 |*
E2WA7DF2	29.00	2	6	-6.84	-7.23	0.39	25.82	23.93	23.50	28.64	24.37	16.71	-14.36	-4.00 |*
E2WA7DF2	29.00	2	7	-8.20	-8.51	0.31	25.82	23.93	23.50	25.88	23.43	13.66	-14.36	-6.77 |*
E2WA7DF2	29.00	2	8	-6.11	-5.86	-0.25	25.82	23.93	23.50	30.18	24.98	20.72	-14.36	-1.98 |*
E2WA7DF2	29.00	2	9	-7.59	-8.39	0.80	25.82	23.93	23.50	27.45	22.97	14.09	-14.36	-5.63 |*
E2WA7DF2	29.00	2	10	-7.59	-8.33	0.74	25.82	23.93	23.50	27.42	23.50	14.06	-14.36	-5.63 |*
E2WA7DF2	29.00	4	1	-6.23	-6.67	0.44	25.79	23.48	23.94	29.40	22.29	26.87	-14.39	-2.29 |*
E2WA7DF2	29.00	4	2	-8.34	-8.23	-0.11	25.79	23.48	23.94	24.85	16.16	24.77	-14.39	-6.98 |*
E2WA7DF2	29.00	4	3	-7.55	-7.74	0.19	25.79	23.48	23.94	25.99	20.36	24.66	-14.39	-5.53 |*
E2WA7DF2	29.00	4	4	-7.17	-7.49	0.32	25.79	23.48	23.94	27.04	19.13	25.57	-14.39	-4.72 |*
E2WA7DF2	29.00	4	5	-7.75	-7.85	0.10	25.79	23.48	23.94	25.42	23.22	23.63	-14.39	-5.91 |*
E2WA7DF2	29.00	4	6	-7.14	-9.26	2.12	25.79	23.48	23.94	27.73	16.68	24.31	-14.39	-4.65 |*
E2WA7DF2	29.00	4	7	-10.16	-9.22	-0.94	25.79	23.48	23.94	21.99	13.63	23.37	-14.39	-9.77 |*
E2WA7DF2	29.00	4	8	-7.71	-7.72	0.01	25.79	23.48	23.94	25.60	20.70	24.93	-14.39	-5.84 |*
E2WA7DF2	29.00	4	9	-9.30	-10.79	1.49	25.79	23.48	23.94	23.43	14.06	22.90	-14.39	-8.53 |*
E2WA7DF2	29.00	4	10	-10.67	-9.67	-1.00	25.79	23.48	23.94	21.13	14.04	23.43	-14.39	-10.45 |*
E2WA7DF2	29.00	6	1	-5.90	-5.76	-0.14	25.82	23.93	23.50	30.68	26.84	22.31	-14.36	-1.23 |*
E2WA7DF2	29.00	6	2	-7.41	-7.54	0.13	25.82	23.93	23.50	27.02	24.75	16.18	-14.36	-5.27 |*
E2WA7DF2	29.00	6	3	-6.84	-6.68	-0.16	25.82	23.93	23.50	27.75	24.64	20.37	-14.36	-4.00 |*
E2WA7DF2	29.00	6	4	-6.82	-6.73	-0.09	25.82	23.93	23.50	27.96	25.55	19.15	-14.36	-3.96 |*
E2WA7DF2	29.00	6	5	-6.55	-6.37	-0.18	25.82	23.93	23.50	28.39	23.60	23.21	-14.36	-3.25 |*
E2WA7DF2	29.00	6	6	-6.86	-7.24	0.38	25.82	23.93	23.50	28.58	24.28	16.71	-14.36	-4.04 |*
E2WA7DF2	29.00	6	7	-8.23	-8.54	0.31	25.82	23.93	23.50	25.81	23.34	13.66	-14.36	-6.83 |*
E2WA7DF2	29.00	6	8	-6.13	-5.87	-0.26	25.82	23.93	23.50	30.14	24.90	20.70	-14.36	-2.01 |*
E2WA7DF2	29.00	6	9	-7.61	-8.41	0.80	25.82	23.93	23.50	27.40	22.88	14.09	-14.36	-5.67 |*
E2WA7DF2	29.00	6	10	-7.61	-8.35	0.74	25.82	23.93	23.50	27.36	23.41	14.06	-14.36	-5.68 |*
E2WA7DF2	29.00	8	1	-6.26	-6.70	0.44	25.79	23.48	23.94	29.31	22.28	26.86	-14.39	-2.37 |*
E2WA7DF2	29.00	8	2	-8.36	-8.28	-0.08	25.79	23.48	23.94	24.79	16.16	24.77	-14.39	-7.03 |*
E2WA7DF2	29.00	8	3	-7.59	-7.79	0.20	25.79	23.48	23.94	25.89	20.35	24.66	-14.39	-5.61 |*
E2WA7DF2	29.00	8	4	-7.20	-7.53	0.33	25.79	23.48	23.94	26.94	19.12	25.57	-14.39	-4.80 |*
E2WA7DF2	29.00	8	5	-7.79	-7.90	0.11	25.79	23.48	23.94	25.33	23.18	23.61	-14.39	-6.00 |*
E2WA7DF2	29.00	8	6	-7.16	-9.31	2.15	25.79	23.48	23.94	27.66	16.68	24.30	-14.39	-4.71 |*
E2WA7DF2	29.00	8	7	-10.18	-9.27	-0.91	25.79	23.48	23.94	21.95	13.63	23.36	-14.39	-9.80 |*
E2WA7DF2	29.00	8	8	-7.75	-7.77	0.02	25.79	23.48	23.94	25.52	20.67	24.91	-14.39	-5.91 |*
E2WA7DF2	29.00	8	9	-9.32	-10.86	1.54	25.79	23.48	23.94	23.39	14.06	22.90	-14.39	-8.56 |*
E2WA7DF2	29.00	8	10	-10.69	-9.72	-0.97	25.79	23.48	23.94	21.11	14.04	23.43	-14.39	-10.47 |*
E2WA7DF2	29.00	10	1	-5.92	-5.78	-0.14	25.82	23.93	23.50	30.58	26.83	22.22	-14.36	-1.32 |*
E2WA7DF2	29.00	10	2	-7.46	-7.59	0.13	25.82	23.93	23.50	26.93	24.74	16.09	-14.36	-5.36 |*
E2WA7DF2	29.00	10	3	-6.88	-6.72	-0.16	25.82	23.93	23.50	27.66	24.63	20.29	-14.36	-4.09 |*
E2WA7DF2	29.00	10	4	-6.86	-6.77	-0.09	25.82	23.93	23.50	27.86	25.54	19.06	-14.36	-4.05 |*
E2WA7DF2	29.00	10	5	-6.58	-6.40	-0.18	25.82	23.93	23.50	28.30	23.58	23.15	-14.36	-3.33 |*

E2WA7DF2	29.00	10	6	-6.89	-7.29	0.40	25.82	23.93	23.50	28.50	24.27	16.63	-14.36	-4.13 |*
E2WA7DF2	29.00	10	7	-8.29	-8.59	0.30	25.82	23.93	23.50	25.71	23.33	13.56	-14.36	-6.92 |*
E2WA7DF2	29.00	10	8	-6.15	-5.89	-0.26	25.82	23.93	23.50	30.06	24.89	20.66	-14.36	-2.09 |*
E2WA7DF2	29.00	10	9	-7.65	-8.46	0.81	25.82	23.93	23.50	27.31	22.87	14.00	-14.36	-5.75 |*
E2WA7DF2	29.00	10	10	-7.66	-8.41	0.75	25.82	23.93	23.50	27.27	23.40	13.97	-14.36	-5.77 |*
E2WA7DF2	29.00	12	1	-6.26	-6.72	0.46	25.79	23.48	23.94	29.32	22.20	26.77	-14.39	-2.38 |*
E2WA7DF2	29.00	12	2	-8.37	-8.31	-0.06	25.79	23.48	23.94	24.80	16.06	24.68	-14.39	-7.04 |*
E2WA7DF2	29.00	12	3	-7.59	-7.79	0.20	25.79	23.48	23.94	25.90	20.26	24.58	-14.39	-5.62 |*
E2WA7DF2	29.00	12	4	-7.21	-7.54	0.33	25.79	23.48	23.94	26.95	19.03	25.48	-14.39	-4.81 |*
E2WA7DF2	29.00	12	5	-7.79	-7.90	0.11	25.79	23.48	23.94	25.33	23.13	23.53	-14.39	-6.00 |*
E2WA7DF2	29.00	12	6	-7.16	-9.36	2.20	25.79	23.48	23.94	27.68	16.60	24.21	-14.39	-4.72 |*
E2WA7DF2	29.00	12	7	-10.19	-9.30	-0.89	25.79	23.48	23.94	21.96	13.53	23.27	-14.39	-9.81 |*
E2WA7DF2	29.00	12	8	-7.76	-7.80	0.04	25.79	23.48	23.94	25.50	20.63	24.83	-14.39	-5.94 |*
E2WA7DF2	29.00	12	9	-9.32	-10.92	1.60	25.79	23.48	23.94	23.40	13.98	22.81	-14.39	-8.56 |*
E2WA7DF2	29.00	12	10	-10.69	-9.77	-0.92	25.79	23.48	23.94	21.11	13.94	23.34	-14.39	-10.48 |*
E2WA7DF2	29.00	14	1	-5.94	-5.80	-0.14	25.82	23.93	23.50	30.54	26.74	22.13	-14.36	-1.37 |*
E2WA7DF2	29.00	14	2	-7.49	-7.63	0.14	25.82	23.93	23.50	26.88	24.65	15.99	-14.36	-5.43 |*
E2WA7DF2	29.00	14	3	-6.90	-6.75	-0.15	25.82	23.93	23.50	27.60	24.55	20.19	-14.36	-4.15 |*
E2WA7DF2	29.00	14	4	-6.89	-6.80	-0.09	25.82	23.93	23.50	27.80	25.45	18.96	-14.36	-4.12 |*
E2WA7DF2	29.00	14	5	-6.59	-6.41	-0.18	25.82	23.93	23.50	28.28	23.51	23.06	-14.36	-3.36 |*
E2WA7DF2	29.00	14	6	-6.91	-7.32	0.41	25.82	23.93	23.50	28.47	24.18	16.55	-14.36	-4.17 |*
E2WA7DF2	29.00	14	7	-8.32	-8.64	0.32	25.82	23.93	23.50	25.67	23.24	13.46	-14.36	-6.98 |*
E2WA7DF2	29.00	14	8	-6.15	-5.90	-0.25	25.82	23.93	23.50	30.05	24.80	20.60	-14.36	-2.11 |*
E2WA7DF2	29.00	14	9	-7.67	-8.50	0.83	25.82	23.93	23.50	27.30	22.78	13.92	-14.36	-5.79 |*
E2WA7DF2	29.00	14	10	-7.68	-8.45	0.77	25.82	23.93	23.50	27.25	23.31	13.87	-14.36	-5.82 |*
E2WA7DF2	29.00	16	1	-6.27	-6.73	0.46	25.79	23.48	23.94	29.28	22.11	26.78	-14.39	-2.42 |*
E2WA7DF2	29.00	16	2	-8.39	-8.33	-0.06	25.79	23.48	23.94	24.78	15.96	24.69	-14.39	-7.08 |*
E2WA7DF2	29.00	16	3	-7.62	-7.82	0.20	25.79	23.48	23.94	25.86	20.16	24.59	-14.39	-5.66 |*
E2WA7DF2	29.00	16	4	-7.23	-7.56	0.33	25.79	23.48	23.94	26.92	18.93	25.49	-14.39	-4.85 |*
E2WA7DF2	29.00	16	5	-7.82	-7.93	0.11	25.79	23.48	23.94	25.28	23.03	23.52	-14.39	-6.05 |*
E2WA7DF2	29.00	16	6	-7.19	-9.37	2.18	25.79	23.48	23.94	27.64	16.52	24.22	-14.39	-4.76 |*
E2WA7DF2	29.00	16	7	-10.21	-9.33	-0.88	25.79	23.48	23.94	21.94	13.43	23.28	-14.39	-9.84 |*
E2WA7DF2	29.00	16	8	-7.77	-7.81	0.04	25.79	23.48	23.94	25.47	20.57	24.82	-14.39	-5.97 |*
E2WA7DF2	29.00	16	9	-9.35	-10.93	1.58	25.79	23.48	23.94	23.38	13.89	22.82	-14.39	-8.60 |*
E2WA7DF2	29.00	16	10	-10.71	-9.79	-0.92	25.79	23.48	23.94	21.10	13.84	23.35	-14.39	-10.50 |*
E2WA7DF2	29.00	18	1	-5.95	-5.68	-0.27	25.82	23.93	23.50	30.50	26.75	22.14	-14.36	-1.41 |*
E2WA7DF2	29.00	18	2	-7.50	-7.56	0.06	25.82	23.93	23.50	26.84	24.66	15.99	-14.36	-5.45 |*
E2WA7DF2	29.00	18	3	-6.91	-6.66	-0.25	25.82	23.93	23.50	27.57	24.56	20.19	-14.36	-4.18 |*
E2WA7DF2	29.00	18	4	-6.90	-6.71	-0.19	25.82	23.93	23.50	27.77	25.46	18.96	-14.36	-4.14 |*
E2WA7DF2	29.00	18	5	-6.61	-6.32	-0.29	25.82	23.93	23.50	28.22	23.49	23.06	-14.36	-3.42 |*
E2WA7DF2	29.00	18	6	-6.93	-7.24	0.31	25.82	23.93	23.50	28.41	24.20	16.55	-14.36	-4.21 |*
E2WA7DF2	29.00	18	7	-8.34	-8.58	0.24	25.82	23.93	23.50	25.63	23.25	13.46	-14.36	-7.00 |*
E2WA7DF2	29.00	18	8	-6.17	-5.80	-0.37	25.82	23.93	23.50	29.98	24.80	20.60	-14.36	-2.16 |*
E2WA7DF2	29.00	18	9	-7.69	-8.45	0.76	25.82	23.93	23.50	27.23	22.79	13.92	-14.36	-5.83 |*
E2WA7DF2	29.00	18	10	-7.70	-8.39	0.69	25.82	23.93	23.50	27.20	23.32	13.87	-14.36	-5.85 |*
E2WA7DF2	29.00	20	1	-1.52	-2.19	0.67	38.35	23.48	43.24	30.04	22.11	32.22	-3.08	-1.65 |*
E2WA7DF2	29.00	20	2	-5.90	-5.79	-0.11	38.35	23.48	43.24	25.25	15.96	32.89	-3.08	-6.60 |*
E2WA7DF2	29.00	20	3	-4.57	-4.99	0.42	38.35	23.48	43.24	26.36	20.17	26.74	-3.08	-5.16 |*
E2WA7DF2	29.00	20	4	-3.77	-4.46	0.69	38.35	23.48	43.24	27.50	18.93	30.62	-3.08	-4.27 |*
E2WA7DF2	29.00	20	5	-4.67	-4.84	0.17	38.35	23.48	43.24	25.97	23.03	30.81	-3.08	-5.27 |*
E2WA7DF2	29.00	20	6	-3.29	-5.15	1.86	38.35	23.48	43.24	28.83	16.52	38.56	-3.08	-3.73 |*
E2WA7DF2	29.00	20	7	-8.63	-7.59	-1.04	38.35	23.48	43.24	22.31	13.43	32.61	-3.08	-9.47 |*
E2WA7DF2	29.00	20	8	-4.77	-4.16	-0.61	38.35	23.48	43.24	25.99	20.57	41.55	-3.08	-5.37 |*
E2WA7DF2	29.00	20	9	-7.21	-7.61	0.40	38.35	23.48	43.24	24.02	13.89	38.07	-3.08	-7.99 |*
E2WA7DF2	29.00	20	10	-9.32	-7.39	-1.93	38.35	23.48	43.24	21.40	13.84	35.92	-3.08	-10.19 |*
E2WA7DF2	29.00	22	1	-9.80	-9.78	-0.02	20.50	43.22	47.58	32.04	32.20	38.08	-19.50	0.91 |*
E2WA7DF2	29.00	22	2	-10.70	-10.36	-0.34	20.50	43.22	47.58	25.51	32.86	32.55	-19.50	-5.53 |*
E2WA7DF2	29.00	22	3	-10.32	-10.40	0.08	20.50	43.22	47.58	27.51	26.71	31.05	-19.50	-3.67 |*
E2WA7DF2	29.00	22	4	-10.35	-10.32	-0.03	20.50	43.22	47.58	27.25	30.59	32.21	-19.50	-3.84 |*
E2WA7DF2	29.00	22	5	-9.76	-9.88	0.12	20.50	43.22	47.58	32.87	30.78	35.87	-19.50	1.65 |*
E2WA7DF2	29.00	22	6	-11.18	-9.85	-1.33	20.50	43.22	47.58	23.76	38.53	34.97	-19.50	-7.25 |*
E2WA7DF2	29.00	22	7	-10.84	-10.41	-0.43	20.50	43.22	47.58	24.98	32.58	30.75	-19.50	-6.07 |*
E2WA7DF2	29.00	22	8	-9.66	-9.67	0.01	20.50	43.22	47.58	34.94	41.52	34.88	-19.50	3.81 |*
E2WA7DF2	29.00	22	9	-12.64	-10.09	-2.55	20.50	43.22	47.58	20.26	38.04	31.84	-19.50	-10.75 |*
E2WA7DF2	29.00	22	10	-11.82	-10.25	-1.57	20.50	43.22	47.58	22.03	35.90	30.67	-19.50	-8.99 |*
E2WA7DF2	29.00	24	1	-9.87	-9.97	0.10	20.50	47.56	43.22	31.09	38.05	32.23	-19.50	-0.01 |*
E2WA7DF2	29.00	24	2	-11.49	-10.85	-0.64	20.50	47.56	43.22	22.87	32.53	32.92	-19.50	-8.15 |*
E2WA7DF2	29.00	24	3	-10.11	-10.23	0.12	20.50	47.56	43.22	28.98	31.03	26.74	-19.50	-2.26 |*
E2WA7DF2	29.00	24	4	-10.29	-10.36	0.07	20.50	47.56	43.22	27.57	32.19	30.63	-19.50	-3.52 |*
E2WA7DF2	29.00	24	5	-9.85	-9.93	0.08	20.50	47.56	43.22	31.37	35.84	30.82	-19.50	0.21 |*
E2WA7DF2	29.00	24	6	-10.69	-10.90	0.21	20.50	47.56	43.22	25.52	34.95	38.63	-19.50	-5.50 |*
E2WA7DF2	29.00	24	7	-12.35	-11.47	-0.88	20.50	47.56	43.22	20.85	30.72	32.66	-19.50	-10.17 |*
E2WA7DF2	29.00	24	8	-9.95	-10.06	0.11	20.50	47.56	43.22	30.16	34.85	41.72	-19.50	-0.88 |*
E2WA7DF2	29.00	24	9	-12.42	-11.73	-0.69	20.50	47.56	43.22	20.70	31.81	38.22	-19.50	-10.31 |*
E2WA7DF2	29.00	24	10	-12.76	-11.46	-1.30	20.50	47.56	43.22	20.03	30.64	36.02	-19.50	-10.98 |*
E2WA7DF2	29.00	26	1	-10.20	-10.32	0.12	20.48	43.20	47.92	28.20	32.20	41.72	-19.52	-2.85 |*
E2WA7DF2	29.00	26	2	-11.07	-11.01	-0.06	20.48	43.20	47.92	24.17	32.89	35.37	-19.52	-6.85 |*
E2WA7DF2	29.00	26	3	-10.65	-10.85	0.20	20.48	43.20	47.92	25.87	26.72	32.20	-19.52	-5.25 |*
E2WA7DF2	29.00	26	4	-10.69	-10.81	0.12	20.48	43.20	47.92	25.62	30.60	34.28	-19.52	-5.43 |*
E2WA7DF2	29.00	26	5	-10.07	-10.27	0.20	20.48	43.20	47.92	29.28	30.80	41.07	-19.52	-1.80 |*
E2WA7DF2	29.00	26	6	-12.14	-11.50	-0.64	20.48	43.20	47.92	21.30	38.60	37.88	-19.52	-9.71 |*
E2WA7DF2	29.00	26	7	-11.22	-11.24	0.02	20.48	43.20	47.92	23.70	32.63	32.88	-19.52	-7.33 |*
E2WA7DF2	29.00	26	8	-10.29	-10.52	0.23	20.48	43.20	47.92	27.61	41.69	39.99	-19.52	-3.40 |*
E2WA7DF2	29.00	26	9	-13.51	-12.14	-1.37	20.48	43.20	47.92	18.71	38.19	32.17	-19.52	-12.30 |*
E2WA7DF2	29.00	26	10	-12.31	-11.48	-0.83	20.48	43.20	47.92	20.95	35.99	31.16	-19.52	-10.06 |*
E2WA7DF2	29.00	28	1	-10.13	-10.38	0.25	20.49	47.90	43.23	28.73	41.70	32.14	-19.51	-2.33 |*
E2WA7DF2	29.00	28	2	-11.70	-11.29	-0.41	20.49	47.90	43.23	22.36	35.34	32.84	-19.51	-8.66 |*
E2WA7DF2	29.00	28	3	-10.33	-10.58	0.25	20.49	47.90	43.23	27.51	32.18	26.65	-19.51	-3.66 |*
E2WA7DF2	29.00	28	4	-10.52	-10.74	0.22	20.49	47.90	43.23	26.39	34.26	30.54	-19.51	-4.66 |*
E2WA7DF2	29.00	28	5	-10.05	-10.21	0.16	20.49	47.90	43.23	29.39	41.04	30.73	-19.51	-1.70 |*
E2WA7DF2	29.00	28	6	-11.39	-12.00	0.61	20.49	47.90	43.23	23.16	37.86	38.67	-19.51	-7.85 |*
E2WA7DF2	29.00	28	7	-12.53	-11.93	-0.60	20.49	47.90	43.23	20.49	32.86	32.59	-19.51	-10.52 |*
E2WA7DF2	29.00	28	8	-10.34	-10.75	0.41	20.49	47.90	43.23	27.31	39.96	41.70	-19.51	-3.70 |*
E2WA7DF2	29.00	28	9	-13.02	-12.88	-0.14	20.49	47.90	43.23	19.56	32.14	38.30	-19.51	-11.45 |*

E2WA7DF2	29.00	28	10	-13.01	-12.09	-0.92	20.49	47.90	43.23	19.57	31.14	36.00	-19.51	-11.44	*
E2WA7DF2	29.00	30	1	-10.21	-10.34	0.13	20.48	43.22	47.92	28.19	32.12	41.66	-19.52	-2.86	*
E2WA7DF2	29.00	30	2	-11.07	-11.02	-0.05	20.48	43.22	47.92	24.17	32.82	35.32	-19.52	-6.86	*
E2WA7DF2	29.00	30	3	-10.65	-10.86	0.21	20.48	43.22	47.92	25.86	26.62	32.11	-19.52	-5.26	*
E2WA7DF2	29.00	30	4	-10.69	-10.82	0.13	20.48	43.22	47.92	25.61	30.51	34.19	-19.52	-5.44	*
E2WA7DF2	29.00	30	5	-10.07	-10.28	0.21	20.48	43.22	47.92	29.26	30.70	41.03	-19.52	-1.82	*
E2WA7DF2	29.00	30	6	-12.14	-11.60	-0.54	20.48	43.22	47.92	21.29	38.64	37.87	-19.52	-9.71	*
E2WA7DF2	29.00	30	7	-11.22	-11.25	0.03	20.48	43.22	47.92	23.69	32.57	32.87	-19.52	-7.33	*
E2WA7DF2	29.00	30	8	-10.29	-10.63	0.34	20.48	43.22	47.92	27.60	41.67	39.97	-19.52	-3.41	*
E2WA7DF2	29.00	30	9	-13.51	-12.24	-1.27	20.48	43.22	47.92	18.70	38.27	32.17	-19.52	-12.30	*
E2WA7DF2	29.00	30	10	-12.31	-11.51	-0.80	20.48	43.22	47.92	20.95	35.98	31.16	-19.52	-10.06	*
E2WA7DF2	29.00	32	1	-10.13	-10.38	0.25	20.49	47.90	43.23	28.70	41.63	32.14	-19.52	-2.35	*
E2WA7DF2	29.00	32	2	-11.70	-11.29	-0.41	20.49	47.90	43.23	22.35	35.29	32.84	-19.52	-8.67	*
E2WA7DF2	29.00	32	3	-10.33	-10.58	0.25	20.49	47.90	43.23	27.48	32.08	26.65	-19.52	-3.68	*
E2WA7DF2	29.00	32	4	-10.52	-10.74	0.22	20.49	47.90	43.23	26.38	34.17	30.54	-19.52	-4.68	*
E2WA7DF2	29.00	32	5	-10.06	-10.22	0.16	20.49	47.90	43.23	29.32	41.00	30.73	-19.52	-1.76	*
E2WA7DF2	29.00	32	6	-11.40	-12.00	0.60	20.49	47.90	43.23	23.14	37.84	38.66	-19.52	-7.86	*
E2WA7DF2	29.00	32	7	-12.53	-11.93	-0.60	20.49	47.90	43.23	20.48	32.84	32.59	-19.52	-10.53	*
E2WA7DF2	29.00	32	8	-10.34	-10.76	0.42	20.49	47.90	43.23	27.28	39.94	41.67	-19.52	-3.73	*
E2WA7DF2	29.00	32	9	-13.02	-12.89	-0.13	20.49	47.90	43.23	19.55	32.14	38.28	-19.52	-11.45	*
E2WA7DF2	29.00	32	10	-13.02	-12.10	-0.92	20.49	47.90	43.23	19.56	31.13	36.00	-19.52	-11.45	*
E2WA7DF2	29.00	34	1	-10.21	-10.35	0.14	20.48	43.22	47.92	28.17	32.12	41.65	-19.52	-2.88	*
E2WA7DF2	29.00	34	2	-11.08	-11.00	-0.08	20.48	43.22	47.92	24.13	32.81	35.32	-19.52	-6.89	*
E2WA7DF2	29.00	34	3	-10.66	-10.87	0.21	20.48	43.22	47.92	25.80	26.62	32.11	-19.52	-5.31	*
E2WA7DF2	29.00	34	4	-10.71	-10.83	0.12	20.48	43.22	47.92	25.56	30.51	34.19	-19.52	-5.49	*
E2WA7DF2	29.00	34	5	-10.07	-10.28	0.21	20.48	43.22	47.92	29.25	30.70	41.01	-19.52	-1.83	*
E2WA7DF2	29.00	34	6	-12.15	-11.61	-0.54	20.48	43.22	47.92	21.29	38.63	37.86	-19.52	-9.71	*
E2WA7DF2	29.00	34	7	-11.23	-11.15	-0.08	20.48	43.22	47.92	23.66	32.57	32.86	-19.52	-7.36	*
E2WA7DF2	29.00	34	8	-10.29	-10.64	0.35	20.48	43.22	47.92	27.60	41.65	39.95	-19.52	-3.41	*
E2WA7DF2	29.00	34	9	-13.51	-12.23	-1.28	20.48	43.22	47.92	18.70	38.26	32.16	-19.52	-12.31	*
E2WA7DF2	29.00	34	10	-12.31	-11.39	-0.92	20.48	43.22	47.92	20.94	35.97	31.16	-19.52	-10.08	*
E2WA7DF2	29.00	36	1	-10.13	-10.40	0.27	20.49	47.90	43.23	28.70	41.62	32.05	-19.51	-2.36	*
E2WA7DF2	29.00	36	2	-11.71	-11.32	-0.39	20.49	47.90	43.23	22.33	35.29	32.75	-19.51	-8.69	*
E2WA7DF2	29.00	36	3	-10.34	-10.59	0.25	20.49	47.90	43.23	27.45	32.08	26.55	-19.51	-3.72	*
E2WA7DF2	29.00	36	4	-10.53	-10.76	0.23	20.49	47.90	43.23	26.34	34.16	30.44	-19.51	-4.72	*
E2WA7DF2	29.00	36	5	-10.06	-10.23	0.17	20.49	47.90	43.23	29.33	40.98	30.63	-19.51	-1.75	*
E2WA7DF2	29.00	36	6	-11.40	-12.02	0.62	20.49	47.90	43.23	23.14	37.84	38.59	-19.51	-7.86	*
E2WA7DF2	29.00	36	7	-12.54	-11.97	-0.57	20.49	47.90	43.23	20.46	32.84	32.50	-19.51	-10.55	*
E2WA7DF2	29.00	36	8	-10.34	-10.77	0.43	20.49	47.90	43.23	27.29	39.92	41.63	-19.51	-3.72	*
E2WA7DF2	29.00	36	9	-13.02	-12.92	-0.10	20.49	47.90	43.23	19.55	32.14	38.22	-19.51	-11.46	*
E2WA7DF2	29.00	36	10	-13.02	-12.13	-0.89	20.49	47.90	43.23	19.55	31.13	35.91	-19.51	-11.46	*
E2WA7DF2	29.00	38	1	-10.27	-10.41	0.14	20.48	43.22	47.91	27.78	32.02	41.48	-19.52	-3.27	*
E2WA7DF2	29.00	38	2	-11.12	-11.04	-0.08	20.48	43.22	47.91	24.01	32.72	35.22	-19.52	-7.01	*
E2WA7DF2	29.00	38	3	-10.73	-10.94	0.21	20.48	43.22	47.91	25.50	26.52	31.99	-19.52	-5.61	*
E2WA7DF2	29.00	38	4	-10.76	-10.89	0.13	20.48	43.22	47.91	25.32	30.41	34.08	-19.52	-5.73	*
E2WA7DF2	29.00	38	5	-10.26	-10.46	0.20	20.48	43.22	47.91	27.87	30.61	40.78	-19.52	-3.19	*
E2WA7DF2	29.00	38	6	-12.27	-11.75	-0.52	20.48	43.22	47.91	21.02	38.56	37.76	-19.52	-9.98	*
E2WA7DF2	29.00	38	7	-11.23	-11.15	-0.08	20.48	43.22	47.91	23.67	32.47	32.81	-19.52	-7.35	*
E2WA7DF2	29.00	38	8	-10.41	-10.75	0.34	20.48	43.22	47.91	26.92	41.60	39.80	-19.52	-4.09	*
E2WA7DF2	29.00	38	9	-13.69	-12.47	-1.22	20.48	43.22	47.91	18.41	38.20	32.12	-19.52	-12.60	*
E2WA7DF2	29.00	38	10	-12.43	-11.54	-0.89	20.48	43.22	47.91	20.69	35.88	31.13	-19.52	-10.32	*
E2WA7DF2	29.00	40	1	-9.99	-10.24	0.25	20.49	47.89	47.91	29.85	41.45		-19.51	-1.15	*
E2WA7DF2	29.00	40	2	-11.60	-11.20	-0.40	20.49	47.89	47.91	22.59	35.19		-19.51	-8.41	*
E2WA7DF2	29.00	40	3	-10.20	-10.46	0.26	20.49	47.89	47.91	28.17	31.97		-19.51	-2.88	*
E2WA7DF2	29.00	40	4	-10.40	-10.64	0.24	20.49	47.89	47.91	26.93	34.05		-19.51	-4.09	*
E2WA7DF2	29.00	40	5	-9.95	-10.11	0.16	20.49	47.89	47.91	30.26	40.75		-19.51	-0.75	*
E2WA7DF2	29.00	40	6	-11.01	-11.59	0.58	20.49	47.89	47.91	24.34	37.73		-19.51	-6.67	*
E2WA7DF2	29.00	40	7	-12.45	-11.86	-0.59	20.49	47.89	47.91	20.64	32.79		-19.51	-10.36	*
E2WA7DF2	29.00	40	8	-10.13	-10.46	0.33	20.49	47.89	47.91	28.67	39.78		-19.51	-2.34	*
E2WA7DF2	29.00	40	9	-12.69	-12.49	-0.20	20.49	47.89	47.91	20.17	32.10		-19.51	-10.84	*
E2WA7DF2	29.00	40	10	-12.88	-11.94	-0.94	20.49	47.89	47.91	19.80	31.10		-19.51	-11.20	*
E2WA7DG1	29.00	1	1	-10.97	-10.68	-0.29	25.69		24.79	20.19		21.88	-14.38	-10.88	*
E2WA7DG1	29.00	1	2	-12.68	-12.56	-0.12	25.69		24.79	18.05		23.85	-14.38	-12.98	*
E2WA7DG1	29.00	1	3	-13.76	-11.75	-2.01	25.69		24.79	17.13		11.95	-14.38	-14.22	*
E2WA7DG1	29.00	1	4	-11.23	-11.18	-0.05	25.69		24.79	19.84		23.46	-14.38	-11.21	*
E2WA7DG1	29.00	1	5	-13.78	-11.89	-1.89	25.69		24.79	17.15		11.47	-14.38	-14.24	*
E2WA7DG1	29.00	1	6	-10.29	-9.68	-0.61	25.69		24.79	21.18		19.46	-14.38	-9.98	*
E2WA7DG1	29.00	1	7	-13.85	-12.47	-1.38	25.69		24.79	16.75		18.88	-14.38	-14.32	*
E2WA7DG1	29.00	1	8	-15.57	-11.38	-4.19	25.69		24.79	14.85		17.22	-14.38	-16.22	*
E2WA7DG1	29.00	1	9	-15.86	-12.74	-3.12	25.69		24.79	14.49		21.14	-14.38	-16.54	*
E2WA7DG1	29.00	1	10	-9.68	-9.62	-0.06	25.69		24.79	22.02		20.15	-14.38	-9.14	*
E2WA7DG1	29.00	3	1	-10.08	-10.25	0.17	25.71	24.77	23.95	21.67	21.85	18.47	-14.44	-9.65	*
E2WA7DG1	29.00	3	2	-10.60	-10.65	0.05	25.71	24.77	23.95	20.78	23.82	22.64	-14.44	-10.35	*
E2WA7DG1	29.00	3	3	-12.23	-10.53	-1.70	25.71	24.77	23.95	20.21	11.92	9.70	-14.44	-12.41	*
E2WA7DG1	29.00	3	4	-9.04	-9.04	0.00	25.71	24.77	23.95	23.09	23.43	23.20	-14.44	-8.11	*
E2WA7DG1	29.00	3	5	-14.28	-11.19	-3.09	25.71	24.77	23.95	16.97	11.44	10.89	-14.44	-14.79	*
E2WA7DG1	29.00	3	6	-9.30	-9.20	-0.10	25.71	24.77	23.95	22.95	19.43	19.31	-14.44	-8.52	*
E2WA7DG1	29.00	3	7	-16.09	-12.87	-3.22	25.71	24.77	23.95	14.30	18.85	19.76	-14.44	-16.77	*
E2WA7DG1	29.00	3	8	-14.51	-14.85	0.34	25.71	24.77	23.95	16.09	17.19	19.38	-14.44	-15.04	*
E2WA7DG1	29.00	3	9	-16.96	-15.15	-1.81	25.71	24.77	23.95	13.35	21.12	19.13	-14.44	-17.70	*
E2WA7DG1	29.00	3	10	-7.49	-7.34	-0.15	25.71	24.77	23.95	26.46	20.12	20.31	-14.44	-5.37	*
E2WA7DG1	29.00	5	1	-11.23	-10.88	-0.35	25.69	23.93	24.79	20.05	18.44	21.82	-14.46	-11.17	*
E2WA7DG1	29.00	5	2	-12.88	-12.77	-0.11	25.69	23.93	24.79	17.88	22.61	23.77	-14.46	-13.18	*
E2WA7DG1	29.00	5	3	-14.27	-11.88	-2.39	25.69	23.93	24.79	17.09	9.67	11.94	-14.46	-14.78	*
E2WA7DG1	29.00	5	4	-11.44	-11.40	-0.04	25.69	23.93	24.79	19.66	23.17	23.41	-14.46	-11.44	*
E2WA7DG1	29.00	5	5	-14.18	-12.03	-2.15	25.69	23.93	24.79	17.11	10.86	11.46	-14.46	-14.67	*
E2WA7DG1	29.00	5	6	-10.49	-10.11	-0.38	25.69	23.93	24.79	21.12	19.28	19.38	-14.46	-10.19	*
E2WA7DG1	29.00	5	7	-13.95	-12.72	-1.23	25.69	23.93	24.79	16.70	19.73	18.85	-14.46	-14.42	*
E2WA7DG1	29.00	5	8	-15.63	-12.23	-3.40	25.69	23.93	24.79	14.83	19.35	17.14	-14.46	-16.28	*
E2WA7DG1	29.00	5	9	-15.94	-13.21	-2.73	25.69	23.93	24.79	14.46	19.10	21.08	-14.46	-16.60	*
E2WA7DG1	29.00	5	10	-9.87	-9.82	-0.05	25.69	23.93	24.79	21.98	20.28	20.09	-14.46	-9.34	*
E2WA7DG1	29.00	7	1	-10.12	-10.29	0.17	25.71	24.77	23.95	21.63	21.79	18.45	-14.44	-9.69	*
E2WA7DG1	29.00	7	2	-10.62	-10.67	0.05	25.71	24.77	23.95	20.75	23.75	22.58	-14.44	-10.37	*

E2WA7DG1	29.00	7	3	-12.24	-10.58	-1.66	25.71	24.77	23.95	20.18	11.91	9.70	-14.44	-12.43 |*
E2WA7DG1	29.00	7	4	-9.04	-9.05	0.01	25.71	24.77	23.95	23.08	23.38	23.11	-14.44	-8.12 |*
E2WA7DG1	29.00	7	5	-14.30	-11.25	-3.05	25.71	24.77	23.95	16.95	11.44	10.88	-14.44	-14.81 |*
E2WA7DG1	29.00	7	6	-9.31	-9.25	-0.06	25.71	24.77	23.95	22.94	19.35	19.30	-14.44	-8.54 |*
E2WA7DG1	29.00	7	7	-16.10	-12.95	-3.15	25.71	24.77	23.95	14.28	18.82	19.71	-14.44	-16.79 |*
E2WA7DG1	29.00	7	8	-14.51	-14.93	0.42	25.71	24.77	23.95	16.09	17.11	19.36	-14.44	-15.05 |*
E2WA7DG1	29.00	7	9	-16.97	-15.23	-1.74	25.71	24.77	23.95	13.34	21.06	19.09	-14.44	-17.71 |*
E2WA7DG1	29.00	7	10	-7.50	-7.35	-0.15	25.71	24.77	23.95	26.46	20.06	20.21	-14.44	-5.39 |*
E2WA7DG1	29.00	9	1	-11.28	-10.93	-0.35	25.69	23.93	24.79	19.99	18.42	21.81	-14.46	-11.23 |*
E2WA7DG1	29.00	9	2	-12.94	-12.82	-0.12	25.69	23.93	24.79	17.82	22.55	23.75	-14.46	-13.25 |*
E2WA7DG1	29.00	9	3	-14.30	-11.93	-2.37	25.69	23.93	24.79	17.05	9.67	11.94	-14.46	-14.81 |*
E2WA7DG1	29.00	9	4	-11.50	-11.46	-0.04	25.69	23.93	24.79	19.58	23.08	23.39	-14.46	-11.51 |*
E2WA7DG1	29.00	9	5	-14.20	-12.07	-2.13	25.69	23.93	24.79	17.09	10.85	11.46	-14.46	-14.70 |*
E2WA7DG1	29.00	9	6	-10.50	-10.14	-0.36	25.69	23.93	24.79	21.10	19.27	19.31	-14.46	-10.22 |*
E2WA7DG1	29.00	9	7	-13.97	-12.74	-1.23	25.69	23.93	24.79	16.69	19.68	18.84	-14.46	-14.43 |*
E2WA7DG1	29.00	9	8	-15.64	-12.25	-3.39	25.69	23.93	24.79	14.82	19.33	17.06	-14.46	-16.28 |*
E2WA7DG1	29.00	9	9	-15.94	-13.23	-2.71	25.69	23.93	24.79	14.45	19.06	21.04	-14.46	-16.61 |*
E2WA7DG1	29.00	9	10	-9.92	-9.87	-0.05	25.69	23.93	24.79	21.91	20.18	20.02	-14.46	-9.41 |*
E2WA7DG1	29.00	11	1	-10.11	-10.27	0.16	25.71	24.77	23.95	21.63	21.78	18.55	-14.44	-9.69 |*
E2WA7DG1	29.00	11	2	-10.62	-10.66	0.04	25.71	24.77	23.95	20.75	23.72	22.58	-14.44	-10.38 |*
E2WA7DG1	29.00	11	3	-12.24	-10.56	-1.68	25.71	24.77	23.95	20.18	11.91	9.71	-14.44	-12.43 |*
E2WA7DG1	29.00	11	4	-9.05	-9.03	-0.02	25.71	24.77	23.95	23.08	23.36	23.00	-14.44	-8.13 |*
E2WA7DG1	29.00	11	5	-14.30	-11.23	-3.07	25.71	24.77	23.95	16.95	11.43	10.90	-14.44	-14.81 |*
E2WA7DG1	29.00	11	6	-9.26	-9.18	-0.08	25.71	24.77	23.95	22.93	19.29	21.39	-14.44	-8.46 |*
E2WA7DG1	29.00	11	7	-16.10	-12.94	-3.16	25.71	24.77	23.95	14.28	18.81	19.87	-14.44	-16.79 |*
E2WA7DG1	29.00	11	8	-14.50	-14.91	0.41	25.71	24.77	23.95	16.09	17.03	21.72	-14.44	-15.03 |*
E2WA7DG1	29.00	11	9	-16.97	-15.23	-1.74	25.71	24.77	23.95	13.34	21.01	19.33	-14.44	-17.71 |*
E2WA7DG1	29.00	11	10	-7.51	-7.32	-0.19	25.71	24.77	23.95	26.44	19.99	20.15	-14.44	-5.41 |*
E2WA7DG1	29.00	13	1	-11.34	-10.99	-0.35	25.69	23.93	24.79	19.91	18.52	21.60	-14.46	-11.31 |*
E2WA7DG1	29.00	13	2	-13.00	-12.89	-0.11	25.69	23.93	24.79	17.74	22.56	23.69	-14.46	-13.32 |*
E2WA7DG1	29.00	13	3	-14.34	-11.99	-2.35	25.69	23.93	24.79	17.00	9.68	11.93	-14.46	-14.85 |*
E2WA7DG1	29.00	13	4	-11.57	-11.53	-0.04	25.69	23.93	24.79	19.50	22.97	22.81	-14.46	-11.60 |*
E2WA7DG1	29.00	13	5	-14.24	-12.13	-2.11	25.69	23.93	24.79	17.03	10.88	11.46	-14.46	-14.74 |*
E2WA7DG1	29.00	13	6	-10.48	-10.11	-0.37	25.69	23.93	24.79	21.03	21.36	20.48	-14.46	-10.19 |*
E2WA7DG1	29.00	13	7	-14.02	-12.81	-1.21	25.69	23.93	24.79	16.62	19.84	19.02	-14.46	-14.49 |*
E2WA7DG1	29.00	13	8	-15.61	-12.22	-3.39	25.69	23.93	24.79	14.80	21.70	20.48	-14.46	-16.25 |*
E2WA7DG1	29.00	13	9	-15.97	-13.29	-2.68	25.69	23.93	24.79	14.41	19.30	22.21	-14.46	-16.64 |*
E2WA7DG1	29.00	13	10	-10.00	-9.95	-0.05	25.69	23.93	24.79	21.81	20.12	19.31	-14.46	-9.53 |*
E2WA7DG1	29.00	15	1	-10.11	-10.28	0.17	25.71	24.77	23.95	21.64	21.57	18.52	-14.44	-9.68 |*
E2WA7DG1	29.00	15	2	-10.57	-10.62	0.05	25.71	24.77	23.95	20.82	23.67	22.52	-14.44	-10.31 |*
E2WA7DG1	29.00	15	3	-12.24	-10.58	-1.66	25.71	24.77	23.95	20.19	11.91	9.71	-14.44	-12.42 |*
E2WA7DG1	29.00	15	4	-8.99	-8.99	0.00	25.71	24.77	23.95	23.19	22.78	22.91	-14.44	-8.04 |*
E2WA7DG1	29.00	15	5	-14.30	-11.28	-3.02	25.71	24.77	23.95	16.94	11.43	10.90	-14.44	-14.81 |*
E2WA7DG1	29.00	15	6	-9.24	-9.19	-0.05	25.71	24.77	23.95	22.92	20.45	21.30	-14.44	-8.42 |*
E2WA7DG1	29.00	15	7	-16.12	-13.01	-3.11	25.71	24.77	23.95	14.27	18.99	19.82	-14.44	-16.80 |*
E2WA7DG1	29.00	15	8	-14.46	-14.95	0.49	25.71	24.77	23.95	16.08	20.45	21.64	-14.44	-14.99 |*
E2WA7DG1	29.00	15	9	-16.98	-15.30	-1.68	25.71	24.77	23.95	13.32	22.18	19.28	-14.44	-17.72 |*
E2WA7DG1	29.00	15	10	-7.48	-7.31	-0.17	25.71	24.77	23.95	26.61	19.28	20.05	-14.44	-5.36 |*
E2WA7DG1	29.00	17	1	-11.34	-10.98	-0.36	25.69	23.93	24.79	19.91	18.49	21.59	-14.46	-11.31 |*
E2WA7DG1	29.00	17	2	-13.01	-12.89	-0.12	25.69	23.93	24.79	17.73	22.49	23.67	-14.46	-13.33 |*
E2WA7DG1	29.00	17	3	-14.35	-12.00	-2.35	25.69	23.93	24.79	16.99	9.68	11.93	-14.46	-14.86 |*
E2WA7DG1	29.00	17	4	-11.57	-11.52	-0.05	25.69	23.93	24.79	19.50	22.88	22.79	-14.46	-11.60 |*
E2WA7DG1	29.00	17	5	-14.25	-12.14	-2.11	25.69	23.93	24.79	17.02	10.87	11.46	-14.46	-14.75 |*
E2WA7DG1	29.00	17	6	-10.48	-10.05	-0.43	25.69	23.93	24.79	21.04	21.27	20.46	-14.46	-10.19 |*
E2WA7DG1	29.00	17	7	-14.02	-12.79	-1.23	25.69	23.93	24.79	16.62	19.79	19.00	-14.46	-14.49 |*
E2WA7DG1	29.00	17	8	-15.61	-11.95	-3.66	25.69	23.93	24.79	14.80	21.61	20.45	-14.46	-16.25 |*
E2WA7DG1	29.00	17	9	-15.97	-13.22	-2.75	25.69	23.93	24.79	14.41	19.25	22.16	-14.46	-16.64 |*
E2WA7DG1	29.00	17	10	-10.00	-9.94	-0.06	25.69	23.93	24.79	21.82	20.02	19.25	-14.46	-9.53 |*
E2WA7DG1	29.00	19	1	-9.97	-8.86	-1.11	25.71	24.77	38.62	21.78	21.56	18.69	-14.36	-9.55 |*
E2WA7DG1	29.00	19	2	-10.36	-9.20	-1.16	25.71	24.77	38.62	21.05	23.64	23.13	-14.36	-10.08 |*
E2WA7DG1	29.00	19	3	-12.17	-9.27	-2.90	25.71	24.77	38.62	20.26	11.90	9.74	-14.36	-12.37 |*
E2WA7DG1	29.00	19	4	-8.75	-6.82	-1.93	25.71	24.77	38.62	23.49	22.76	23.48	-14.36	-7.74 |*
E2WA7DG1	29.00	19	5	-14.27	-10.18	-4.09	25.71	24.77	38.62	16.96	11.43	10.95	-14.36	-14.80 |*
E2WA7DG1	29.00	19	6	-9.16	-7.01	-2.15	25.71	24.77	38.62	22.94	20.43	21.88	-14.36	-8.38 |*
E2WA7DG1	29.00	19	7	-16.10	-12.18	-3.92	25.71	24.77	38.62	14.27	18.97	20.50	-14.36	-16.79 |*
E2WA7DG1	29.00	19	8	-14.43	-14.35	-0.08	25.71	24.77	38.62	16.08	20.43	22.93	-14.36	-14.98 |*
E2WA7DG1	29.00	19	9	-16.96	-14.68	-2.28	25.71	24.77	38.62	13.32	22.14	20.07	-14.36	-17.71 |*
E2WA7DG1	29.00	19	10	-7.28	-3.73	-3.55	25.71	24.77	38.62	26.89	19.22	20.55	-14.36	-5.10 |*
E2WA7DG1	29.00	21	1	-19.82	-19.84	0.02	43.00	38.60	-5.60	23.58	18.66	23.05	-26.60	-7.85 |*
E2WA7DG1	29.00	21	2	-19.79	-19.83	0.04	43.00	38.60	-5.60	24.09	23.11	22.94	-26.60	-7.18 |*
E2WA7DG1	29.00	21	3	-19.89	-19.96	0.07	43.00	38.60	-5.60	24.65	9.71	22.30	-26.60	-8.97 |*
E2WA7DG1	29.00	21	4	-19.77	-19.77	0.00	43.00	38.60	-5.60	24.81	23.45	22.01	-26.60	-6.54 |*
E2WA7DG1	29.00	21	5	-19.84	-19.97	0.13	43.00	38.60	-5.60	25.23	10.93	21.08	-26.60	-8.18 |*
E2WA7DG1	29.00	21	6	-19.86	-19.84	-0.02	43.00	38.60	-5.60	22.93	21.85	18.90	-26.60	-8.47 |*
E2WA7DG1	29.00	21	7	-19.83	-20.09	0.26	43.00	38.60	-5.60	23.58	20.47	20.00	-26.60	-7.87 |*
E2WA7DG1	29.00	21	8	-20.39	-20.10	-0.29	43.00	38.60	-5.60	17.51	22.90	17.62	-26.60	-13.62 |*
E2WA7DG1	29.00	21	9	-20.25	-20.40	0.15	43.00	38.60	-5.60	18.50	20.04	19.95	-26.60	-12.65 |*
E2WA7DG1	29.00	21	10	-19.63	-19.64	0.01	43.00	38.60	-5.60	38.41	20.52	19.50	-26.60	0.88 |*
E2WA7DG1	29.00	23	1	-22.76	-22.75	-0.01	47.46	-5.62	-5.60	22.38	23.02	23.79	-29.62	-8.79 |*
E2WA7DG1	29.00	23	2	-22.74	-22.76	0.02	47.46	-5.62	-5.60	22.88	22.91	24.55	-29.62	-8.29 |*
E2WA7DG1	29.00	23	3	-22.84	-22.81	-0.03	47.46	-5.62	-5.60	20.24	22.28	23.71	-29.62	-10.88 |*
E2WA7DG1	29.00	23	4	-22.77	-22.77	0.00	47.46	-5.62	-5.60	22.18	21.98	24.21	-29.62	-9.00 |*
E2WA7DG1	29.00	23	5	-22.93	-22.80	-0.13	47.46	-5.62	-5.60	18.71	21.05	23.44	-29.62	-12.39 |*
E2WA7DG1	29.00	23	6	-22.74	-22.75	0.01	47.46	-5.62	-5.60	23.43	18.88	18.97	-29.62	-8.14 |*
E2WA7DG1	29.00	23	7	-22.90	-22.87	-0.03	47.46	-5.62	-5.60	19.19	19.98	22.11	-29.62	-11.95 |*
E2WA7DG1	29.00	23	8	-22.71	-23.20	0.49	47.46	-5.62	-5.60	25.30	17.59	17.49	-29.62	-6.84 |*
E2WA7DG1	29.00	23	9	-22.78	-23.13	0.35	47.46	-5.62	-5.60	21.83	19.92	20.71	-29.62	-9.47 |*
E2WA7DG1	29.00	23	10	-22.85	-22.86	0.01	47.46	-5.62	-5.60	20.16	19.47	22.92	-29.62	-11.02 |*
E2WA7DG1	29.00	25	1	-22.73	-22.74	0.01	40.87	-5.62	-5.60	23.54	23.76	23.11	-29.62	-7.67 |*
E2WA7DG1	29.00	25	2	-22.72	-22.74	0.02	40.87	-5.62	-5.60	23.97	24.53	22.94	-29.62	-7.26 |*
E2WA7DG1	29.00	25	3	-22.71	-22.81	0.10	40.87	-5.62	-5.60	24.34	23.68	22.32	-29.62	-6.95 |*
E2WA7DG1	29.00	25	4	-22.70	-22.71	0.01	40.87	-5.62	-5.60	24.82	24.19	22.07	-29.62	-6.50 |*
E2WA7DG1	29.00	25	5	-22.71	-22.82	0.11	40.87	-5.62	-5.60	24.62	23.42	21.10	-29.62	-6.75 |*
E2WA7DG1	29.00	25	6	-22.77	-22.76	-0.01	40.87	-5.62	-5.60	22.24	18.94	19.08	-29.62	-9.20 |*

E2WA7DG1	29.00	25	7	-22.77	-22.91	0.14	40.87	-5.62	-5.60	22.22	22.08	20.04	-29.62	-9.06	*
E2WA7DG1	29.00	25	8	-23.13	-22.95	-0.18	40.87	-5.62	-5.60	16.58	17.46	17.79	-29.62	-14.59	*
E2WA7DG1	29.00	25	9	-23.04	-23.13	0.09	40.87	-5.62	-5.60	17.46	20.68	20.04	-29.62	-13.65	*
E2WA7DG1	29.00	25	10	-22.63	-22.64	0.01	40.87	-5.62	-5.60	36.82	22.90	19.54	-29.62	1.10	*
E2WA7DG1	29.00	27	1	-22.74	-22.73	-0.01	42.59	-5.62	-5.60	23.11	23.08	24.00	-29.62	-8.08	*
E2WA7DG1	29.00	27	2	-22.69	-22.71	0.02	42.59	-5.62	-5.60	25.48	22.91	24.50	-29.62	-5.85	*
E2WA7DG1	29.00	27	3	-22.81	-22.79	-0.02	42.59	-5.62	-5.60	20.99	22.29	23.70	-29.62	-10.15	*
E2WA7DG1	29.00	27	4	-22.76	-22.77	0.01	42.59	-5.62	-5.60	22.30	22.04	24.51	-29.62	-8.87	*
E2WA7DG1	29.00	27	5	-22.91	-22.84	-0.07	42.59	-5.62	-5.60	19.06	21.08	23.51	-29.62	-12.05	*
E2WA7DG1	29.00	27	6	-22.76	-22.84	0.08	42.59	-5.62	-5.60	22.56	19.05	19.54	-29.62	-8.88	*
E2WA7DG1	29.00	27	7	-22.93	-22.98	0.05	42.59	-5.62	-5.60	18.87	20.02	22.27	-29.62	-12.27	*
E2WA7DG1	29.00	27	8	-22.85	-23.13	0.28	42.59	-5.62	-5.60	20.38	17.77	18.03	-29.62	-10.99	*
E2WA7DG1	29.00	27	9	-22.89	-23.17	0.28	42.59	-5.62	-5.60	19.47	20.01	21.01	-29.62	-11.70	*
E2WA7DG1	29.00	27	10	-22.85	-22.86	0.01	42.59	-5.62	-5.60	20.22	19.51	23.22	-29.62	-10.96	*
E2WA7DG1	29.00	29	1	-22.72	-22.75	0.03	40.53	-5.62	-5.60	23.82	23.97	23.17	-29.62	-7.41	*
E2WA7DG1	29.00	29	2	-22.72	-22.74	0.02	40.53	-5.62	-5.60	23.98	24.47	22.87	-29.62	-7.25	*
E2WA7DG1	29.00	29	3	-22.71	-22.84	0.13	40.53	-5.62	-5.60	24.26	23.67	22.26	-29.62	-7.02	*
E2WA7DG1	29.00	29	4	-22.69	-22.70	0.01	40.53	-5.62	-5.60	25.33	24.48	22.17	-29.62	-6.02	*
E2WA7DG1	29.00	29	5	-22.71	-22.89	0.18	40.53	-5.62	-5.60	24.34	23.48	21.06	-29.62	-7.01	*
E2WA7DG1	29.00	29	6	-22.78	-22.80	0.02	40.53	-5.62	-5.60	21.96	19.51	19.41	-29.62	-9.41	*
E2WA7DG1	29.00	29	7	-22.79	-23.00	0.21	40.53	-5.62	-5.60	21.58	22.25	20.03	-29.62	-9.66	*
E2WA7DG1	29.00	29	8	-23.18	-22.95	-0.23	40.53	-5.62	-5.60	16.10	18.01	18.12	-29.62	-15.04	*
E2WA7DG1	29.00	29	9	-23.08	-23.11	0.03	40.53	-5.62	-5.60	16.94	20.99	20.13	-29.62	-14.15	*
E2WA7DG1	29.00	29	10	-22.63	-22.64	0.01	40.53	-5.62	-5.60	36.63	23.19	19.61	-29.62	1.13	*
E2WA7DG1	29.00	31	1	-22.74	-22.74	0.00	42.59	-5.62	-5.60	23.07	23.15	21.54	-29.62	-8.18	*
E2WA7DG1	29.00	31	2	-22.69	-22.71	0.02	42.59	-5.62	-5.60	25.46	22.84	24.17	-29.62	-5.87	*
E2WA7DG1	29.00	31	3	-22.81	-22.80	-0.01	42.59	-5.62	-5.60	20.98	22.23	22.95	-29.62	-10.17	*
E2WA7DG1	29.00	31	4	-22.77	-22.77	0.00	42.59	-5.62	-5.60	22.24	22.14	21.55	-29.62	-8.99	*
E2WA7DG1	29.00	31	5	-22.91	-22.84	-0.07	42.59	-5.62	-5.60	19.05	21.03	22.17	-29.62	-12.07	*
E2WA7DG1	29.00	31	6	-22.77	-22.85	0.08	42.59	-5.62	-5.60	22.53	19.38	15.05	-29.62	-9.23	*
E2WA7DG1	29.00	31	7	-22.93	-22.99	0.06	42.59	-5.62	-5.60	18.86	20.00	20.29	-29.62	-12.30	*
E2WA7DG1	29.00	31	8	-22.86	-23.14	0.28	42.59	-5.62	-5.60	20.38	18.09	13.66	-29.62	-11.27	*
E2WA7DG1	29.00	31	9	-22.89	-23.17	0.28	42.59	-5.62	-5.60	19.47	20.11	18.02	-29.62	-11.77	*
E2WA7DG1	29.00	31	10	-22.86	-22.87	0.01	42.59	-5.62	-5.60	20.09	19.58	20.48	-29.62	-11.13	*
E2WA7DG1	29.00	33	1	-22.73	-22.75	0.02	40.53	-5.62	-5.60	23.59	21.51	23.72	-29.62	-7.68	*
E2WA7DG1	29.00	33	2	-22.72	-22.74	0.02	40.53	-5.62	-5.60	23.91	24.14	22.84	-29.62	-7.33	*
E2WA7DG1	29.00	33	3	-22.72	-22.84	0.12	40.53	-5.62	-5.60	24.18	22.92	22.20	-29.62	-7.12	*
E2WA7DG1	29.00	33	4	-22.70	-22.71	0.01	40.53	-5.62	-5.60	24.99	21.52	23.37	-29.62	-6.39	*
E2WA7DG1	29.00	33	5	-22.72	-22.90	0.18	40.53	-5.62	-5.60	24.27	22.15	21.07	-29.62	-7.12	*
E2WA7DG1	29.00	33	6	-22.80	-22.82	0.02	40.53	-5.62	-5.60	21.86	15.03	19.16	-29.62	-9.81	*
E2WA7DG1	29.00	33	7	-22.79	-23.01	0.22	40.53	-5.62	-5.60	21.56	20.26	20.33	-29.62	-9.73	*
E2WA7DG1	29.00	33	8	-23.20	-22.97	-0.23	40.53	-5.62	-5.60	16.09	13.63	19.45	-29.62	-15.14	*
E2WA7DG1	29.00	33	9	-23.09	-23.12	0.03	40.53	-5.62	-5.60	16.94	17.99	21.23	-29.62	-14.19	*
E2WA7DG1	29.00	33	10	-22.64	-22.64	0.00	40.53	-5.62	-5.60	36.59	20.45	20.47	-29.62	0.73	*
E2WA7DG1	29.00	35	1	-22.74	-22.74	0.00	42.59	-5.62	-5.60	23.06	23.69	23.46	-29.62	-8.13	*
E2WA7DG1	29.00	35	2	-22.69	-22.71	0.02	42.59	-5.62	-5.60	25.39	22.82	24.35	-29.62	-5.93	*
E2WA7DG1	29.00	35	3	-22.81	-22.80	-0.01	42.59	-5.62	-5.60	20.97	22.18	23.48	-29.62	-10.17	*
E2WA7DG1	29.00	35	4	-22.76	-22.77	0.01	42.59	-5.62	-5.60	22.23	23.35	23.86	-29.62	-8.92	*
E2WA7DG1	29.00	35	5	-22.91	-22.84	-0.07	42.59	-5.62	-5.60	19.05	21.05	23.19	-29.62	-12.06	*
E2WA7DG1	29.00	35	6	-22.76	-22.85	0.09	42.59	-5.62	-5.60	22.53	19.13	18.37	-29.62	-8.96	*
E2WA7DG1	29.00	35	7	-22.93	-22.99	0.06	42.59	-5.62	-5.60	18.86	20.30	21.84	-29.62	-12.27	*
E2WA7DG1	29.00	35	8	-22.85	-23.14	0.29	42.59	-5.62	-5.60	20.38	19.43	16.92	-29.62	-10.98	*
E2WA7DG1	29.00	35	9	-22.89	-23.18	0.29	42.59	-5.62	-5.60	19.47	21.20	20.34	-29.62	-11.69	*
E2WA7DG1	29.00	35	10	-22.85	-22.86	0.01	42.59	-5.62	-5.60	20.15	20.45	22.61	-29.62	-11.01	*
E2WA7DG1	29.00	37	1	-22.73	-22.76	0.03	40.53	-5.62	-5.60	23.34	23.43	24.05	-29.62	-7.86	*
E2WA7DG1	29.00	37	2	-22.72	-22.74	0.02	40.53	-5.62	-5.60	23.86	24.32	22.92	-29.62	-7.36	*
E2WA7DG1	29.00	37	3	-22.72	-22.84	0.12	40.53	-5.62	-5.60	24.17	23.46	22.30	-29.62	-7.12	*
E2WA7DG1	29.00	37	4	-22.71	-22.71	0.00	40.53	-5.62	-5.60	24.56	23.83	22.56	-29.62	-6.73	*
E2WA7DG1	29.00	37	5	-22.71	-22.89	0.18	40.53	-5.62	-5.60	24.26	23.16	21.25	-29.62	-7.09	*
E2WA7DG1	29.00	37	6	-22.79	-22.81	0.02	40.53	-5.62	-5.60	21.80	18.34	21.12	-29.62	-9.56	*
E2WA7DG1	29.00	37	7	-22.79	-23.01	0.22	40.53	-5.62	-5.60	21.55	21.81	20.52	-29.62	-9.68	*
E2WA7DG1	29.00	37	8	-23.18	-22.95	-0.23	40.53	-5.62	-5.60	16.09	16.89	21.29	-29.62	-15.03	*
E2WA7DG1	29.00	37	9	-23.08	-23.11	0.03	40.53	-5.62	-5.60	16.93	20.31	21.66	-29.62	-14.15	*
E2WA7DG1	29.00	37	10	-22.63	-22.64	0.01	40.53	-5.62	-5.60	36.51	22.59	19.27	-29.62	0.81	*
E2WA7DG1	29.00	39	1	-22.74	-22.74	0.00	42.58	-5.62	-5.60	22.95	24.02	20.67	-29.62	-8.31	*
E2WA7DG1	29.00	39	2	-22.70	-22.72	0.02	42.58	-5.62	-5.60	25.12	22.90	23.93	-29.62	-6.19	*
E2WA7DG1	29.00	39	3	-22.81	-22.80	-0.01	42.58	-5.62	-5.60	20.93	22.27	22.55	-29.62	-10.23	*
E2WA7DG1	29.00	39	4	-22.77	-22.78	0.01	42.58	-5.62	-5.60	22.08	22.53	20.59	-29.62	-9.16	*
E2WA7DG1	29.00	39	5	-22.91	-22.85	-0.06	42.58	-5.62	-5.60	19.04	21.23	21.58	-29.62	-12.09	*
E2WA7DG1	29.00	39	6	-22.78	-22.86	0.08	42.58	-5.62	-5.60	22.49	21.09	13.83	-29.62	-9.37	*
E2WA7DG1	29.00	39	7	-22.93	-22.99	0.06	42.58	-5.62	-5.60	18.86	20.49	19.53	-29.62	-12.31	*
E2WA7DG1	29.00	39	8	-22.87	-23.15	0.28	42.58	-5.62	-5.60	20.37	21.26	12.46	-29.62	-11.34	*
E2WA7DG1	29.00	39	9	-22.89	-23.18	0.29	42.58	-5.62	-5.60	19.46	21.63	17.05	-29.62	-11.79	*
E2WA7DG1	29.00	39	10	-22.86	-22.88	0.02	42.58	-5.62	-5.60	20.00	19.24	19.56	-29.62	-11.24	*
E2WA7DG2	29.00	2	1	-10.42	-10.23	-0.19	25.82	23.93	23.50	21.09	19.73	22.54	-14.36	-10.13	*
E2WA7DG2	29.00	2	2	-10.48	-10.35	-0.13	25.82	23.93	23.50	20.97	20.47	23.34	-14.36	-10.21	*
E2WA7DG2	29.00	2	3	-12.20	-9.63	-2.57	25.82	23.93	23.50	19.52	10.31	20.21	-14.36	-12.38	*
E2WA7DG2	29.00	2	4	-10.09	-10.01	-0.08	25.82	23.93	23.50	21.39	26.34	26.23	-14.36	-9.68	*
E2WA7DG2	29.00	2	5	-12.22	-9.38	-2.84	25.82	23.93	23.50	19.58	10.46	16.42	-14.36	-12.42	*
E2WA7DG2	29.00	2	6	-11.72	-11.62	-0.10	25.82	23.93	23.50	19.46	19.00	18.46	-14.36	-11.80	*
E2WA7DG2	29.00	2	7	-10.86	-9.89	-0.97	25.82	23.93	23.50	21.93	13.09	11.68	-14.36	-10.71	*
E2WA7DG2	29.00	2	8	-14.66	-14.15	-0.51	25.82	23.93	23.50	17.27	8.06	8.28	-14.36	-15.22	*
E2WA7DG2	29.00	2	9	-12.37	-11.48	-0.89	25.82	23.93	23.50	21.19	9.76	7.81	-14.36	-12.59	*
E2WA7DG2	29.00	2	10	-11.32	-11.25	-0.07	25.82	23.93	23.50	19.78	21.87	28.10	-14.36	-11.30	*
E2WA7DG2	29.00	4	1	-9.96	-9.50	-0.46	25.79	23.48	23.94	21.78	22.51	19.75	-14.39	-9.48	*
E2WA7DG2	29.00	4	2	-10.80	-10.75	-0.05	25.79	23.48	23.94	20.54	23.32	20.47	-14.39	-10.63	*
E2WA7DG2	29.00	4	3	-13.15	-10.08	-3.07	25.79	23.48	23.94	18.18	20.18	10.33	-14.39	-13.50	*
E2WA7DG2	29.00	4	4	-10.22	-10.23	0.01	25.79	23.48	23.94	21.22	26.20	26.34	-14.39	-9.85	*
E2WA7DG2	29.00	4	5	-12.65	-10.22	-2.43	25.79	23.48	23.94	18.95	16.40	10.48	-14.39	-12.92	*
E2WA7DG2	29.00	4	6	-11.80	-12.39	0.59	25.79	23.48	23.94	19.35	18.43	19.00	-14.39	-11.90	*
E2WA7DG2	29.00	4	7	-11.05	-11.30	0.25	25.79	23.48	23.94	21.59	11.65	13.10	-14.39	-10.95	*
E2WA7DG2	29.00	4	8	-13.27	-14.77	1.50	25.79	23.48	23.94	19.69	8.25	8.09	-14.39	-13.65	*
E2WA7DG2	29.00	4	9	-12.47	-13.26	0.79	25.79	23.48	23.94	20.98	7.78	9.78	-14.39	-12.70	*

E2WA7DG2	29.00	4	10	-11.22	-11.25	0.03	25.79	23.48	23.94	19.92	28.07	21.88	-14.39	-11.17	*
E2WA7DG2	29.00	6	1	-10.46	-10.27	-0.19	25.82	23.93	23.50	21.04	19.72	22.48	-14.36	-10.18	*
E2WA7DG2	29.00	6	2	-10.51	-10.38	-0.13	25.82	23.93	23.50	20.93	20.45	23.30	-14.36	-10.25	*
E2WA7DG2	29.00	6	3	-12.22	-9.68	-2.54	25.82	23.93	23.50	19.49	10.30	20.18	-14.36	-12.41	*
E2WA7DG2	29.00	6	4	-10.12	-10.03	-0.09	25.82	23.93	23.50	21.35	26.31	26.21	-14.36	-9.72	*
E2WA7DG2	29.00	6	5	-12.25	-9.43	-2.82	25.82	23.93	23.50	19.54	10.46	16.41	-14.36	-12.44	*
E2WA7DG2	29.00	6	6	-11.78	-11.69	-0.09	25.82	23.93	23.50	19.37	18.97	18.46	-14.36	-11.88	*
E2WA7DG2	29.00	6	7	-10.89	-9.94	-0.95	25.82	23.93	23.50	21.88	13.07	11.67	-14.36	-10.75	*
E2WA7DG2	29.00	6	8	-14.72	-14.23	-0.49	25.82	23.93	23.50	17.19	8.06	8.28	-14.36	-15.28	*
E2WA7DG2	29.00	6	9	-12.40	-11.54	-0.86	25.82	23.93	23.50	21.13	9.75	7.80	-14.36	-12.62	*
E2WA7DG2	29.00	6	10	-11.36	-11.30	-0.06	25.82	23.93	23.50	19.72	21.85	28.10	-14.36	-11.36	*
E2WA7DG2	29.00	8	1	-9.99	-9.54	-0.45	25.79	23.48	23.94	21.73	22.45	19.75	-14.39	-9.52	*
E2WA7DG2	29.00	8	2	-10.83	-10.78	-0.05	25.79	23.48	23.94	20.50	23.27	20.47	-14.39	-10.67	*
E2WA7DG2	29.00	8	3	-13.17	-10.13	-3.04	25.79	23.48	23.94	18.15	20.15	10.33	-14.39	-13.53	*
E2WA7DG2	29.00	8	4	-10.27	-10.27	0.00	25.79	23.48	23.94	21.16	26.18	26.34	-14.39	-9.91	*
E2WA7DG2	29.00	8	5	-12.68	-10.28	-2.40	25.79	23.48	23.94	18.91	16.38	10.48	-14.39	-12.95	*
E2WA7DG2	29.00	8	6	-11.82	-12.42	0.60	25.79	23.48	23.94	19.33	18.43	18.98	-14.39	-11.91	*
E2WA7DG2	29.00	8	7	-11.09	-11.36	0.27	25.79	23.48	23.94	21.52	11.64	13.09	-14.39	-11.00	*
E2WA7DG2	29.00	8	8	-13.28	-14.83	1.55	25.79	23.48	23.94	19.67	8.25	8.08	-14.39	-13.66	*
E2WA7DG2	29.00	8	9	-12.49	-13.34	0.85	25.79	23.48	23.94	20.93	7.77	9.78	-14.39	-12.73	*
E2WA7DG2	29.00	8	10	-11.29	-11.32	0.03	25.79	23.48	23.94	19.83	28.07	21.81	-14.39	-11.25	*
E2WA7DG2	29.00	10	1	-10.46	-10.28	-0.18	25.82	23.93	23.50	21.03	19.72	22.48	-14.36	-10.19	*
E2WA7DG2	29.00	10	2	-10.52	-10.39	-0.13	25.82	23.93	23.50	20.92	20.45	23.29	-14.36	-10.26	*
E2WA7DG2	29.00	10	3	-12.22	-9.69	-2.53	25.82	23.93	23.50	19.48	10.30	20.18	-14.36	-12.42	*
E2WA7DG2	29.00	10	4	-10.13	-10.04	-0.09	25.82	23.93	23.50	21.34	26.31	26.20	-14.36	-9.73	*
E2WA7DG2	29.00	10	5	-12.25	-9.44	-2.81	25.82	23.93	23.50	19.54	10.45	16.40	-14.36	-12.45	*
E2WA7DG2	29.00	10	6	-11.83	-11.74	-0.09	25.82	23.93	23.50	19.31	18.95	18.45	-14.36	-11.94	*
E2WA7DG2	29.00	10	7	-10.90	-9.96	-0.94	25.82	23.93	23.50	21.86	13.06	11.66	-14.36	-10.77	*
E2WA7DG2	29.00	10	8	-14.76	-14.28	-0.48	25.82	23.93	23.50	17.11	8.06	8.28	-14.36	-15.33	*
E2WA7DG2	29.00	10	9	-12.42	-11.57	-0.85	25.82	23.93	23.50	21.09	9.75	7.80	-14.36	-12.65	*
E2WA7DG2	29.00	10	10	-11.41	-11.35	-0.06	25.82	23.93	23.50	19.66	21.78	28.07	-14.36	-11.42	*
E2WA7DG2	29.00	12	1	-9.84	-9.38	-0.46	25.79	23.48	23.94	21.95	22.45	19.74	-14.39	-9.32	*
E2WA7DG2	29.00	12	2	-10.83	-10.78	-0.05	25.79	23.48	23.94	20.50	23.26	20.45	-14.39	-10.66	*
E2WA7DG2	29.00	12	3	-13.10	-10.00	-3.10	25.79	23.48	23.94	18.28	20.15	10.02	-14.39	-13.45	*
E2WA7DG2	29.00	12	4	-10.31	-10.32	0.01	25.79	23.48	23.94	21.09	26.17	26.30	-14.39	-9.98	*
E2WA7DG2	29.00	12	5	-12.58	-10.11	-2.47	25.79	23.48	23.94	19.05	16.38	10.47	-14.39	-12.84	*
E2WA7DG2	29.00	12	6	-10.29	-11.14	0.85	25.79	23.48	23.94	21.46	18.42	18.94	-14.39	-9.94	*
E2WA7DG2	29.00	12	7	-10.96	-11.27	0.31	25.79	23.48	23.94	21.76	11.64	13.06	-14.39	-10.84	*
E2WA7DG2	29.00	12	8	-12.16	-14.12	1.96	25.79	23.48	23.94	22.28	8.25	8.08	-14.39	-12.33	*
E2WA7DG2	29.00	12	9	-12.34	-13.25	0.91	25.79	23.48	23.94	21.30	7.77	9.76	-14.39	-12.54	*
E2WA7DG2	29.00	12	10	-11.34	-11.37	0.03	25.79	23.48	23.94	19.77	28.05	21.72	-14.39	-11.31	*
E2WA7DG2	29.00	14	1	-10.56	-10.37	-0.19	25.82	23.93	23.50	20.90	19.71	22.42	-14.36	-10.31	*
E2WA7DG2	29.00	14	2	-10.47	-10.34	-0.13	25.82	23.93	23.50	20.98	20.42	23.24	-14.36	-10.20	*
E2WA7DG2	29.00	14	3	-12.23	-9.70	-2.53	25.82	23.93	23.50	19.54	9.99	20.15	-14.36	-12.43	*
E2WA7DG2	29.00	14	4	-10.34	-10.26	-0.08	25.82	23.93	23.50	21.04	26.28	26.17	-14.36	-10.03	*
E2WA7DG2	29.00	14	5	-12.26	-9.45	-2.81	25.82	23.93	23.50	19.53	10.44	16.38	-14.36	-12.46	*
E2WA7DG2	29.00	14	6	-10.97	-10.86	-0.11	25.82	23.93	23.50	20.47	18.91	18.44	-14.36	-10.85	*
E2WA7DG2	29.00	14	7	-10.78	-9.81	-0.97	25.82	23.93	23.50	22.10	13.04	11.65	-14.36	-10.61	*
E2WA7DG2	29.00	14	8	-12.84	-12.09	-0.75	25.82	23.93	23.50	20.60	8.05	8.28	-14.36	-13.14	*
E2WA7DG2	29.00	14	9	-11.94	-11.00	-0.94	25.82	23.93	23.50	22.26	9.74	7.80	-14.36	-12.07	*
E2WA7DG2	29.00	14	10	-11.92	-11.87	-0.05	25.82	23.93	23.50	19.02	21.69	28.06	-14.36	-12.05	*
E2WA7DG2	29.00	16	1	-9.88	-9.42	-0.46	25.79	23.48	23.94	21.90	22.39	19.74	-14.39	-9.37	*
E2WA7DG2	29.00	16	2	-10.86	-10.81	-0.05	25.79	23.48	23.94	20.46	23.21	20.43	-14.39	-10.70	*
E2WA7DG2	29.00	16	3	-13.13	-10.05	-3.08	25.79	23.48	23.94	18.25	20.12	10.02	-14.39	-13.48	*
E2WA7DG2	29.00	16	4	-10.36	-10.37	0.01	25.79	23.48	23.94	21.03	26.14	26.31	-14.39	-10.04	*
E2WA7DG2	29.00	16	5	-12.61	-10.17	-2.44	25.79	23.48	23.94	19.01	16.36	10.46	-14.39	-12.87	*
E2WA7DG2	29.00	16	6	-10.35	-11.19	0.84	25.79	23.48	23.94	21.36	18.41	18.94	-14.39	-10.02	*
E2WA7DG2	29.00	16	7	-11.00	-11.31	0.31	25.79	23.48	23.94	21.69	11.63	13.06	-14.39	-10.89	*
E2WA7DG2	29.00	16	8	-12.19	-14.16	1.97	25.79	23.48	23.94	22.19	8.25	8.08	-14.39	-12.37	*
E2WA7DG2	29.00	16	9	-12.37	-13.29	0.92	25.79	23.48	23.94	21.23	7.77	9.76	-14.39	-12.58	*
E2WA7DG2	29.00	16	10	-11.40	-11.44	0.04	25.79	23.48	23.94	19.68	28.03	21.72	-14.39	-11.40	*
E2WA7DG2	29.00	18	1	-10.51	-10.28	-0.23	25.82	23.93	23.50	20.97	19.71	22.42	-14.36	-10.25	*
E2WA7DG2	29.00	18	2	-10.37	-10.19	-0.18	25.82	23.93	23.50	21.13	20.41	23.23	-14.36	-10.06	*
E2WA7DG2	29.00	18	3	-12.21	-9.61	-2.60	25.82	23.93	23.50	19.56	9.99	20.15	-14.36	-12.40	*
E2WA7DG2	29.00	18	4	-10.27	-10.14	-0.13	25.82	23.93	23.50	21.14	26.28	26.17	-14.36	-9.93	*
E2WA7DG2	29.00	18	5	-12.25	-9.39	-2.86	25.82	23.93	23.50	19.54	10.44	16.38	-14.36	-12.45	*
E2WA7DG2	29.00	18	6	-10.97	-10.82	-0.15	25.82	23.93	23.50	20.46	18.91	18.44	-14.36	-10.86	*
E2WA7DG2	29.00	18	7	-10.79	-9.77	-1.02	25.82	23.93	23.50	22.08	13.04	11.66	-14.36	-10.62	*
E2WA7DG2	29.00	18	8	-12.85	-12.07	-0.78	25.82	23.93	23.50	20.57	8.05	8.28	-14.36	-13.16	*
E2WA7DG2	29.00	18	9	-11.95	-10.98	-0.97	25.82	23.93	23.50	22.22	9.74	7.80	-14.36	-12.08	*
E2WA7DG2	29.00	18	10	-11.94	-11.85	-0.09	25.82	23.93	23.50	19.00	21.70	28.05	-14.36	-12.07	*
E2WA7DG2	29.00	20	1	-7.95	-7.29	-0.66	38.35	23.48	43.24	22.42	22.39	23.78	-3.08	-8.76	*
E2WA7DG2	29.00	20	2	-9.19	-9.12	-0.07	38.35	23.48	43.24	21.07	23.21	24.55	-3.08	-10.05	*
E2WA7DG2	29.00	20	3	-11.73	-8.20	-3.53	38.35	23.48	43.24	18.44	20.12	24.70	-3.08	-12.66	*
E2WA7DG2	29.00	20	4	-8.62	-8.56	-0.06	38.35	23.48	43.24	21.63	26.14	25.17	-3.08	-9.46	*
E2WA7DG2	29.00	20	5	-11.05	-8.16	-2.89	38.35	23.48	43.24	19.28	16.36	24.74	-3.08	-11.96	*
E2WA7DG2	29.00	20	6	-8.75	-9.07	0.32	38.35	23.48	43.24	21.84	18.41	18.79	-3.08	-9.60	*
E2WA7DG2	29.00	20	7	-9.14	-9.21	0.07	38.35	23.48	43.24	22.42	11.63	16.99	-3.08	-10.00	*
E2WA7DG2	29.00	20	8	-10.78	-12.87	2.09	38.35	23.48	43.24	23.28	8.25	8.88	-3.08	-11.69	*
E2WA7DG2	29.00	20	9	-11.19	-11.21	0.02	38.35	23.48	43.24	22.10	7.77	9.98	-3.08	-12.10	*
E2WA7DG2	29.00	20	10	-10.00	-10.01	0.01	38.35	23.48	43.24	20.13	28.02	36.68	-3.08	-10.89	*
E2WA7DG2	29.00	22	1	-11.47	-11.46	-0.01	20.50	43.22	47.58	23.12	23.75	22.32	-19.50	-8.10	*
E2WA7DG2	29.00	22	2	-11.49	-11.49	0.00	20.50	43.22	47.58	23.03	24.52	23.33	-19.50	-8.14	*
E2WA7DG2	29.00	22	3	-11.74	-11.73	-0.01	20.50	43.22	47.58	22.48	24.67	19.66	-19.50	-8.79	*
E2WA7DG2	29.00	22	4	-11.87	-11.86	-0.01	20.50	43.22	47.58	22.04	25.14	22.46	-19.50	-9.11	*
E2WA7DG2	29.00	22	5	-12.27	-12.26	-0.01	20.50	43.22	47.58	21.26	24.71	17.93	-19.50	-10.01	*
E2WA7DG2	29.00	22	6	-13.42	-13.45	0.03	20.50	43.22	47.58	18.99	18.77	22.95	-19.50	-12.16	*
E2WA7DG2	29.00	22	7	-12.84	-13.10	0.26	20.50	43.22	47.58	20.25	16.96	18.47	-19.50	-11.13	*
E2WA7DG2	29.00	22	8	-14.61	-14.99	0.38	20.50	43.22	47.58	17.79	8.85	25.12	-19.50	-14.01	*
E2WA7DG2	29.00	22	9	-13.22	-13.95	0.73	20.50	43.22	47.58	20.29	9.95	21.29	-19.50	-11.82	*
E2WA7DG2	29.00	22	10	-13.08	-13.08	0.00	20.50	43.22	47.58	19.52	36.65	20.22	-19.50	-11.57	*
E2WA7DG2	29.00	24	1	-11.70	-11.70	0.00	20.50	47.56	43.22	22.50	22.29	23.79	-19.50	-8.69	*
E2WA7DG2	29.00	24	2	-11.89	-11.90	0.01	20.50	47.56	43.22	21.99	23.30	24.48	-19.50	-9.15	*
E2WA7DG2	29.00	24	3	-11.72	-11.75	0.03	20.50	47.56	43.22	22.52	19.63	24.61	-19.50	-8.75	*

E2WA7DG2	29.00	24	4	-11.77	-11.78	0.01	20.50	47.56	43.22	22.28	22.43	25.26	-19.50	-8.88
E2WA7DG2	29.00	24	5	-11.72	-11.76	0.04	20.50	47.56	43.22	22.62	17.91	24.67	-19.50	-8.75
E2WA7DG2	29.00	24	6	-13.57	-13.64	0.07	20.50	47.56	43.22	18.74	22.93	18.78	-19.50	-12.41
E2WA7DG2	29.00	24	7	-12.26	-12.65	0.39	20.50	47.56	43.22	21.53	18.44	16.98	-19.50	-9.98
E2WA7DG2	29.00	24	8	-15.15	-15.59	0.44	20.50	47.56	43.22	16.89	25.09	8.88	-19.50	-14.77
E2WA7DG2	29.00	24	9	-13.49	-14.30	0.81	20.50	47.56	43.22	19.71	21.26	9.98	-19.50	-12.27
E2WA7DG2	29.00	24	10	-11.92	-11.94	0.02	20.50	47.56	43.22	21.93	20.19	36.76	-19.50	-9.23
E2WA7DG2	29.00	26	1	-11.47	-11.48	0.01	20.48	43.20	47.92	23.15	23.76	23.06	-19.52	-8.05
E2WA7DG2	29.00	26	2	-11.49	-11.50	0.01	20.48	43.20	47.92	23.01	24.45	26.30	-19.52	-8.12
E2WA7DG2	29.00	26	3	-11.78	-11.84	0.06	20.48	43.20	47.92	22.36	24.59	20.39	-19.52	-8.88
E2WA7DG2	29.00	26	4	-11.86	-11.87	0.01	20.48	43.20	47.92	22.09	25.24	22.60	-19.52	-9.06
E2WA7DG2	29.00	26	5	-12.42	-12.53	0.11	20.48	43.20	47.92	20.94	24.64	18.40	-19.52	-10.29
E2WA7DG2	29.00	26	6	-13.59	-13.73	0.14	20.48	43.20	47.92	18.72	18.75	23.24	-19.52	-12.43
E2WA7DG2	29.00	26	7	-13.36	-13.76	0.40	20.48	43.20	47.92	19.25	16.95	18.98	-19.52	-12.04
E2WA7DG2	29.00	26	8	-15.45	-15.56	0.11	20.48	43.20	47.92	16.43	8.85	26.08	-19.52	-15.17
E2WA7DG2	29.00	26	9	-14.29	-14.82	0.53	20.48	43.20	47.92	18.18	9.95	22.16	-19.52	-13.53
E2WA7DG2	29.00	26	10	-13.08	-13.09	0.01	20.48	43.20	47.92	19.54	36.74	20.30	-19.52	-11.55
E2WA7DG2	29.00	28	1	-11.65	-11.69	0.04	20.49	47.90	43.23	22.63	23.03	24.09	-19.51	-8.54
E2WA7DG2	29.00	28	2	-11.90	-11.92	0.02	20.49	47.90	43.23	21.95	26.28	24.48	-19.51	-9.15
E2WA7DG2	29.00	28	3	-11.76	-11.90	0.14	20.49	47.90	43.23	22.42	20.36	24.61	-19.51	-8.82
E2WA7DG2	29.00	28	4	-11.71	-11.73	0.02	20.49	47.90	43.23	22.46	22.58	25.82	-19.51	-8.70
E2WA7DG2	29.00	28	5	-11.81	-12.14	0.33	20.49	47.90	43.23	22.37	18.38	24.66	-19.51	-8.95
E2WA7DG2	29.00	28	6	-13.43	-13.68	0.25	20.49	47.90	43.23	18.98	23.21	18.81	-19.51	-12.17
E2WA7DG2	29.00	28	7	-12.59	-13.28	0.69	20.49	47.90	43.23	20.76	18.95	16.98	-19.51	-10.65
E2WA7DG2	29.00	28	8	-15.42	-15.57	0.15	20.49	47.90	43.23	16.46	26.05	8.88	-19.51	-15.14
E2WA7DG2	29.00	28	9	-14.08	-14.64	0.56	20.49	47.90	43.23	18.56	22.14	9.98	-19.51	-13.20
E2WA7DG2	29.00	28	10	-11.84	-11.89	0.05	20.49	47.90	43.23	22.14	20.27	36.80	-19.51	-9.03
E2WA7DG2	29.00	30	1	-11.44	-11.48	0.04	20.48	43.22	47.92	23.22	24.06	23.02	-19.52	-7.98
E2WA7DG2	29.00	30	2	-11.52	-11.53	0.01	20.48	43.22	47.92	22.94	24.45	26.28	-19.52	-8.18
E2WA7DG2	29.00	30	3	-11.81	-11.93	0.12	20.48	43.22	47.92	22.30	24.58	20.38	-19.52	-8.93
E2WA7DG2	29.00	30	4	-11.82	-11.83	0.01	20.48	43.22	47.92	22.18	25.79	22.53	-19.52	-8.96
E2WA7DG2	29.00	30	5	-12.44	-12.69	0.25	20.48	43.22	47.92	20.90	24.64	18.40	-19.52	-10.33
E2WA7DG2	29.00	30	6	-13.41	-13.61	0.20	20.48	43.22	47.92	19.02	18.78	23.20	-19.52	-12.13
E2WA7DG2	29.00	30	7	-13.36	-13.88	0.52	20.48	43.22	47.92	19.24	16.95	18.98	-19.52	-12.05
E2WA7DG2	29.00	30	8	-15.29	-15.34	0.05	20.48	43.22	47.92	16.66	8.85	26.06	-19.52	-14.96
E2WA7DG2	29.00	30	9	-14.25	-14.70	0.45	20.48	43.22	47.92	18.24	9.95	22.16	-19.52	-13.48
E2WA7DG2	29.00	30	10	-13.04	-13.06	0.02	20.48	43.22	47.92	19.61	36.77	20.16	-19.52	-11.49
E2WA7DG2	29.00	32	1	-12.47	-12.51	0.04	20.49	47.90	43.23	20.70	22.99	23.85	-19.52	-10.41
E2WA7DG2	29.00	32	2	-11.98	-11.99	0.01	20.49	47.90	43.23	21.76	26.25	24.39	-19.52	-9.33
E2WA7DG2	29.00	32	3	-11.99	-12.13	0.14	20.49	47.90	43.23	21.84	20.35	24.52	-19.52	-9.36
E2WA7DG2	29.00	32	4	-12.63	-12.64	0.01	20.49	47.90	43.23	20.39	22.51	25.45	-19.52	-10.71
E2WA7DG2	29.00	32	5	-12.25	-12.55	0.30	20.49	47.90	43.23	21.31	18.37	24.59	-19.52	-9.95
E2WA7DG2	29.00	32	6	-16.25	-16.38	0.13	20.49	47.90	43.23	14.84	23.18	18.77	-19.52	-16.22
E2WA7DG2	29.00	32	7	-13.35	-13.94	0.59	20.49	47.90	43.23	19.26	18.95	16.97	-19.52	-12.03
E2WA7DG2	29.00	32	8	-17.94	-18.03	0.09	20.49	47.90	43.23	13.01	26.04	8.87	-19.52	-18.27
E2WA7DG2	29.00	32	9	-15.24	-15.69	0.45	20.49	47.90	43.23	16.61	22.14	9.98	-19.52	-14.89
E2WA7DG2	29.00	32	10	-12.90	-12.93	0.03	20.49	47.90	43.23	19.87	20.13	36.74	-19.52	-11.23
E2WA7DG2	29.00	34	1	-11.26	-11.30	0.04	20.48	43.22	47.92	23.77	23.82	23.01	-19.52	-7.46
E2WA7DG2	29.00	34	2	-11.53	-11.54	0.01	20.48	43.22	47.92	22.92	24.36	26.21	-19.52	-8.21
E2WA7DG2	29.00	34	3	-11.83	-11.95	0.12	20.48	43.22	47.92	22.25	24.49	20.38	-19.52	-8.98
E2WA7DG2	29.00	34	4	-11.38	-11.39	0.01	20.48	43.22	47.92	23.40	25.42	22.53	-19.52	-7.80
E2WA7DG2	29.00	34	5	-12.43	-12.69	0.26	20.48	43.22	47.92	20.92	24.56	18.40	-19.52	-10.32
E2WA7DG2	29.00	34	6	-13.54	-13.74	0.20	20.48	43.22	47.92	18.80	18.74	23.20	-19.52	-12.35
E2WA7DG2	29.00	34	7	-13.22	-13.77	0.55	20.48	43.22	47.92	19.50	16.94	18.97	-19.52	-11.81
E2WA7DG2	29.00	34	8	-14.74	-14.80	0.06	20.48	43.22	47.92	17.58	8.85	26.06	-19.52	-14.18
E2WA7DG2	29.00	34	9	-13.89	-14.39	0.50	20.48	43.22	47.92	18.92	9.95	22.16	-19.52	-12.91
E2WA7DG2	29.00	34	10	-12.59	-12.61	0.02	20.48	43.22	47.92	20.48	36.71	20.23	-19.52	-10.64
E2WA7DG2	29.00	36	1	-11.81	-11.86	0.05	20.49	47.90	43.23	22.23	22.98	23.58	-19.51	-8.94
E2WA7DG2	29.00	36	2	-11.93	-11.95	0.02	20.49	47.90	43.23	21.87	26.19	24.35	-19.51	-9.23
E2WA7DG2	29.00	36	3	-11.82	-11.97	0.15	20.49	47.90	43.23	22.25	20.35	24.50	-19.51	-8.97
E2WA7DG2	29.00	36	4	-11.88	-11.90	0.02	20.49	47.90	43.23	22.04	22.50	24.98	-19.51	-9.11
E2WA7DG2	29.00	36	5	-11.91	-12.24	0.33	20.49	47.90	43.23	22.13	18.37	24.57	-19.51	-9.18
E2WA7DG2	29.00	36	6	-14.06	-14.28	0.22	20.49	47.90	43.23	17.93	23.18	18.73	-19.51	-13.19
E2WA7DG2	29.00	36	7	-12.74	-13.43	0.69	20.49	47.90	43.23	20.45	18.95	16.97	-19.51	-10.93
E2WA7DG2	29.00	36	8	-15.97	-16.11	0.14	20.49	47.90	43.23	15.65	26.03	8.87	-19.51	-15.85
E2WA7DG2	29.00	36	9	-14.30	-14.86	0.56	20.49	47.90	43.23	18.16	22.13	9.98	-19.51	-13.54
E2WA7DG2	29.00	36	10	-12.04	-12.09	0.05	20.49	47.90	43.23	21.66	20.20	36.69	-19.51	-9.49
E2WA7DG2	29.00	38	1	-11.17	-11.20	0.03	20.48	43.22	47.91	24.10	23.56	22.96	-19.52	-7.16
E2WA7DG2	29.00	38	2	-11.50	-11.51	0.01	20.48	43.22	47.91	23.01	24.33	26.11	-19.52	-8.13
E2WA7DG2	29.00	38	3	-11.79	-11.91	0.12	20.48	43.22	47.91	22.34	24.48	20.36	-19.52	-8.89
E2WA7DG2	29.00	38	4	-11.67	-11.68	0.01	20.48	43.22	47.91	22.58	24.95	22.44	-19.52	-8.59
E2WA7DG2	29.00	38	5	-12.35	-12.61	0.26	20.48	43.22	47.91	21.10	24.55	18.39	-19.52	-10.15
E2WA7DG2	29.00	38	6	-12.60	-12.84	0.24	20.48	43.22	47.91	20.57	18.71	23.16	-19.52	-10.65
E2WA7DG2	29.00	38	7	-13.14	-13.70	0.56	20.48	43.22	47.91	19.66	16.94	18.97	-19.52	-11.66
E2WA7DG2	29.00	38	8	-14.12	-14.20	0.08	20.48	43.22	47.91	18.69	8.85	26.02	-19.52	-13.27
E2WA7DG2	29.00	38	9	-13.75	-14.27	0.52	20.48	43.22	47.91	19.18	9.95	22.15	-19.52	-12.70
E2WA7DG2	29.00	38	10	-13.23	-13.25	0.02	20.48	43.22	47.91	19.27	36.66	20.08	-19.52	-11.82
E2WA7DG2	29.00	40	1	-12.81	-12.83	0.02	20.49	47.89	47.91	19.98	22.93		-19.51	-11.07
E2WA7DG2	29.00	40	2	-12.01	-12.02	0.01	20.49	47.89	47.91	21.63	26.08		-19.51	-9.41
E2WA7DG2	29.00	40	3	-12.08	-12.13	0.05	20.49	47.89	47.91	21.57	20.33		-19.51	-9.57
E2WA7DG2	29.00	40	4	-13.00	-13.02	0.02	20.49	47.89	47.91	19.63	22.42		-19.51	-11.43
E2WA7DG2	29.00	40	5	-12.40	-12.51	0.11	20.49	47.89	47.91	20.94	18.36		-19.51	-10.25
E2WA7DG2	29.00	40	6	-17.13	-17.22	0.09	20.49	47.89	47.91	13.71	23.13		-19.51	-17.30
E2WA7DG2	29.00	40	7	-13.41	-13.77	0.36	20.49	47.89	47.91	18.97	18.94		-19.51	-12.14
E2WA7DG2	29.00	40	8	-18.47	-18.68	0.21	20.49	47.89	47.91	12.13	25.99		-19.51	-18.88
E2WA7DG2	29.00	40	9	-15.13	-15.60	0.47	20.49	47.89	47.91	16.29	22.12		-19.51	-14.74
E2WA7DG2	29.00	40	10	-13.34	-13.38	0.04	20.49	47.89	47.91	19.06	20.06		-19.51	-12.03
RSTRSA11	36.00	25	1	-0.27	-0.04	-0.23	42.87	41.80	43.27	25.55	20.79	21.40	11.57	-1.21
RSTRSA11	36.00	25	2	1.32	0.00	1.32	42.87	41.80	43.27	26.14	23.65	24.93	11.57	0.41
RSTRSA11	36.00	25	3	8.07	0.00	8.07	42.87	41.80	43.27	33.58	28.66	34.33	11.57	7.47
RSTRSA11	36.00	25	4	11.12	0.00	11.12	42.87	41.80	43.27	46.67	27.51	40.35	11.57	10.99
RSTRSA11	36.00	25	5	5.54	0.00	5.54	42.87	41.80	43.27	35.79	23.53	26.40	11.57	4.76
RSTRSA11	36.00	25	6	0.78	-1.36	2.14	42.87	41.80	43.27	32.42	17.55	23.22	11.57	-0.14

RSTRSA11	36.00	25	7	4.23	0.00	4.23	42.87	41.80	43.27	41.87	19.79	32.25	11.57	3.40
RSTRSA11	36.00	25	8	4.97	0.00	4.97	42.87	41.80	43.27	38.11	20.66	41.96	11.57	4.17
RSTRSA11	36.00	25	9	6.87	0.00	6.87	42.87	41.80	43.27	34.60	24.41	35.92	11.57	6.17
RSTRSA11	36.00	25	10	4.14	0.00	4.14	42.87	41.80	43.27	31.39	23.61	25.51	11.57	3.30
RSTRSA11	36.00	25	11	3.51	0.00	3.51	42.87	41.80	43.27	31.78	22.77	23.79	11.57	2.65
RSTRSA11	36.00	25	12	0.59	0.00	0.59	42.87	41.80	43.27	28.73	20.07	20.51	11.57	-0.34
RSTRSA11	36.00	25	13	-0.72	-0.76	0.04	42.87	41.80	43.27	27.30	18.98	19.05	11.57	-1.66
RSTRSA11	36.00	25	14	-2.08	-1.89	-0.19	42.87	41.80	43.27	22.54	20.74	21.54	11.57	-3.04
RSTRSA11	36.00	25	15	-2.60	-2.17	-0.43	42.87	41.80	43.27	22.24	19.79	20.45	11.57	-3.57
RSTRSA11	36.00	25	16	-4.12	-3.54	-0.58	42.87	41.80	43.27	21.18	17.59	18.06	11.57	-5.09
RSTRSA11	36.00	25	17	-4.27	-3.87	-0.40	42.87	41.80	43.27	21.10	17.32	17.79	11.57	-5.25
RSTRSA11	36.00	27	1	1.39	-0.53	1.92	42.40	43.25	42.17	29.48	21.37	20.93	11.27	0.48
RSTRSA11	36.00	27	2	4.44	0.00	4.44	42.40	43.25	42.17	32.53	24.90	23.84	11.27	3.63
RSTRSA11	36.00	27	3	10.47	0.00	10.47	42.40	43.25	42.17	39.41	34.31	28.95	11.27	10.26
RSTRSA11	36.00	27	4	11.02	0.00	11.02	42.40	43.25	42.17	44.04	40.33	27.73	11.27	10.93
RSTRSA11	36.00	27	5	5.33	0.00	5.33	42.40	43.25	42.17	34.52	26.37	23.71	11.27	4.56
RSTRSA11	36.00	27	6	-0.37	-4.15	3.78	42.40	43.25	42.17	27.06	23.19	17.75	11.27	-1.32
RSTRSA11	36.00	27	7	3.43	-0.95	4.38	42.40	43.25	42.17	32.92	32.22	19.98	11.27	2.58
RSTRSA11	36.00	27	8	4.87	0.00	4.87	42.40	43.25	42.17	36.14	41.93	20.84	11.27	4.07
RSTRSA11	36.00	27	9	6.74	0.00	6.74	42.40	43.25	42.17	33.93	35.89	24.66	11.27	6.05
RSTRSA11	36.00	27	10	4.09	0.00	4.09	42.40	43.25	42.17	31.07	25.48	23.86	11.27	3.25
RSTRSA11	36.00	27	11	3.54	0.00	3.54	42.40	43.25	42.17	31.67	23.77	22.98	11.27	2.69
RSTRSA11	36.00	27	12	0.74	-0.35	1.09	42.40	43.25	42.17	29.07	20.48	20.24	11.27	-0.19
RSTRSA11	36.00	27	13	-0.51	-1.49	0.98	42.40	43.25	42.17	27.84	19.03	19.13	11.27	-1.45
RSTRSA11	36.00	27	14	1.12	-1.98	3.10	42.40	43.25	42.17	28.52	21.52	20.94	11.27	0.20
RSTRSA11	36.00	27	15	0.25	-2.38	2.63	42.40	43.25	42.17	27.89	20.42	19.97	11.27	-0.68
RSTRSA11	36.00	27	16	-2.12	-4.08	1.96	42.40	43.25	42.17	25.31	18.03	17.76	11.27	-3.08
RSTRSA11	36.00	27	17	-2.58	-4.48	1.90	42.40	43.25	42.17	24.52	17.77	17.50	11.27	-3.54
RSTRSA11	36.00	29	1	-0.23	0.00	-0.23	42.83	42.16	43.26	25.54	20.90	21.44	11.60	-1.17
RSTRSA11	36.00	29	2	1.36	0.00	1.36	42.83	42.16	43.26	26.14	23.81	24.97	11.60	0.44
RSTRSA11	36.00	29	3	8.14	0.00	8.14	42.83	42.16	43.26	33.58	28.92	34.37	11.60	7.55
RSTRSA11	36.00	29	4	11.28	0.00	11.28	42.83	42.16	43.26	46.88	27.70	40.35	11.60	11.17
RSTRSA11	36.00	29	5	5.62	0.00	5.62	42.83	42.16	43.26	35.82	23.68	26.40	11.60	4.85
RSTRSA11	36.00	29	6	0.90	-1.66	2.56	42.83	42.16	43.26	32.46	17.72	23.22	11.60	-0.02
RSTRSA11	36.00	29	7	4.38	0.00	4.38	42.83	42.16	43.26	42.11	19.95	32.25	11.60	3.55
RSTRSA11	36.00	29	8	5.04	0.00	5.04	42.83	42.16	43.26	37.54	20.81	41.96	11.60	4.24
RSTRSA11	36.00	29	9	6.77	0.00	6.77	42.83	42.16	43.26	33.99	24.63	35.95	11.60	6.07
RSTRSA11	36.00	29	10	4.19	0.00	4.19	42.83	42.16	43.26	31.26	23.84	25.57	11.60	3.35
RSTRSA11	36.00	29	11	3.56	0.00	3.56	42.83	42.16	43.26	31.67	22.95	23.86	11.60	2.70
RSTRSA11	36.00	29	12	0.66	0.00	0.66	42.83	42.16	43.26	28.73	20.22	20.56	11.60	-0.27
RSTRSA11	36.00	29	13	-0.66	-0.70	0.04	42.83	42.16	43.26	27.29	19.10	19.10	11.60	-1.61
RSTRSA11	36.00	29	14	-2.04	-1.09	-0.95	42.83	42.16	43.26	22.54	20.91	21.60	11.60	-3.01
RSTRSA11	36.00	29	15	-2.57	-1.47	-1.10	42.83	42.16	43.26	22.24	19.95	20.50	11.60	-3.54
RSTRSA11	36.00	29	16	-4.08	-3.38	-0.70	42.83	42.16	43.26	21.18	17.73	18.11	11.60	-5.05
RSTRSA11	36.00	29	17	-4.23	-3.93	-0.30	42.83	42.16	43.26	21.11	17.47	17.85	11.60	-5.20
RSTRSA11	36.00	31	1	1.12	-0.71	1.83	42.40	43.25	42.14	29.47	21.41	20.16	11.27	0.20
RSTRSA11	36.00	31	2	4.16	0.00	4.16	42.40	43.25	42.14	32.53	24.94	23.07	11.27	3.33
RSTRSA11	36.00	31	3	10.31	0.00	10.31	42.40	43.25	42.14	39.40	34.35	28.60	11.27	10.07
RSTRSA11	36.00	31	4	11.02	0.00	11.02	42.40	43.25	42.14	44.03	40.33	27.73	11.27	10.92
RSTRSA11	36.00	31	5	5.33	0.00	5.33	42.40	43.25	42.14	34.52	26.37	23.70	11.27	4.56
RSTRSA11	36.00	31	6	-0.38	-4.16	3.78	42.40	43.25	42.14	27.06	23.19	17.74	11.27	-1.32
RSTRSA11	36.00	31	7	3.43	-0.95	4.38	42.40	43.25	42.14	32.92	32.22	19.97	11.27	2.58
RSTRSA11	36.00	31	8	4.86	0.00	4.86	42.40	43.25	42.14	36.14	41.93	20.84	11.27	4.07
RSTRSA11	36.00	31	9	6.70	0.00	6.70	42.40	43.25	42.14	33.93	35.92	24.59	11.27	6.02
RSTRSA11	36.00	31	10	3.78	0.00	3.78	42.40	43.25	42.14	31.07	25.55	22.97	11.27	2.94
RSTRSA11	36.00	31	11	3.17	0.00	3.17	42.40	43.25	42.14	31.67	23.83	21.97	11.27	2.30
RSTRSA11	36.00	31	12	0.36	-0.64	1.00	42.40	43.25	42.14	29.07	20.54	19.22	11.27	-0.56
RSTRSA11	36.00	31	13	-0.84	-1.76	0.92	42.40	43.25	42.14	27.84	19.07	18.19	11.27	-1.79
RSTRSA11	36.00	31	14	0.77	-2.15	2.92	42.40	43.25	42.14	28.52	21.57	19.94	11.27	-0.15
RSTRSA11	36.00	31	15	-0.09	-2.57	2.48	42.40	43.25	42.14	27.89	20.47	19.00	11.27	-1.03
RSTRSA11	36.00	31	16	-2.46	-4.29	1.83	42.40	43.25	42.14	25.31	18.09	16.76	11.27	-3.42
RSTRSA11	36.00	31	17	-2.92	-4.70	1.78	42.40	43.25	42.14	24.52	17.82	16.44	11.27	-3.89
RSTRSA11	36.00	33	1	-0.36	0.00	-0.36	42.83	42.12	43.26	25.54	20.14	21.78	11.59	-1.31
RSTRSA11	36.00	33	2	1.27	0.00	1.27	42.83	42.12	43.26	26.14	23.04	25.41	11.59	0.35
RSTRSA11	36.00	33	3	8.08	0.00	8.08	42.83	42.12	43.26	33.56	28.57	34.93	11.59	7.48
RSTRSA11	36.00	33	4	11.27	0.00	11.27	42.83	42.12	43.26	46.86	27.70	40.36	11.59	11.16
RSTRSA11	36.00	33	5	5.62	0.00	5.62	42.83	42.12	43.26	35.82	23.68	26.40	11.59	4.84
RSTRSA11	36.00	33	6	0.90	-1.35	2.25	42.83	42.12	43.26	32.46	17.72	23.22	11.59	-0.03
RSTRSA11	36.00	33	7	4.38	0.00	4.38	42.83	42.12	43.26	42.10	19.95	32.25	11.59	3.54
RSTRSA11	36.00	33	8	5.04	0.00	5.04	42.83	42.12	43.26	37.54	20.81	41.95	11.59	4.23
RSTRSA11	36.00	33	9	6.75	0.00	6.75	42.83	42.12	43.26	33.99	24.56	36.33	11.59	6.04
RSTRSA11	36.00	33	10	4.01	0.00	4.01	42.83	42.12	43.26	31.26	22.94	26.32	11.59	3.16
RSTRSA11	36.00	33	11	3.33	0.00	3.33	42.83	42.12	43.26	31.67	21.94	24.49	11.59	2.46
RSTRSA11	36.00	33	12	0.34	0.00	0.34	42.83	42.12	43.26	28.73	19.20	20.78	11.59	-0.60
RSTRSA11	36.00	33	13	-0.96	-1.00	0.04	42.83	42.12	43.26	27.29	18.16	19.22	11.59	-1.91
RSTRSA11	36.00	33	14	-2.18	-1.30	-0.88	42.83	42.12	43.26	22.54	19.91	21.93	11.59	-3.14
RSTRSA11	36.00	33	15	-2.72	-1.69	-1.03	42.83	42.12	43.26	22.24	18.98	20.79	11.59	-3.69
RSTRSA11	36.00	33	16	-4.28	-3.64	-0.64	42.83	42.12	43.26	21.17	16.73	18.28	11.59	-5.26
RSTRSA11	36.00	33	17	-4.46	-4.20	-0.26	42.83	42.12	43.26	21.09	16.41	17.99	11.59	-5.43
RSTRSA11	36.00	35	1	1.46	-0.53	1.99	42.40	43.25	42.17	29.47	21.75	20.79	11.27	0.55
RSTRSA11	36.00	35	2	4.52	0.00	4.52	42.40	43.25	42.17	32.52	25.38	23.70	11.27	3.71
RSTRSA11	36.00	35	3	10.51	0.00	10.51	42.40	43.25	42.17	39.39	34.90	28.89	11.27	10.31
RSTRSA11	36.00	35	4	11.02	0.00	11.02	42.40	43.25	42.17	44.02	40.33	27.73	11.27	10.93
RSTRSA11	36.00	35	5	5.33	0.00	5.33	42.40	43.25	42.17	34.52	26.37	23.70	11.27	4.56
RSTRSA11	36.00	35	6	-0.38	-4.07	3.69	42.40	43.25	42.17	27.06	23.19	17.74	11.27	-1.32
RSTRSA11	36.00	35	7	3.43	-1.21	4.64	42.40	43.25	42.17	32.92	32.23	19.98	11.27	2.58
RSTRSA11	36.00	35	8	4.87	0.00	4.87	42.40	43.25	42.17	36.14	41.93	20.84	11.27	4.07
RSTRSA11	36.00	35	9	6.75	0.00	6.75	42.40	43.25	42.17	33.93	36.30	24.65	11.27	6.06
RSTRSA11	36.00	35	10	4.20	0.00	4.20	42.40	43.25	42.17	31.07	26.29	23.70	11.27	3.37
RSTRSA11	36.00	35	11	3.66	0.00	3.66	42.40	43.25	42.17	31.67	24.46	22.79	11.27	2.82
RSTRSA11	36.00	35	12	0.76	-0.36	1.12	42.40	43.25	42.17	29.07	20.76	20.05	11.27	-0.17
RSTRSA11	36.00	35	13	-0.51	-1.52	1.01	42.40	43.25	42.17	27.84	19.19	18.96	11.27	-1.46
RSTRSA11	36.00	35	14	1.16	-2.02	3.18	42.40	43.25	42.17	28.51	21.90	20.76	11.27	0.24
RSTRSA11	36.00	35	15	0.28	-2.41	2.69	42.40	43.25	42.17	27.88	20.76	19.80	11.27	-0.65

RSTRSA11	36.00 35 16	-2.12	-4.12	2.00	42.40	43.25	42.17	25.31	18.25	17.57	11.27	-3.08
RSTRSA11	36.00 35 17	-2.59	-4.53	1.94	42.40	43.25	42.17	24.51	17.96	17.30	11.27	-3.55
RSTRSA11	36.00 37 1	-0.20	0.00	-0.20	42.83	42.16	43.26	25.54	20.76	21.76	11.60	-1.14
RSTRSA11	36.00 37 2	1.39	0.00	1.39	42.83	42.16	43.26	26.14	23.67	25.40	11.60	0.47
RSTRSA11	36.00 37 3	8.15	0.00	8.15	42.83	42.16	43.26	33.56	28.86	34.82	11.60	7.56
RSTRSA11	36.00 37 4	11.25	0.00	11.25	42.83	42.16	43.26	46.82	27.70	39.79	11.60	11.14
RSTRSA11	36.00 37 5	5.55	0.00	5.55	42.83	42.16	43.26	35.81	23.68	26.15	11.60	4.77
RSTRSA11	36.00 37 6	0.85	-1.46	2.31	42.83	42.16	43.26	32.45	17.72	22.95	11.60	-0.08
RSTRSA11	36.00 37 7	4.33	0.00	4.33	42.83	42.16	43.26	42.08	19.95	31.37	11.60	3.49
RSTRSA11	36.00 37 8	5.03	0.00	5.03	42.83	42.16	43.26	37.53	20.81	40.25	11.60	4.22
RSTRSA11	36.00 37 9	6.78	0.00	6.78	42.83	42.16	43.26	33.98	24.62	36.32	11.60	6.07
RSTRSA11	36.00 37 10	4.24	0.00	4.24	42.83	42.16	43.26	31.26	23.67	26.10	11.60	3.40
RSTRSA11	36.00 37 11	3.61	0.00	3.61	42.83	42.16	43.26	31.67	22.76	24.26	11.60	2.75
RSTRSA11	36.00 37 12	0.63	0.00	0.63	42.83	42.16	43.26	28.73	20.03	20.70	11.60	-0.30
RSTRSA11	36.00 37 13	-0.69	-0.74	0.05	42.83	42.16	43.26	27.29	18.93	19.19	11.60	-1.63
RSTRSA11	36.00 37 14	-2.01	-1.10	-0.91	42.83	42.16	43.26	22.53	20.73	22.10	11.60	-2.97
RSTRSA11	36.00 37 15	-2.54	-1.46	-1.08	42.83	42.16	43.26	22.24	19.77	20.96	11.60	-3.50
RSTRSA11	36.00 37 16	-4.04	-3.37	-0.67	42.83	42.16	43.26	21.17	17.54	18.55	11.60	-5.02
RSTRSA11	36.00 37 17	-4.19	-3.92	-0.27	42.83	42.16	43.26	21.09	17.27	18.32	11.60	-5.17
RSTRSA11	36.00 39 1	1.07	-0.78	1.85	42.40	43.24	42.14	29.47	21.73	19.82	11.26	0.15
RSTRSA11	36.00 39 2	4.12	0.00	4.12	42.40	43.24	42.14	32.51	25.37	22.73	11.26	3.29
RSTRSA11	36.00 39 3	10.27	0.00	10.27	42.40	43.24	42.14	39.35	34.80	28.44	11.26	10.03
RSTRSA11	36.00 39 4	10.98	0.00	10.98	42.40	43.24	42.14	43.95	39.77	27.72	11.26	10.88
RSTRSA11	36.00 39 5	5.26	0.00	5.26	42.40	43.24	42.14	34.51	26.12	23.70	11.26	4.48
RSTRSA11	36.00 39 6	-0.42	-4.10	3.68	42.40	43.24	42.14	27.06	22.92	17.74	11.26	-1.36
RSTRSA11	36.00 39 7	3.39	-1.24	4.63	42.40	43.24	42.14	32.91	31.35	19.97	11.26	2.53
RSTRSA11	36.00 39 8	4.84	0.00	4.84	42.40	43.24	42.14	36.09	40.22	20.83	11.26	4.04
RSTRSA11	36.00 39 9	6.67	0.00	6.67	42.40	43.24	42.14	33.87	36.29	24.56	11.26	5.99
RSTRSA11	36.00 39 10	3.72	0.00	3.72	42.40	43.24	42.14	31.04	26.08	22.58	11.26	2.87
RSTRSA11	36.00 39 11	3.08	0.00	3.08	42.40	43.24	42.14	31.65	24.23	21.54	11.26	2.21
RSTRSA11	36.00 39 12	0.22	-0.79	1.01	42.40	43.24	42.14	29.06	20.68	18.79	11.26	-0.71
RSTRSA11	36.00 39 13	-0.98	-1.90	0.92	42.40	43.24	42.14	27.83	19.17	17.78	11.26	-1.93
RSTRSA11	36.00 39 14	0.72	-2.23	2.95	42.40	43.24	42.14	28.50	22.08	19.51	11.26	-0.20
RSTRSA11	36.00 39 15	-0.14	-2.65	2.51	42.40	43.24	42.14	27.87	20.93	18.59	11.26	-1.08
RSTRSA11	36.00 39 16	-2.52	-4.37	1.85	42.40	43.24	42.14	25.30	18.52	16.33	11.26	-3.48
RSTRSA11	36.00 39 17	-2.98	-4.79	1.81	42.40	43.24	42.14	24.50	18.29	15.99	11.26	-3.95
RSTRSD11	36.00 25 1	-0.27	-0.04	-0.23	42.87	41.80	43.27	25.55	20.79	21.40	11.57	-1.21
RSTRSD11	36.00 25 2	1.32	0.00	1.32	42.87	41.80	43.27	26.14	23.65	24.93	11.57	0.41
RSTRSD11	36.00 25 3	8.07	0.00	8.07	42.87	41.80	43.27	33.58	28.66	34.33	11.57	7.47
RSTRSD11	36.00 25 4	11.12	0.00	11.12	42.87	41.80	43.27	46.67	27.51	40.35	11.57	10.99
RSTRSD11	36.00 25 5	5.54	0.00	5.54	42.87	41.80	43.27	35.79	23.53	26.40	11.57	4.76
RSTRSD11	36.00 25 6	0.78	-1.36	2.14	42.87	41.80	43.27	32.42	17.55	23.22	11.57	-0.14
RSTRSD11	36.00 25 7	4.23	0.00	4.23	42.87	41.80	43.27	41.87	19.79	32.25	11.57	3.40
RSTRSD11	36.00 25 8	4.97	0.00	4.97	42.87	41.80	43.27	38.11	20.66	41.96	11.57	4.17
RSTRSD11	36.00 25 9	6.87	0.00	6.87	42.87	41.80	43.27	34.60	24.41	35.92	11.57	6.17
RSTRSD11	36.00 25 10	4.14	0.00	4.14	42.87	41.80	43.27	31.39	23.61	25.51	11.57	3.30
RSTRSD11	36.00 25 11	3.51	0.00	3.51	42.87	41.80	43.27	31.78	22.77	23.79	11.57	2.65
RSTRSD11	36.00 25 12	0.59	0.00	0.59	42.87	41.80	43.27	28.73	20.07	20.51	11.57	-0.34
RSTRSD11	36.00 25 13	-0.72	-0.76	0.04	42.87	41.80	43.27	27.30	18.98	19.05	11.57	-1.66
RSTRSD11	36.00 25 14	-2.08	-1.89	-0.19	42.87	41.80	43.27	22.54	20.74	21.54	11.57	-3.04
RSTRSD11	36.00 25 15	-2.60	-2.17	-0.43	42.87	41.80	43.27	22.24	19.79	20.45	11.57	-3.57
RSTRSD11	36.00 25 16	-4.12	-3.54	-0.58	42.87	41.80	43.27	21.18	17.59	18.06	11.57	-5.09
RSTRSD11	36.00 25 17	-4.27	-3.87	-0.40	42.87	41.80	43.27	21.10	17.32	17.79	11.57	-5.25
RSTRSD11	36.00 27 1	1.39	-0.53	1.92	42.40	43.25	42.17	29.48	21.37	20.93	11.27	0.48
RSTRSD11	36.00 27 2	4.44	0.00	4.44	42.40	43.25	42.17	32.53	24.90	23.84	11.27	3.63
RSTRSD11	36.00 27 3	10.47	0.00	10.47	42.40	43.25	42.17	39.41	34.31	28.95	11.27	10.26
RSTRSD11	36.00 27 4	11.02	0.00	11.02	42.40	43.25	42.17	44.04	40.33	27.73	11.27	10.93
RSTRSD11	36.00 27 5	5.33	0.00	5.33	42.40	43.25	42.17	34.52	26.37	23.71	11.27	4.56
RSTRSD11	36.00 27 6	-0.37	-4.15	3.78	42.40	43.25	42.17	27.06	23.19	17.75	11.27	-1.32
RSTRSD11	36.00 27 7	3.43	-0.95	4.38	42.40	43.25	42.17	32.92	32.22	19.98	11.27	2.58
RSTRSD11	36.00 27 8	4.87	0.00	4.87	42.40	43.25	42.17	36.14	41.93	20.84	11.27	4.07
RSTRSD11	36.00 27 9	6.74	0.00	6.74	42.40	43.25	42.17	33.93	35.89	24.66	11.27	6.05
RSTRSD11	36.00 27 10	4.09	0.00	4.09	42.40	43.25	42.17	31.07	25.48	23.86	11.27	3.25
RSTRSD11	36.00 27 11	3.54	0.00	3.54	42.40	43.25	42.17	31.67	23.77	22.98	11.27	2.69
RSTRSD11	36.00 27 12	0.74	-0.35	1.09	42.40	43.25	42.17	29.07	20.48	20.24	11.27	-0.19
RSTRSD11	36.00 27 13	-0.51	-1.49	0.98	42.40	43.25	42.17	27.84	19.03	19.13	11.27	-1.45
RSTRSD11	36.00 27 14	1.12	-1.98	3.10	42.40	43.25	42.17	28.52	21.52	20.94	11.27	0.20
RSTRSD11	36.00 27 15	0.25	-2.38	2.63	42.40	43.25	42.17	27.89	20.42	19.97	11.27	-0.68
RSTRSD11	36.00 27 16	-2.12	-4.08	1.96	42.40	43.25	42.17	25.31	18.03	17.76	11.27	-3.08
RSTRSD11	36.00 27 17	-2.58	-4.48	1.90	42.40	43.25	42.17	24.52	17.77	17.50	11.27	-3.54
RSTRSD11	36.00 29 1	-0.23	0.00	-0.23	42.83	42.16	43.26	25.54	20.90	21.44	11.60	-1.17
RSTRSD11	36.00 29 2	1.36	0.00	1.36	42.83	42.16	43.26	26.14	23.81	24.97	11.60	0.44
RSTRSD11	36.00 29 3	8.14	0.00	8.14	42.83	42.16	43.26	33.58	28.92	34.37	11.60	7.55
RSTRSD11	36.00 29 4	11.28	0.00	11.28	42.83	42.16	43.26	46.88	27.70	40.35	11.60	11.17
RSTRSD11	36.00 29 5	5.62	0.00	5.62	42.83	42.16	43.26	35.82	23.68	26.40	11.60	4.85
RSTRSD11	36.00 29 6	0.90	-1.66	2.56	42.83	42.16	43.26	32.46	17.72	23.22	11.60	-0.02
RSTRSD11	36.00 29 7	4.38	0.00	4.38	42.83	42.16	43.26	42.11	19.95	32.25	11.60	3.55
RSTRSD11	36.00 29 8	5.04	0.00	5.04	42.83	42.16	43.26	37.54	20.81	41.96	11.60	4.24
RSTRSD11	36.00 29 9	6.77	0.00	6.77	42.83	42.16	43.26	33.99	24.63	35.95	11.60	6.07
RSTRSD11	36.00 29 10	4.19	0.00	4.19	42.83	42.16	43.26	31.26	23.84	25.57	11.60	3.35
RSTRSD11	36.00 29 11	3.56	0.00	3.56	42.83	42.16	43.26	31.67	22.95	23.86	11.60	2.70
RSTRSD11	36.00 29 12	0.66	0.00	0.66	42.83	42.16	43.26	28.73	20.22	20.56	11.60	-0.27
RSTRSD11	36.00 29 13	-0.66	-0.70	0.04	42.83	42.16	43.26	27.29	19.10	19.10	11.60	-1.61
RSTRSD11	36.00 29 14	-2.04	-1.09	-0.95	42.83	42.16	43.26	22.54	20.91	21.60	11.60	-3.01
RSTRSD11	36.00 29 15	-2.57	-1.47	-1.10	42.83	42.16	43.26	22.24	19.95	20.50	11.60	-3.54
RSTRSD11	36.00 29 16	-4.08	-3.38	-0.70	42.83	42.16	43.26	21.18	17.73	18.11	11.60	-5.05
RSTRSD11	36.00 29 17	-4.23	-3.93	-0.30	42.83	42.16	43.26	21.11	17.47	17.85	11.60	-5.20
RSTRSD11	36.00 31 1	1.12	-0.71	1.83	42.40	43.25	42.14	29.47	21.41	20.16	11.27	0.20
RSTRSD11	36.00 31 2	4.16	0.00	4.16	42.40	43.25	42.14	32.53	24.94	23.07	11.27	3.33
RSTRSD11	36.00 31 3	10.31	0.00	10.31	42.40	43.25	42.14	39.40	34.35	28.60	11.27	10.07
RSTRSD11	36.00 31 4	11.02	0.00	11.02	42.40	43.25	42.14	44.03	40.33	27.73	11.27	10.92
RSTRSD11	36.00 31 5	5.33	0.00	5.33	42.40	43.25	42.14	34.52	26.37	23.70	11.27	4.56
RSTRSD11	36.00 31 6	-0.38	-4.16	3.78	42.40	43.25	42.14	27.06	23.19	17.74	11.27	-1.32

RSTRSD11	36.00	31	7	3.43	-0.95	4.38	42.40	43.25	42.14	32.92	32.22	19.97	11.27	2.58
RSTRSD11	36.00	31	8	4.86	0.00	4.86	42.40	43.25	42.14	36.14	41.93	20.84	11.27	4.07
RSTRSD11	36.00	31	9	6.70	0.00	6.70	42.40	43.25	42.14	33.93	35.92	24.59	11.27	6.02
RSTRSD11	36.00	31	10	3.78	0.00	3.78	42.40	43.25	42.14	31.07	25.55	22.97	11.27	2.94
RSTRSD11	36.00	31	11	3.17	0.00	3.17	42.40	43.25	42.14	31.67	23.83	21.97	11.27	2.30
RSTRSD11	36.00	31	12	0.36	-0.64	1.00	42.40	43.25	42.14	29.07	20.54	19.22	11.27	-0.56
RSTRSD11	36.00	31	13	-0.84	-1.76	0.92	42.40	43.25	42.14	27.84	19.07	18.19	11.27	-1.79
RSTRSD11	36.00	31	14	0.77	-2.15	2.92	42.40	43.25	42.14	28.52	21.57	19.94	11.27	-0.15
RSTRSD11	36.00	31	15	-0.09	-2.57	2.48	42.40	43.25	42.14	27.89	20.47	19.00	11.27	-1.03
RSTRSD11	36.00	31	16	-2.46	-4.29	1.83	42.40	43.25	42.14	25.31	18.09	16.76	11.27	-3.42
RSTRSD11	36.00	31	17	-2.92	-4.70	1.78	42.40	43.25	42.14	24.52	17.82	16.44	11.27	-3.89
RSTRSD11	36.00	33	1	-0.36	0.00	-0.36	42.83	42.12	43.26	25.54	20.14	21.78	11.59	-1.31
RSTRSD11	36.00	33	2	1.27	0.00	1.27	42.83	42.12	43.26	26.14	23.04	25.41	11.59	0.35
RSTRSD11	36.00	33	3	8.08	0.00	8.08	42.83	42.12	43.26	33.56	28.57	34.93	11.59	7.48
RSTRSD11	36.00	33	4	11.27	0.00	11.27	42.83	42.12	43.26	46.86	27.70	40.36	11.59	11.16
RSTRSD11	36.00	33	5	5.62	0.00	5.62	42.83	42.12	43.26	35.82	23.68	26.40	11.59	4.84
RSTRSD11	36.00	33	6	0.90	-1.35	2.25	42.83	42.12	43.26	32.46	17.72	23.22	11.59	-0.03
RSTRSD11	36.00	33	7	4.38	0.00	4.38	42.83	42.12	43.26	42.10	19.95	32.25	11.59	3.54
RSTRSD11	36.00	33	8	5.04	0.00	5.04	42.83	42.12	43.26	37.54	20.81	41.95	11.59	4.23
RSTRSD11	36.00	33	9	6.75	0.00	6.75	42.83	42.12	43.26	33.99	24.56	36.33	11.59	6.04
RSTRSD11	36.00	33	10	4.01	0.00	4.01	42.83	42.12	43.26	31.26	22.94	26.32	11.59	3.16
RSTRSD11	36.00	33	11	3.33	0.00	3.33	42.83	42.12	43.26	31.67	21.94	24.49	11.59	2.46
RSTRSD11	36.00	33	12	0.34	0.00	0.34	42.83	42.12	43.26	28.73	19.20	20.78	11.59	-0.60
RSTRSD11	36.00	33	13	-0.96	-1.00	0.04	42.83	42.12	43.26	27.29	18.16	19.22	11.59	-1.91
RSTRSD11	36.00	33	14	-2.18	-1.30	-0.88	42.83	42.12	43.26	22.54	19.91	21.93	11.59	-3.14
RSTRSD11	36.00	33	15	-2.72	-1.69	-1.03	42.83	42.12	43.26	22.24	18.98	20.79	11.59	-3.69
RSTRSD11	36.00	33	16	-4.28	-3.64	-0.64	42.83	42.12	43.26	21.17	16.73	18.28	11.59	-5.26
RSTRSD11	36.00	33	17	-4.46	-4.20	-0.26	42.83	42.12	43.26	21.09	16.41	17.99	11.59	-5.43
RSTRSD11	36.00	35	1	1.46	-0.53	1.99	42.40	43.25	42.17	29.47	21.75	20.79	11.27	0.55
RSTRSD11	36.00	35	2	4.52	0.00	4.52	42.40	43.25	42.17	32.52	25.38	23.70	11.27	3.71
RSTRSD11	36.00	35	3	10.51	0.00	10.51	42.40	43.25	42.17	39.39	34.90	28.89	11.27	10.31
RSTRSD11	36.00	35	4	11.02	0.00	11.02	42.40	43.25	42.17	44.02	40.33	27.73	11.27	10.93
RSTRSD11	36.00	35	5	5.33	0.00	5.33	42.40	43.25	42.17	34.52	26.37	23.70	11.27	4.56
RSTRSD11	36.00	35	6	-0.38	-4.07	3.69	42.40	43.25	42.17	27.06	23.19	17.74	11.27	-1.32
RSTRSD11	36.00	35	7	3.43	-1.21	4.64	42.40	43.25	42.17	32.92	32.23	19.98	11.27	2.58
RSTRSD11	36.00	35	8	4.87	0.00	4.87	42.40	43.25	42.17	36.14	41.93	20.84	11.27	4.07
RSTRSD11	36.00	35	9	6.75	0.00	6.75	42.40	43.25	42.17	33.93	36.30	24.65	11.27	6.06
RSTRSD11	36.00	35	10	4.20	0.00	4.20	42.40	43.25	42.17	31.07	26.29	23.70	11.27	3.37
RSTRSD11	36.00	35	11	3.66	0.00	3.66	42.40	43.25	42.17	31.67	24.46	22.79	11.27	2.82
RSTRSD11	36.00	35	12	0.76	-0.36	1.12	42.40	43.25	42.17	29.07	20.76	20.05	11.27	-0.17
RSTRSD11	36.00	35	13	-0.51	-1.52	1.01	42.40	43.25	42.17	27.84	19.19	18.96	11.27	-1.46
RSTRSD11	36.00	35	14	1.16	-2.02	3.18	42.40	43.25	42.17	28.51	21.90	20.76	11.27	0.24
RSTRSD11	36.00	35	15	0.28	-2.41	2.69	42.40	43.25	42.17	27.88	20.76	19.80	11.27	-0.65
RSTRSD11	36.00	35	16	-2.12	-4.12	2.00	42.40	43.25	42.17	25.31	18.25	17.57	11.27	-3.08
RSTRSD11	36.00	35	17	-2.59	-4.53	1.94	42.40	43.25	42.17	24.51	17.96	17.30	11.27	-3.55
RSTRSD11	36.00	37	1	-0.20	0.00	-0.20	42.83	42.16	43.26	25.54	20.76	21.76	11.60	-1.14
RSTRSD11	36.00	37	2	1.39	0.00	1.39	42.83	42.16	43.26	26.14	23.67	25.40	11.60	0.47
RSTRSD11	36.00	37	3	8.15	0.00	8.15	42.83	42.16	43.26	33.56	28.86	34.82	11.60	7.56
RSTRSD11	36.00	37	4	11.25	0.00	11.25	42.83	42.16	43.26	46.82	27.70	39.79	11.60	11.14
RSTRSD11	36.00	37	5	5.55	0.00	5.55	42.83	42.16	43.26	35.81	23.68	26.15	11.60	4.77
RSTRSD11	36.00	37	6	0.85	-1.46	2.31	42.83	42.16	43.26	32.45	17.72	22.95	11.60	-0.08
RSTRSD11	36.00	37	7	4.33	0.00	4.33	42.83	42.16	43.26	42.08	19.95	31.37	11.60	3.49
RSTRSD11	36.00	37	8	5.03	0.00	5.03	42.83	42.16	43.26	37.53	20.81	40.25	11.60	4.22
RSTRSD11	36.00	37	9	6.78	0.00	6.78	42.83	42.16	43.26	33.98	24.62	36.32	11.60	6.07
RSTRSD11	36.00	37	10	4.24	0.00	4.24	42.83	42.16	43.26	31.26	23.67	26.10	11.60	3.40
RSTRSD11	36.00	37	11	3.61	0.00	3.61	42.83	42.16	43.26	31.67	22.76	24.26	11.60	2.75
RSTRSD11	36.00	37	12	0.63	0.00	0.63	42.83	42.16	43.26	28.73	20.03	20.70	11.60	-0.30
RSTRSD11	36.00	37	13	-0.69	-0.74	0.05	42.83	42.16	43.26	27.29	18.93	19.19	11.60	-1.63
RSTRSD11	36.00	37	14	-2.01	-1.10	-0.91	42.83	42.16	43.26	22.53	20.73	22.10	11.60	-2.97
RSTRSD11	36.00	37	15	-2.54	-1.46	-1.08	42.83	42.16	43.26	22.24	19.77	20.96	11.60	-3.50
RSTRSD11	36.00	37	16	-4.04	-3.37	-0.67	42.83	42.16	43.26	21.17	17.54	18.55	11.60	-5.02
RSTRSD11	36.00	37	17	-4.19	-3.92	-0.27	42.83	42.16	43.26	21.09	17.27	18.32	11.60	-5.17
RSTRSD11	36.00	39	1	1.07	-0.78	1.85	42.40	43.24	42.14	29.47	21.73	19.82	11.26	0.15
RSTRSD11	36.00	39	2	4.12	0.00	4.12	42.40	43.24	42.14	32.51	25.37	22.73	11.26	3.29
RSTRSD11	36.00	39	3	10.27	0.00	10.27	42.40	43.24	42.14	39.35	34.80	28.44	11.26	10.03
RSTRSD11	36.00	39	4	10.98	0.00	10.98	42.40	43.24	42.14	43.95	39.77	27.72	11.26	10.88
RSTRSD11	36.00	39	5	5.26	0.00	5.26	42.40	43.24	42.14	34.51	26.12	23.70	11.26	4.48
RSTRSD11	36.00	39	6	-0.42	-4.10	3.68	42.40	43.24	42.14	27.06	22.92	17.74	11.26	-1.36
RSTRSD11	36.00	39	7	3.39	-1.24	4.63	42.40	43.24	42.14	32.91	31.35	19.97	11.26	2.53
RSTRSD11	36.00	39	8	4.84	0.00	4.84	42.40	43.24	42.14	36.09	40.22	20.83	11.26	4.04
RSTRSD11	36.00	39	9	6.67	0.00	6.67	42.40	43.24	42.14	33.87	36.29	24.56	11.26	5.99
RSTRSD11	36.00	39	10	3.72	0.00	3.72	42.40	43.24	42.14	31.04	26.08	22.58	11.26	2.87
RSTRSD11	36.00	39	11	3.08	0.00	3.08	42.40	43.24	42.14	31.65	24.23	21.54	11.26	2.21
RSTRSD11	36.00	39	12	0.22	-0.79	1.01	42.40	43.24	42.14	29.06	20.68	18.79	11.26	-0.71
RSTRSD11	36.00	39	13	-0.98	-1.90	0.92	42.40	43.24	42.14	27.83	19.17	17.78	11.26	-1.93
RSTRSD11	36.00	39	14	0.72	-2.23	2.95	42.40	43.24	42.14	28.50	22.08	19.51	11.26	-0.20
RSTRSD11	36.00	39	15	-0.14	-2.65	2.51	42.40	43.24	42.14	27.87	20.93	18.59	11.26	-1.08
RSTRSD11	36.00	39	16	-2.52	-4.37	1.85	42.40	43.24	42.14	25.30	18.52	16.33	11.26	-3.48
RSTRSD11	36.00	39	17	-2.98	-4.79	1.81	42.40	43.24	42.14	24.50	18.29	15.99	11.26	-3.95
RSTRSA12	36.00	26	1	0.88	0.00	0.88	42.71	43.34	42.97	27.21	21.60	21.88	11.62	-0.05
RSTRSA12	36.00	26	2	4.05	0.00	4.05	42.71	43.34	42.97	30.36	24.75	25.44	11.62	3.20
RSTRSA12	36.00	26	3	11.71	0.00	11.71	42.71	43.34	42.97	38.34	33.60	34.72	11.62	11.70
RSTRSA12	36.00	26	4	13.65	0.00	13.65	42.71	43.34	42.97	39.47	42.08	38.07	11.62	14.31
RSTRSA12	36.00	26	5	1.86	0.00	1.86	42.71	43.34	42.97	25.81	28.12	26.81	11.62	0.95
RSTRSA12	36.00	26	6	-2.02	0.00	-2.02	42.71	43.34	42.97	22.58	25.09	19.22	11.62	-2.98
RSTRSA12	36.00	26	7	4.62	0.00	4.62	42.71	43.34	42.97	29.43	35.93	25.20	11.62	3.80
RSTRSA12	36.00	26	8	11.59	0.00	11.59	42.71	43.34	42.97	37.04	43.17	33.33	11.62	11.55
RSTRSA12	36.00	26	9	9.46	0.00	9.46	42.71	43.34	42.97	33.71	36.42	36.28	11.62	9.02
RSTRSA12	36.00	26	10	3.86	0.00	3.86	42.71	43.34	42.97	29.06	26.26	26.27	11.62	3.01
RSTRSA12	36.00	26	11	2.94	0.00	2.94	42.71	43.34	42.97	28.64	24.55	24.56	11.62	2.06
RSTRSA12	36.00	26	12	-0.01	-0.12	0.11	42.71	43.34	42.97	25.96	21.15	21.19	11.62	-0.95
RSTRSA12	36.00	26	13	-1.61	-1.67	0.06	42.71	43.34	42.97	24.02	19.90	19.94	11.62	-2.57
RSTRSA12	36.00	26	14	0.47	0.00	0.47	42.71	43.34	42.97	26.30	21.49	22.19	11.62	-0.46

RSTRSA12	36.00	26	15	-0.43	-0.54	0.11	42.71	43.34	42.97	25.54	20.46	21.06	11.62	-1.37
RSTRSA12	36.00	26	16	-2.74	-2.80	0.06	42.71	43.34	42.97	23.19	18.24	18.64	11.62	-3.71
RSTRSA12	36.00	26	17	-3.12	-3.18	0.06	42.71	43.34	42.97	22.67	18.03	18.36	11.62	-4.09
RSTRSA12	36.00	28	1	0.77	0.00	0.77	41.69	42.95	43.39	27.00	21.86	21.62	10.81	-0.15
RSTRSA12	36.00	28	2	3.68	0.00	3.68	41.69	42.95	43.39	29.67	25.41	24.78	10.81	2.86
RSTRSA12	36.00	28	3	9.92	0.00	9.92	41.69	42.95	43.39	35.17	34.69	33.63	10.81	9.70
RSTRSA12	36.00	28	4	10.96	0.00	10.96	41.69	42.95	43.39	35.47	38.04	42.20	10.81	10.97
RSTRSA12	36.00	28	5	4.20	0.00	4.20	41.69	42.95	43.39	29.04	26.78	28.15	10.81	3.40
RSTRSA12	36.00	28	6	-3.54	-0.78	-2.76	41.69	42.95	43.39	20.53	19.19	25.13	10.81	-4.51
RSTRSA12	36.00	28	7	2.85	0.00	2.85	41.69	42.95	43.39	27.00	25.17	36.03	10.81	2.00
RSTRSA12	36.00	28	8	4.83	0.00	4.83	41.69	42.95	43.39	28.28	33.30	43.53	10.81	4.05
RSTRSA12	36.00	28	9	6.61	0.00	6.61	41.69	42.95	43.39	30.28	36.26	36.51	10.81	5.96
RSTRSA12	36.00	28	10	3.55	0.00	3.55	41.69	42.95	43.39	28.58	26.24	26.35	10.81	2.71
RSTRSA12	36.00	28	11	2.80	0.00	2.80	41.69	42.95	43.39	28.42	24.54	24.58	10.81	1.94
RSTRSA12	36.00	28	12	0.02	-0.24	0.26	41.69	42.95	43.39	26.05	21.16	21.18	10.81	-0.91
RSTRSA12	36.00	28	13	-1.07	-1.27	0.20	41.69	42.95	43.39	25.08	19.92	19.92	10.81	-2.02
RSTRSA12	36.00	28	14	0.34	0.00	0.34	41.69	42.95	43.39	26.08	22.16	21.51	10.81	-0.58
RSTRSA12	36.00	28	15	-0.53	-0.73	0.20	41.69	42.95	43.39	25.36	21.04	20.49	10.81	-1.46
RSTRSA12	36.00	28	16	-2.79	-2.93	0.14	41.69	42.95	43.39	23.10	18.61	18.26	10.81	-3.75
RSTRSA12	36.00	28	17	-3.15	-3.30	0.15	41.69	42.95	43.39	22.63	18.34	18.06	10.81	-4.11
RSTRSA12	36.00	30	1	0.95	0.00	0.95	42.71	43.37	42.97	27.38	21.60	21.88	11.62	0.03
RSTRSA12	36.00	30	2	4.12	0.00	4.12	42.71	43.37	42.97	30.52	24.75	25.44	11.62	3.28
RSTRSA12	36.00	30	3	11.75	0.00	11.75	42.71	43.37	42.97	38.44	33.60	34.71	11.62	11.75
RSTRSA12	36.00	30	4	13.65	0.00	13.65	42.71	43.37	42.97	39.47	42.17	38.07	11.62	14.32
RSTRSA12	36.00	30	5	1.86	0.00	1.86	42.71	43.37	42.97	25.81	28.13	26.81	11.62	0.95
RSTRSA12	36.00	30	6	-2.02	0.00	-2.02	42.71	43.37	42.97	22.58	25.10	19.22	11.62	-2.98
RSTRSA12	36.00	30	7	4.62	0.00	4.62	42.71	43.37	42.97	29.43	36.01	25.20	11.62	3.80
RSTRSA12	36.00	30	8	11.59	0.00	11.59	42.71	43.37	42.97	37.04	43.50	33.33	11.62	11.56
RSTRSA12	36.00	30	9	9.48	0.00	9.48	42.71	43.37	42.97	33.73	36.49	36.28	11.62	9.04
RSTRSA12	36.00	30	10	3.97	0.00	3.97	42.71	43.37	42.97	29.22	26.32	26.27	11.62	3.12
RSTRSA12	36.00	30	11	3.05	0.00	3.05	42.71	43.37	42.97	28.84	24.55	24.56	11.62	2.17
RSTRSA12	36.00	30	12	0.09	-0.03	0.12	42.71	43.37	42.97	26.16	21.15	21.19	11.62	-0.85
RSTRSA12	36.00	30	13	-1.53	-1.59	0.06	42.71	43.37	42.97	24.18	19.90	19.94	11.62	-2.48
RSTRSA12	36.00	30	14	0.56	0.00	0.56	42.71	43.37	42.97	26.46	21.49	22.19	11.62	-0.38
RSTRSA12	36.00	30	15	-0.34	-0.42	0.08	42.71	43.37	42.97	25.71	20.46	21.06	11.62	-1.29
RSTRSA12	36.00	30	16	-2.65	-2.71	0.06	42.71	43.37	42.97	23.36	18.24	18.64	11.62	-3.62
RSTRSA12	36.00	30	17	-3.03	-3.10	0.07	42.71	43.37	42.97	22.85	18.03	18.36	11.62	-4.00
RSTRSA12	36.00	32	1	-0.61	-0.73	0.12	41.66	42.95	43.39	24.49	21.86	21.62	10.78	-1.54
RSTRSA12	36.00	32	2	2.30	0.00	2.30	41.66	42.95	43.39	27.25	25.41	24.78	10.78	1.43
RSTRSA12	36.00	32	3	9.10	0.00	9.10	41.66	42.95	43.39	33.87	34.69	33.61	10.78	8.73
RSTRSA12	36.00	32	4	10.93	0.00	10.93	41.66	42.95	43.39	35.43	38.04	42.19	10.78	10.94
RSTRSA12	36.00	32	5	4.19	0.00	4.19	41.66	42.95	43.39	29.03	26.78	28.15	10.78	3.39
RSTRSA12	36.00	32	6	-3.55	-0.75	-2.80	41.66	42.95	43.39	20.52	19.19	25.13	10.78	-4.52
RSTRSA12	36.00	32	7	2.84	0.00	2.84	41.66	42.95	43.39	26.99	25.17	36.03	10.78	1.99
RSTRSA12	36.00	32	8	4.81	0.00	4.81	41.66	42.95	43.39	28.27	33.30	43.51	10.78	4.04
RSTRSA12	36.00	32	9	6.40	0.00	6.40	41.66	42.95	43.39	30.03	36.25	36.51	10.78	5.73
RSTRSA12	36.00	32	10	2.01	0.00	2.01	41.66	42.95	43.39	26.33	26.24	26.35	10.78	1.12
RSTRSA12	36.00	32	11	1.04	0.00	1.04	41.66	42.95	43.39	25.60	24.54	24.58	10.78	0.13
RSTRSA12	36.00	32	12	-1.75	-1.89	0.14	41.66	42.95	43.39	23.02	21.16	21.18	10.78	-2.70
RSTRSA12	36.00	32	13	-2.73	-2.84	0.11	41.66	42.95	43.39	22.16	19.92	19.92	10.78	-3.69
RSTRSA12	36.00	32	14	-1.28	-1.43	0.15	41.66	42.95	43.39	23.41	22.16	21.51	10.78	-2.23
RSTRSA12	36.00	32	15	-2.13	-2.25	0.12	41.66	42.95	43.39	22.64	21.04	20.48	10.78	-3.09
RSTRSA12	36.00	32	16	-4.42	-4.51	0.09	41.66	42.95	43.39	20.34	18.61	18.26	10.78	-5.40
RSTRSA12	36.00	32	17	-4.84	-4.93	0.09	41.66	42.95	43.39	19.84	18.34	18.05	10.78	-5.81
RSTRSA12	36.00	34	1	1.57	0.00	1.57	42.71	43.38	42.97	28.87	21.60	21.88	11.62	0.66
RSTRSA12	36.00	34	2	4.87	0.00	4.87	42.71	43.38	42.97	32.37	24.75	25.44	11.62	4.06
RSTRSA12	36.00	34	3	12.36	0.00	12.36	42.71	43.38	42.97	40.02	33.58	34.71	11.62	12.53
RSTRSA12	36.00	34	4	13.65	0.00	13.65	42.71	43.38	42.97	39.47	42.16	38.06	11.62	14.32
RSTRSA12	36.00	34	5	1.86	0.00	1.86	42.71	43.38	42.97	25.81	28.13	26.81	11.62	0.95
RSTRSA12	36.00	34	6	-2.02	0.00	-2.02	42.71	43.38	42.97	22.57	25.10	19.22	11.62	-2.98
RSTRSA12	36.00	34	7	4.63	0.00	4.63	42.71	43.38	42.97	29.43	36.00	25.20	11.62	3.80
RSTRSA12	36.00	34	8	11.59	0.00	11.59	42.71	43.38	42.97	37.04	43.49	33.33	11.62	11.55
RSTRSA12	36.00	34	9	9.65	0.00	9.65	42.71	43.38	42.97	33.96	36.49	36.28	11.62	9.23
RSTRSA12	36.00	34	10	5.03	0.00	5.03	42.71	43.38	42.97	31.19	26.32	26.27	11.62	4.22
RSTRSA12	36.00	34	11	4.15	0.00	4.15	42.71	43.38	42.97	31.26	24.55	24.56	11.62	3.31
RSTRSA12	36.00	34	12	0.49	0.00	0.49	42.71	43.38	42.97	27.02	21.15	21.19	11.62	-0.44
RSTRSA12	36.00	34	13	-1.32	-1.39	0.07	42.71	43.38	42.97	24.57	19.90	19.94	11.62	-2.27
RSTRSA12	36.00	34	14	1.09	0.00	1.09	42.71	43.38	42.97	27.59	21.48	22.19	11.62	0.17
RSTRSA12	36.00	34	15	0.14	0.00	0.14	42.71	43.38	42.97	26.75	20.46	21.06	11.62	-0.80
RSTRSA12	36.00	34	16	-2.37	-2.44	0.07	42.71	43.38	42.97	23.94	18.23	18.64	11.62	-3.34
RSTRSA12	36.00	34	17	-2.80	-2.88	0.08	42.71	43.38	42.97	23.31	18.03	18.36	11.62	-3.77
RSTRSA12	36.00	36	1	0.50	0.00	0.50	41.69	42.95	43.39	26.47	21.86	21.62	10.81	-0.41
RSTRSA12	36.00	36	2	3.43	0.00	3.43	41.69	42.95	43.39	29.17	25.41	24.78	10.81	2.59
RSTRSA12	36.00	36	3	9.78	0.00	9.78	41.69	42.95	43.39	34.93	34.68	33.61	10.81	9.52
RSTRSA12	36.00	36	4	10.96	0.00	10.96	41.69	42.95	43.39	35.46	38.04	42.18	10.81	10.96
RSTRSA12	36.00	36	5	4.19	0.00	4.19	41.69	42.95	43.39	29.03	26.78	28.15	10.81	3.39
RSTRSA12	36.00	36	6	-3.55	-0.85	-2.70	41.69	42.95	43.39	20.52	19.19	25.13	10.81	-4.52
RSTRSA12	36.00	36	7	2.85	0.00	2.85	41.69	42.95	43.39	27.00	25.17	36.03	10.81	1.99
RSTRSA12	36.00	36	8	4.82	0.00	4.82	41.69	42.95	43.39	28.28	33.30	43.47	10.81	4.05
RSTRSA12	36.00	36	9	6.58	0.00	6.58	41.69	42.95	43.39	30.24	36.25	36.51	10.81	5.92
RSTRSA12	36.00	36	10	3.24	0.00	3.24	41.69	42.95	43.39	28.11	26.24	26.35	10.81	2.40
RSTRSA12	36.00	36	11	2.44	0.00	2.44	41.69	42.95	43.39	27.79	24.54	24.58	10.81	1.57
RSTRSA12	36.00	36	12	-0.33	-0.57	0.24	41.69	42.95	43.39	25.36	21.16	21.18	10.81	-1.27
RSTRSA12	36.00	36	13	-1.40	-1.58	0.18	41.69	42.95	43.39	24.43	19.92	19.92	10.81	-2.35
RSTRSA12	36.00	36	14	0.02	-0.23	0.25	41.69	42.95	43.39	25.50	22.16	21.51	10.81	-0.90
RSTRSA12	36.00	36	15	-0.84	-1.03	0.19	41.69	42.95	43.39	24.77	21.04	20.48	10.81	-1.78
RSTRSA12	36.00	36	16	-3.11	-3.25	0.14	41.69	42.95	43.39	22.50	18.61	18.26	10.81	-4.08
RSTRSA12	36.00	36	17	-3.49	-3.63	0.14	41.69	42.95	43.39	22.01	18.33	18.05	10.81	-4.45
RSTRSA12	36.00	38	1	1.54	0.00	1.54	42.71	43.38	42.97	28.79	21.60	21.88	11.62	0.63
RSTRSA12	36.00	38	2	4.85	0.00	4.85	42.71	43.38	42.97	32.32	24.75	25.43	11.62	4.04
RSTRSA12	36.00	38	3	12.24	0.00	12.24	42.71	43.38	42.97	39.69	33.58	34.70	11.62	12.37
RSTRSA12	36.00	38	4	13.40	0.00	13.40	42.71	43.38	42.97	39.00	42.15	38.05	11.62	13.95
RSTRSA12	36.00	38	5	1.68	0.00	1.68	42.71	43.38	42.97	25.59	28.12	26.81	11.62	0.77
RSTRSA12	36.00	38	6	-2.18	0.00	-2.18	42.71	43.38	42.97	22.34	25.10	19.22	11.62	-3.15

RSTRSA12	36.00	38	7	4.30	0.00	4.30	42.71	43.38	42.97	28.95	36.00	25.20	11.62	3.46
RSTRSA12	36.00	38	8	11.22	0.00	11.22	42.71	43.38	42.97	36.41	43.44	33.30	11.62	11.09
RSTRSA12	36.00	38	9	9.63	0.00	9.63	42.71	43.38	42.97	33.95	36.48	36.18	11.62	9.22
RSTRSA12	36.00	38	10	4.72	0.00	4.72	42.71	43.38	42.97	30.56	26.32	26.26	11.62	3.90
RSTRSA12	36.00	38	11	3.73	0.00	3.73	42.71	43.38	42.97	30.25	24.55	24.56	11.62	2.87
RSTRSA12	36.00	38	12	0.34	0.00	0.34	42.71	43.38	42.97	26.68	21.15	21.19	11.62	-0.60
RSTRSA12	36.00	38	13	-1.36	-1.43	0.07	42.71	43.38	42.97	24.48	19.90	19.94	11.62	-2.32
RSTRSA12	36.00	38	14	1.38	0.00	1.38	42.71	43.38	42.97	28.26	21.48	22.19	11.62	0.47
RSTRSA12	36.00	38	15	0.44	0.00	0.44	42.71	43.38	42.97	27.48	20.46	21.06	11.62	-0.49
RSTRSA12	36.00	38	16	-1.90	-1.97	0.07	42.71	43.38	42.97	25.02	18.23	18.63	11.62	-2.86
RSTRSA12	36.00	38	17	-2.24	-2.33	0.09	42.71	43.38	42.97	24.55	18.03	18.36	11.62	-3.20
RSTRSA12	36.00	40	1	-0.36	-0.57	0.21	41.71	42.95	42.97	23.62	21.86		11.22	-1.30
RSTRSA12	36.00	40	2	2.50	0.00	2.50	41.71	42.95	42.97	26.41	25.41		11.22	1.62
RSTRSA12	36.00	40	3	9.27	0.00	9.27	41.71	42.95	42.97	33.35	34.67		11.22	8.87
RSTRSA12	36.00	40	4	11.11	0.00	11.11	41.71	42.95	42.97	35.42	38.02		11.22	11.05
RSTRSA12	36.00	40	5	4.79	0.00	4.79	41.71	42.95	42.97	29.02	26.78		11.22	4.00
RSTRSA12	36.00	40	6	-3.36	-0.47	-2.89	41.71	42.95	42.97	20.52	19.19		11.22	-4.33
RSTRSA12	36.00	40	7	2.92	0.00	2.92	41.71	42.95	42.97	26.98	25.17		11.22	2.05
RSTRSA12	36.00	40	8	4.91	0.00	4.91	41.71	42.95	42.97	28.33	33.28		11.22	4.12
RSTRSA12	36.00	40	9	6.67	0.00	6.67	41.71	42.95	42.97	30.16	36.15		11.22	5.99
RSTRSA12	36.00	40	10	1.95	0.00	1.95	41.71	42.95	42.97	25.61	26.23		11.22	1.05
RSTRSA12	36.00	40	11	0.94	0.00	0.94	41.71	42.95	42.97	24.68	24.53		11.22	0.02
RSTRSA12	36.00	40	12	-1.78	-1.95	0.17	41.71	42.95	42.97	22.04	21.16		11.22	-2.73
RSTRSA12	36.00	40	13	-2.67	-2.81	0.14	41.71	42.95	42.97	21.21	19.91		11.22	-3.63
RSTRSA12	36.00	40	14	-1.23	-1.46	0.23	41.71	42.95	42.97	22.50	22.16		11.22	-2.18
RSTRSA12	36.00	40	15	-2.05	-2.24	0.19	41.71	42.95	42.97	21.73	21.03		11.22	-3.01
RSTRSA12	36.00	40	16	-4.37	-4.49	0.12	41.71	42.95	42.97	19.42	18.61		11.22	-5.34
RSTRSA12	36.00	40	17	-4.84	-4.95	0.11	41.71	42.95	42.97	18.91	18.33		11.22	-5.82
RSTRSD12	36.00	26	1	0.88	0.00	0.88	42.71	43.34	42.97	27.21	21.60	21.88	11.62	-0.05
RSTRSD12	36.00	26	2	4.05	0.00	4.05	42.71	43.34	42.97	30.36	24.75	25.44	11.62	3.20
RSTRSD12	36.00	26	3	11.71	0.00	11.71	42.71	43.34	42.97	38.34	33.60	34.72	11.62	11.70
RSTRSD12	36.00	26	4	13.65	0.00	13.65	42.71	43.34	42.97	39.47	42.08	38.07	11.62	14.31
RSTRSD12	36.00	26	5	1.86	0.00	1.86	42.71	43.34	42.97	25.81	28.12	26.81	11.62	0.95
RSTRSD12	36.00	26	6	-2.02	0.00	-2.02	42.71	43.34	42.97	22.58	25.09	19.22	11.62	-2.98
RSTRSD12	36.00	26	7	4.62	0.00	4.62	42.71	43.34	42.97	29.43	35.93	25.20	11.62	3.80
RSTRSD12	36.00	26	8	11.59	0.00	11.59	42.71	43.34	42.97	37.04	43.17	33.33	11.62	11.55
RSTRSD12	36.00	26	9	9.46	0.00	9.46	42.71	43.34	42.97	33.71	36.42	36.28	11.62	9.02
RSTRSD12	36.00	26	10	3.86	0.00	3.86	42.71	43.34	42.97	29.06	26.26	26.27	11.62	3.01
RSTRSD12	36.00	26	11	2.94	0.00	2.94	42.71	43.34	42.97	28.64	24.55	24.56	11.62	2.06
RSTRSD12	36.00	26	12	-0.01	-0.12	0.11	42.71	43.34	42.97	25.96	21.15	21.19	11.62	-0.95
RSTRSD12	36.00	26	13	-1.61	-1.67	0.06	42.71	43.34	42.97	24.02	19.90	19.94	11.62	-2.57
RSTRSD12	36.00	26	14	0.47	0.00	0.47	42.71	43.34	42.97	26.30	21.49	22.19	11.62	-0.46
RSTRSD12	36.00	26	15	-0.43	-0.54	0.11	42.71	43.34	42.97	25.54	20.46	21.06	11.62	-1.37
RSTRSD12	36.00	26	16	-2.74	-2.80	0.06	42.71	43.34	42.97	23.19	18.24	18.64	11.62	-3.71
RSTRSD12	36.00	26	17	-3.12	-3.18	0.06	42.71	43.34	42.97	22.67	18.03	18.36	11.62	-4.09
RSTRSD12	36.00	28	1	0.77	0.00	0.77	41.69	42.95	43.39	27.00	21.86	21.62	10.81	-0.15
RSTRSD12	36.00	28	2	3.68	0.00	3.68	41.69	42.95	43.39	29.67	25.41	24.78	10.81	2.86
RSTRSD12	36.00	28	3	9.92	0.00	9.92	41.69	42.95	43.39	35.17	34.69	33.63	10.81	9.70
RSTRSD12	36.00	28	4	10.96	0.00	10.96	41.69	42.95	43.39	35.47	38.04	42.20	10.81	10.97
RSTRSD12	36.00	28	5	4.20	0.00	4.20	41.69	42.95	43.39	29.04	26.78	28.15	10.81	3.40
RSTRSD12	36.00	28	6	-3.54	-0.78	-2.76	41.69	42.95	43.39	20.53	19.19	25.13	10.81	-4.51
RSTRSD12	36.00	28	7	2.85	0.00	2.85	41.69	42.95	43.39	27.00	25.17	36.03	10.81	2.00
RSTRSD12	36.00	28	8	4.83	0.00	4.83	41.69	42.95	43.39	28.28	33.30	43.53	10.81	4.05
RSTRSD12	36.00	28	9	6.61	0.00	6.61	41.69	42.95	43.39	30.28	36.26	36.51	10.81	5.96
RSTRSD12	36.00	28	10	3.55	0.00	3.55	41.69	42.95	43.39	28.58	26.24	26.35	10.81	2.71
RSTRSD12	36.00	28	11	2.80	0.00	2.80	41.69	42.95	43.39	28.42	24.54	24.58	10.81	1.94
RSTRSD12	36.00	28	12	0.02	-0.24	0.26	41.69	42.95	43.39	26.05	21.16	21.18	10.81	-0.91
RSTRSD12	36.00	28	13	-1.07	-1.27	0.20	41.69	42.95	43.39	25.08	19.92	19.92	10.81	-2.02
RSTRSD12	36.00	28	14	0.34	0.00	0.34	41.69	42.95	43.39	26.08	22.16	21.51	10.81	-0.58
RSTRSD12	36.00	28	15	-0.53	-0.73	0.20	41.69	42.95	43.39	25.36	21.04	20.49	10.81	-1.46
RSTRSD12	36.00	28	16	-2.79	-2.93	0.14	41.69	42.95	43.39	23.10	18.61	18.26	10.81	-3.75
RSTRSD12	36.00	28	17	-3.15	-3.30	0.15	41.69	42.95	43.39	22.63	18.34	18.06	10.81	-4.11
RSTRSD12	36.00	30	1	0.95	0.00	0.95	42.71	43.37	42.97	27.38	21.60	21.88	11.62	0.03
RSTRSD12	36.00	30	2	4.12	0.00	4.12	42.71	43.37	42.97	30.52	24.75	25.44	11.62	3.28
RSTRSD12	36.00	30	3	11.75	0.00	11.75	42.71	43.37	42.97	38.44	33.60	34.71	11.62	11.75
RSTRSD12	36.00	30	4	13.65	0.00	13.65	42.71	43.37	42.97	39.47	42.17	38.07	11.62	14.32
RSTRSD12	36.00	30	5	1.86	0.00	1.86	42.71	43.37	42.97	25.81	28.13	26.81	11.62	0.95
RSTRSD12	36.00	30	6	-2.02	0.00	-2.02	42.71	43.37	42.97	22.58	25.10	19.22	11.62	-2.98
RSTRSD12	36.00	30	7	4.62	0.00	4.62	42.71	43.37	42.97	29.43	36.01	25.20	11.62	3.80
RSTRSD12	36.00	30	8	11.59	0.00	11.59	42.71	43.37	42.97	37.04	43.50	33.33	11.62	11.56
RSTRSD12	36.00	30	9	9.48	0.00	9.48	42.71	43.37	42.97	33.73	36.49	36.28	11.62	9.04
RSTRSD12	36.00	30	10	3.97	0.00	3.97	42.71	43.37	42.97	29.22	26.32	26.27	11.62	3.12
RSTRSD12	36.00	30	11	3.05	0.00	3.05	42.71	43.37	42.97	28.84	24.55	24.56	11.62	2.17
RSTRSD12	36.00	30	12	0.09	-0.03	0.12	42.71	43.37	42.97	26.16	21.15	21.19	11.62	-0.85
RSTRSD12	36.00	30	13	-1.53	-1.59	0.06	42.71	43.37	42.97	24.18	19.90	19.94	11.62	-2.48
RSTRSD12	36.00	30	14	0.56	0.00	0.56	42.71	43.37	42.97	26.46	21.49	22.19	11.62	-0.38
RSTRSD12	36.00	30	15	-0.34	-0.42	0.08	42.71	43.37	42.97	25.71	20.46	21.06	11.62	-1.29
RSTRSD12	36.00	30	16	-2.65	-2.71	0.06	42.71	43.37	42.97	23.36	18.24	18.64	11.62	-3.62
RSTRSD12	36.00	30	17	-3.03	-3.10	0.07	42.71	43.37	42.97	22.85	18.03	18.36	11.62	-4.00
RSTRSD12	36.00	32	1	-0.61	-0.73	0.12	41.66	42.95	43.39	24.49	21.86	21.62	10.78	-1.54
RSTRSD12	36.00	32	2	2.30	0.00	2.30	41.66	42.95	43.39	27.25	25.41	24.78	10.78	1.43
RSTRSD12	36.00	32	3	9.10	0.00	9.10	41.66	42.95	43.39	33.87	34.69	33.61	10.78	8.73
RSTRSD12	36.00	32	4	10.93	0.00	10.93	41.66	42.95	43.39	35.43	38.04	42.19	10.78	10.94
RSTRSD12	36.00	32	5	4.19	0.00	4.19	41.66	42.95	43.39	29.03	26.78	28.15	10.78	3.39
RSTRSD12	36.00	32	6	-3.55	-0.75	-2.80	41.66	42.95	43.39	20.52	19.19	25.13	10.78	-4.52
RSTRSD12	36.00	32	7	2.84	0.00	2.84	41.66	42.95	43.39	26.99	25.17	36.03	10.78	1.99
RSTRSD12	36.00	32	8	4.81	0.00	4.81	41.66	42.95	43.39	28.27	33.30	43.51	10.78	4.04
RSTRSD12	36.00	32	9	6.40	0.00	6.40	41.66	42.95	43.39	30.03	36.25	36.51	10.78	5.73
RSTRSD12	36.00	32	10	2.01	0.00	2.01	41.66	42.95	43.39	26.33	26.24	26.35	10.78	1.12
RSTRSD12	36.00	32	11	1.04	0.00	1.04	41.66	42.95	43.39	25.60	24.54	24.58	10.78	0.13
RSTRSD12	36.00	32	12	-1.75	-1.89	0.14	41.66	42.95	43.39	23.02	21.16	21.18	10.78	-2.70
RSTRSD12	36.00	32	13	-2.73	-2.84	0.11	41.66	42.95	43.39	22.16	19.92	19.92	10.78	-3.69
RSTRSD12	36.00	32	14	-1.28	-1.43	0.15	41.66	42.95	43.39	23.41	22.16	21.51	10.78	-2.23

RSTRSD12	36.00	32	15	-2.13	-2.25	0.12	41.66	42.95	43.39	22.64	21.04	20.48	10.78	-3.09
RSTRSD12	36.00	32	16	-4.42	-4.51	0.09	41.66	42.95	43.39	20.34	18.61	18.26	10.78	-5.40
RSTRSD12	36.00	32	17	-4.84	-4.93	0.09	41.66	42.95	43.39	19.84	18.34	18.05	10.78	-5.81
RSTRSD12	36.00	34	1	1.57	0.00	1.57	42.71	43.38	42.97	28.87	21.60	21.88	11.62	0.66
RSTRSD12	36.00	34	2	4.87	0.00	4.87	42.71	43.38	42.97	32.37	24.75	25.44	11.62	4.06
RSTRSD12	36.00	34	3	12.36	0.00	12.36	42.71	43.38	42.97	40.02	33.58	34.71	11.62	12.53
RSTRSD12	36.00	34	4	13.65	0.00	13.65	42.71	43.38	42.97	39.47	42.16	38.06	11.62	14.32
RSTRSD12	36.00	34	5	1.86	0.00	1.86	42.71	43.38	42.97	25.81	28.13	26.81	11.62	0.95
RSTRSD12	36.00	34	6	-2.02	0.00	-2.02	42.71	43.38	42.97	22.57	25.10	19.22	11.62	-2.98
RSTRSD12	36.00	34	7	4.63	0.00	4.63	42.71	43.38	42.97	29.43	36.00	25.20	11.62	3.80
RSTRSD12	36.00	34	8	11.59	0.00	11.59	42.71	43.38	42.97	37.04	43.49	33.33	11.62	11.55
RSTRSD12	36.00	34	9	9.65	0.00	9.65	42.71	43.38	42.97	33.96	36.49	36.28	11.62	9.23
RSTRSD12	36.00	34	10	5.03	0.00	5.03	42.71	43.38	42.97	31.19	26.32	26.27	11.62	4.22
RSTRSD12	36.00	34	11	4.15	0.00	4.15	42.71	43.38	42.97	31.26	24.55	24.56	11.62	3.31
RSTRSD12	36.00	34	12	0.49	0.00	0.49	42.71	43.38	42.97	27.02	21.15	21.19	11.62	-0.44
RSTRSD12	36.00	34	13	-1.32	-1.39	0.07	42.71	43.38	42.97	24.57	19.90	19.94	11.62	-2.27
RSTRSD12	36.00	34	14	1.09	0.00	1.09	42.71	43.38	42.97	27.59	21.48	22.19	11.62	0.17
RSTRSD12	36.00	34	15	0.14	0.00	0.14	42.71	43.38	42.97	26.75	20.46	21.06	11.62	-0.80
RSTRSD12	36.00	34	16	-2.37	-2.44	0.07	42.71	43.38	42.97	23.94	18.23	18.64	11.62	-3.34
RSTRSD12	36.00	34	17	-2.80	-2.88	0.08	42.71	43.38	42.97	23.31	18.03	18.36	11.62	-3.77
RSTRSD12	36.00	36	1	0.50	0.00	0.50	41.69	42.95	43.39	26.47	21.86	21.62	10.81	-0.41
RSTRSD12	36.00	36	2	3.43	0.00	3.43	41.69	42.95	43.39	29.17	25.41	24.78	10.81	2.59
RSTRSD12	36.00	36	3	9.78	0.00	9.78	41.69	42.95	43.39	34.93	34.68	33.61	10.81	9.52
RSTRSD12	36.00	36	4	10.96	0.00	10.96	41.69	42.95	43.39	35.46	38.04	42.18	10.81	10.96
RSTRSD12	36.00	36	5	4.19	0.00	4.19	41.69	42.95	43.39	29.03	26.78	28.15	10.81	3.39
RSTRSD12	36.00	36	6	-3.55	-0.85	-2.70	41.69	42.95	43.39	20.52	19.19	25.13	10.81	-4.52
RSTRSD12	36.00	36	7	2.85	0.00	2.85	41.69	42.95	43.39	27.00	25.17	36.03	10.81	1.99
RSTRSD12	36.00	36	8	4.82	0.00	4.82	41.69	42.95	43.39	28.28	33.30	43.47	10.81	4.05
RSTRSD12	36.00	36	9	6.58	0.00	6.58	41.69	42.95	43.39	30.24	36.25	36.51	10.81	5.92
RSTRSD12	36.00	36	10	3.24	0.00	3.24	41.69	42.95	43.39	28.11	26.24	26.35	10.81	2.40
RSTRSD12	36.00	36	11	2.44	0.00	2.44	41.69	42.95	43.39	27.79	24.54	24.58	10.81	1.57
RSTRSD12	36.00	36	12	-0.33	-0.57	0.24	41.69	42.95	43.39	25.36	21.16	21.18	10.81	-1.27
RSTRSD12	36.00	36	13	-1.40	-1.58	0.18	41.69	42.95	43.39	24.43	19.92	19.92	10.81	-2.35
RSTRSD12	36.00	36	14	0.02	-0.23	0.25	41.69	42.95	43.39	25.50	22.16	21.51	10.81	-0.90
RSTRSD12	36.00	36	15	-0.84	-1.03	0.19	41.69	42.95	43.39	24.77	21.04	20.48	10.81	-1.78
RSTRSD12	36.00	36	16	-3.11	-3.25	0.14	41.69	42.95	43.39	22.50	18.61	18.26	10.81	-4.08
RSTRSD12	36.00	36	17	-3.49	-3.63	0.14	41.69	42.95	43.39	22.01	18.33	18.05	10.81	-4.45
RSTRSD12	36.00	38	1	1.54	0.00	1.54	42.71	43.38	42.97	28.79	21.60	21.88	11.62	0.63
RSTRSD12	36.00	38	2	4.85	0.00	4.85	42.71	43.38	42.97	32.32	24.75	25.43	11.62	4.04
RSTRSD12	36.00	38	3	12.24	0.00	12.24	42.71	43.38	42.97	39.69	33.58	34.70	11.62	12.37
RSTRSD12	36.00	38	4	13.40	0.00	13.40	42.71	43.38	42.97	39.00	42.15	38.05	11.62	13.95
RSTRSD12	36.00	38	5	1.68	0.00	1.68	42.71	43.38	42.97	25.59	28.12	26.81	11.62	0.77
RSTRSD12	36.00	38	6	-2.18	0.00	-2.18	42.71	43.38	42.97	22.34	25.10	19.22	11.62	-3.15
RSTRSD12	36.00	38	7	4.30	0.00	4.30	42.71	43.38	42.97	28.95	36.00	25.20	11.62	3.46
RSTRSD12	36.00	38	8	11.22	0.00	11.22	42.71	43.38	42.97	36.41	43.44	33.30	11.62	11.09
RSTRSD12	36.00	38	9	9.63	0.00	9.63	42.71	43.38	42.97	33.95	36.48	36.18	11.62	9.22
RSTRSD12	36.00	38	10	4.72	0.00	4.72	42.71	43.38	42.97	30.56	26.32	26.26	11.62	3.90
RSTRSD12	36.00	38	11	3.73	0.00	3.73	42.71	43.38	42.97	30.25	24.55	24.56	11.62	2.87
RSTRSD12	36.00	38	12	0.34	0.00	0.34	42.71	43.38	42.97	26.68	21.15	21.19	11.62	-0.60
RSTRSD12	36.00	38	13	-1.36	-1.43	0.07	42.71	43.38	42.97	24.48	19.90	19.94	11.62	-2.32
RSTRSD12	36.00	38	14	1.38	0.00	1.38	42.71	43.38	42.97	28.26	21.48	22.19	11.62	0.47
RSTRSD12	36.00	38	15	0.44	0.00	0.44	42.71	43.38	42.97	27.48	20.46	21.06	11.62	-0.49
RSTRSD12	36.00	38	16	-1.90	-1.97	0.07	42.71	43.38	42.97	25.02	18.23	18.63	11.62	-2.86
RSTRSD12	36.00	38	17	-2.24	-2.33	0.09	42.71	43.38	42.97	24.55	18.03	18.36	11.62	-3.20
RSTRSD12	36.00	40	1	-0.36	-0.57	0.21	41.71	42.95	42.97	23.62	21.86		11.22	-1.30
RSTRSD12	36.00	40	2	2.50	0.00	2.50	41.71	42.95	42.97	26.41	25.41		11.22	1.62
RSTRSD12	36.00	40	3	9.27	0.00	9.27	41.71	42.95	42.97	33.35	34.67		11.22	8.87
RSTRSD12	36.00	40	4	11.11	0.00	11.11	41.71	42.95	42.97	35.42	38.02		11.22	11.05
RSTRSD12	36.00	40	5	4.79	0.00	4.79	41.71	42.95	42.97	29.02	26.78		11.22	4.00
RSTRSD12	36.00	40	6	-3.36	-0.47	-2.89	41.71	42.95	42.97	20.52	19.19		11.22	-4.33
RSTRSD12	36.00	40	7	2.92	0.00	2.92	41.71	42.95	42.97	26.98	25.17		11.22	2.05
RSTRSD12	36.00	40	8	4.91	0.00	4.91	41.71	42.95	42.97	28.33	33.28		11.22	4.12
RSTRSD12	36.00	40	9	6.67	0.00	6.67	41.71	42.95	42.97	30.16	36.15		11.22	5.99
RSTRSD12	36.00	40	10	1.95	0.00	1.95	41.71	42.95	42.97	25.61	26.23		11.22	1.05
RSTRSD12	36.00	40	11	0.94	0.00	0.94	41.71	42.95	42.97	24.68	24.53		11.22	0.02
RSTRSD12	36.00	40	12	-1.78	-1.95	0.17	41.71	42.95	42.97	22.04	21.16		11.22	-2.73
RSTRSD12	36.00	40	13	-2.67	-2.81	0.14	41.71	42.95	42.97	21.21	19.91		11.22	-3.63
RSTRSD12	36.00	40	14	-1.23	-1.46	0.23	41.71	42.95	42.97	22.50	22.16		11.22	-2.18
RSTRSD12	36.00	40	15	-2.05	-2.24	0.19	41.71	42.95	42.97	21.73	21.03		11.22	-3.01
RSTRSD12	36.00	40	16	-4.37	-4.49	0.12	41.71	42.95	42.97	19.42	18.61		11.22	-5.34
RSTRSD12	36.00	40	17	-4.84	-4.95	0.11	41.71	42.95	42.97	18.91	18.33		11.22	-5.82
RSTRSA21	56.00	25	1	-1.38	-1.89	0.51	50.06	20.45	53.54	31.03	15.34	39.09	-1.58	-1.36
RSTRSA21	56.00	25	2	3.80	0.00	3.80	50.06	20.45	53.54	38.44	25.01	44.19	-1.58	7.88
RSTRSA21	56.00	25	3	3.75	0.00	3.75	50.06	20.45	53.54	36.71	26.03	33.96	-1.58	7.72
RSTRSA21	56.00	25	4	4.13	0.00	4.13	50.06	20.45	53.54	38.39	26.99	36.58	-1.58	9.04
RSTRSA21	56.00	25	5	4.59	0.00	4.59	50.06	20.45	53.54	41.11	28.80	39.79	-1.58	11.19
RSTRSA21	56.00	25	6	4.63	0.00	4.63	50.06	20.45	53.54	41.75	28.75	43.19	-1.58	11.44
RSTRSA21	56.00	25	7	4.57	0.00	4.57	50.06	20.45	53.54	39.41	29.11	47.16	-1.58	11.05
RSTRSA21	56.00	25	8	4.42	0.00	4.42	50.06	20.45	53.54	38.51	28.40	49.78	-1.58	10.30
RSTRSA21	56.00	25	9	4.09	0.00	4.09	50.06	20.45	53.54	37.42	26.77	53.28	-1.58	8.88
RSTRSA21	56.00	25	10	-0.60	-1.81	1.21	50.06	20.45	53.54	28.55	17.35	46.87	-1.58	-0.35
RSTRSA21	56.00	25	11	3.79	0.00	3.79	50.06	20.45	53.54	39.26	24.70	54.02	-1.58	7.83
RSTRSA21	56.00	25	12	-0.88	-1.84	0.96	50.06	20.45	53.54	32.08	15.90	45.65	-1.58	-0.72
RSTRSA21	56.00	25	13	4.01	0.00	4.01	50.06	20.45	53.54	44.18	24.90	53.70	-1.58	8.59
RSTRSA21	56.00	25	14	4.33	0.00	4.33	50.06	20.45	53.54	46.87	26.09	53.33	-1.58	9.86
RSTRSA21	56.00	25	15	3.21	0.00	3.21	50.06	20.45	53.54	42.83	22.47	48.08	-1.58	6.21
RSTRSA21	56.00	27	1	2.74	-0.25	2.99	50.99	53.52	51.47	30.17	39.06	19.75	20.09	1.75
RSTRSA21	56.00	27	2	11.98	0.00	11.98	50.99	53.52	51.47	37.78	44.16	30.69	20.09	11.11
RSTRSA21	56.00	27	3	10.82	0.00	10.82	50.99	53.52	51.47	36.28	33.94	31.77	20.09	9.92
RSTRSA21	56.00	27	4	12.49	0.00	12.49	50.99	53.52	51.47	37.92	36.55	33.17	20.09	11.64
RSTRSA21	56.00	27	5	15.17	0.00	15.17	50.99	53.52	51.47	40.73	39.77	35.84	20.09	14.46
RSTRSA21	56.00	27	6	15.96	0.00	15.96	50.99	53.52	51.47	41.41	43.16	36.29	20.09	15.31
RSTRSA21	56.00	27	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.14	37.82	20.09	14.10

RSTRSA21	56.00	27	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSA21	56.00	27	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSA21	56.00	27	10	4.08	-0.93	5.01	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSA21	56.00	27	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.99	31.41	20.09	12.61
RSTRSA21	56.00	27	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.62	21.66	20.09	4.62
RSTRSA21	56.00	27	13	14.36	0.00	14.36	50.99	53.52	51.47	47.47	53.67	30.09	20.09	13.60
RSTRSA21	56.00	27	14	14.87	0.00	14.87	50.99	53.52	51.47	46.95	53.31	30.77	20.09	14.13
RSTRSA21	56.00	27	15	10.52	0.00	10.52	50.99	53.52	51.47	40.20	48.05	26.73	20.09	9.62
RSTRSA21	56.00	29	1	2.79	0.00	2.79	49.89	51.45	53.54	30.40	19.72	39.08	19.18	1.81
RSTRSA21	56.00	29	2	11.95	0.00	11.95	49.89	51.45	53.54	37.80	30.66	44.35	19.18	11.12
RSTRSA21	56.00	29	3	10.91	0.00	10.91	49.89	51.45	53.54	36.41	31.74	34.28	19.18	10.04
RSTRSA21	56.00	29	4	12.55	0.00	12.55	49.89	51.45	53.54	38.04	33.15	36.88	19.18	11.75
RSTRSA21	56.00	29	5	15.47	0.00	15.47	49.89	51.45	53.54	41.37	35.81	40.13	19.18	14.86
RSTRSA21	56.00	29	6	16.27	0.00	16.27	49.89	51.45	53.54	42.10	36.26	43.53	19.18	15.74
RSTRSA21	56.00	29	7	15.53	0.00	15.53	49.89	51.45	53.54	40.06	37.79	47.16	19.18	14.92
RSTRSA21	56.00	29	8	14.98	0.00	14.98	49.89	51.45	53.54	39.38	37.21	49.78	19.18	14.33
RSTRSA21	56.00	29	9	13.72	0.00	13.72	49.89	51.45	53.54	38.16	35.27	53.28	19.18	12.97
RSTRSA21	56.00	29	10	4.41	0.00	4.41	49.89	51.45	53.54	28.81	25.14	46.87	19.18	3.44
RSTRSA21	56.00	29	11	12.99	0.00	12.99	49.89	51.45	53.54	39.06	31.38	54.01	19.18	12.20
RSTRSA21	56.00	29	12	4.51	0.00	4.51	49.89	51.45	53.54	31.75	21.63	45.72	19.18	3.54
RSTRSA21	56.00	29	13	13.78	0.00	13.78	49.89	51.45	53.54	43.91	30.06	53.75	19.18	13.04
RSTRSA21	56.00	29	14	14.72	0.00	14.72	49.89	51.45	53.54	46.44	30.74	53.36	19.18	14.04
RSTRSA21	56.00	29	15	10.85	0.00	10.85	49.89	51.45	53.54	42.26	26.70	48.06	19.18	9.97
RSTRSA21	56.00	31	1	2.73	-0.25	2.98	50.99	53.52	51.47	30.17	39.05	19.74	20.09	1.75
RSTRSA21	56.00	31	2	11.90	0.00	11.90	50.99	53.52	51.47	37.77	44.32	30.50	20.09	11.03
RSTRSA21	56.00	31	3	9.96	0.00	9.96	50.99	53.52	51.47	36.28	34.25	28.96	20.09	9.04
RSTRSA21	56.00	31	4	11.78	0.00	11.78	50.99	53.52	51.47	37.92	36.86	30.91	20.09	10.91
RSTRSA21	56.00	31	5	14.48	0.00	14.48	50.99	53.52	51.47	40.73	40.11	33.61	20.09	13.72
RSTRSA21	56.00	31	6	15.56	0.00	15.56	50.99	53.52	51.47	41.41	43.50	35.00	20.09	14.88
RSTRSA21	56.00	31	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.14	37.82	20.09	14.10
RSTRSA21	56.00	31	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSA21	56.00	31	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSA21	56.00	31	10	4.08	-0.17	4.25	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSA21	56.00	31	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.99	31.41	20.09	12.61
RSTRSA21	56.00	31	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.69	21.65	20.09	4.61
RSTRSA21	56.00	31	13	14.35	0.00	14.35	50.99	53.52	51.47	47.47	53.72	30.08	20.09	13.59
RSTRSA21	56.00	31	14	14.86	0.00	14.86	50.99	53.52	51.47	46.94	53.33	30.76	20.09	14.13
RSTRSA21	56.00	31	15	10.52	0.00	10.52	50.99	53.52	51.47	40.19	48.04	26.73	20.09	9.62
RSTRSA21	56.00	33	1	2.79	0.00	2.79	49.90	51.45	53.54	30.39	19.72	39.05	19.18	1.81
RSTRSA21	56.00	33	2	11.89	0.00	11.89	49.90	51.45	53.54	37.79	30.47	46.63	19.18	11.06
RSTRSA21	56.00	33	3	10.39	0.00	10.39	49.90	51.45	53.54	36.41	28.94	40.26	19.18	9.51
RSTRSA21	56.00	33	4	12.13	0.00	12.13	49.90	51.45	53.54	38.04	30.88	42.84	19.18	11.31
RSTRSA21	56.00	33	5	15.04	0.00	15.04	49.90	51.45	53.54	41.37	33.59	48.12	19.18	14.39
RSTRSA21	56.00	33	6	16.02	0.00	16.02	49.90	51.45	53.54	42.10	34.97	51.26	19.18	15.46
RSTRSA21	56.00	33	7	15.53	0.00	15.53	49.90	51.45	53.54	40.06	37.79	47.16	19.18	14.92
RSTRSA21	56.00	33	8	14.98	0.00	14.98	49.90	51.45	53.54	39.38	37.21	49.78	19.18	14.33
RSTRSA21	56.00	33	9	13.72	0.00	13.72	49.90	51.45	53.54	38.16	35.27	53.28	19.18	12.97
RSTRSA21	56.00	33	10	4.41	0.00	4.41	49.90	51.45	53.54	28.81	25.14	46.87	19.18	3.44
RSTRSA21	56.00	33	11	12.99	0.00	12.99	49.90	51.45	53.54	39.06	31.38	54.01	19.18	12.20
RSTRSA21	56.00	33	12	4.51	0.00	4.51	49.90	51.45	53.54	31.75	21.63	46.01	19.18	3.54
RSTRSA21	56.00	33	13	13.78	0.00	13.78	49.90	51.45	53.54	43.90	30.05	53.92	19.18	13.04
RSTRSA21	56.00	33	14	14.71	0.00	14.71	49.90	51.45	53.54	46.43	30.74	53.43	19.18	14.04
RSTRSA21	56.00	33	15	10.84	0.00	10.84	49.90	51.45	53.54	42.25	26.70	48.12	19.18	9.97
RSTRSA21	56.00	35	1	2.73	-0.41	3.14	50.99	53.52	51.47	30.17	39.03	19.75	20.09	1.75
RSTRSA21	56.00	35	2	12.00	0.00	12.00	50.99	53.52	51.47	37.77	46.60	30.66	20.09	11.13
RSTRSA21	56.00	35	3	11.18	0.00	11.18	50.99	53.52	51.47	36.28	40.23	31.15	20.09	10.29
RSTRSA21	56.00	35	4	12.77	0.00	12.77	50.99	53.52	51.47	37.92	42.81	32.70	20.09	11.94
RSTRSA21	56.00	35	5	15.46	0.00	15.46	50.99	53.52	51.47	40.73	48.09	35.37	20.09	14.77
RSTRSA21	56.00	35	6	16.11	0.00	16.11	50.99	53.52	51.47	41.41	51.23	36.05	20.09	15.47
RSTRSA21	56.00	35	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.13	37.82	20.09	14.10
RSTRSA21	56.00	35	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSA21	56.00	35	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSA21	56.00	35	10	4.08	-0.22	4.30	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSA21	56.00	35	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.98	31.41	20.09	12.61
RSTRSA21	56.00	35	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.98	21.66	20.09	4.61
RSTRSA21	56.00	35	13	14.36	0.00	14.36	50.99	53.52	51.47	47.47	53.89	30.08	20.09	13.59
RSTRSA21	56.00	35	14	14.86	0.00	14.86	50.99	53.52	51.47	46.94	53.40	30.77	20.09	14.13
RSTRSA21	56.00	35	15	10.52	0.00	10.52	50.99	53.52	51.47	40.19	48.10	26.73	20.09	9.62
RSTRSA21	56.00	37	1	2.71	0.00	2.71	49.90	51.45	53.54	30.37	19.72	33.71	19.18	1.73
RSTRSA21	56.00	37	2	11.96	0.00	11.96	49.90	51.45	53.54	37.78	30.63	46.53	19.18	11.13
RSTRSA21	56.00	37	3	11.09	0.00	11.09	49.90	51.45	53.54	36.41	31.12	37.72	19.18	10.22
RSTRSA21	56.00	37	4	12.72	0.00	12.72	49.90	51.45	53.54	38.04	32.68	40.77	19.18	11.92
RSTRSA21	56.00	37	5	15.65	0.00	15.65	49.90	51.45	53.54	41.36	35.35	44.93	19.18	15.05
RSTRSA21	56.00	37	6	16.38	0.00	16.38	49.90	51.45	53.54	42.09	36.02	49.19	19.18	15.86
RSTRSA21	56.00	37	7	15.53	0.00	15.53	49.90	51.45	53.54	40.05	37.79	47.15	19.18	14.92
RSTRSA21	56.00	37	8	14.98	0.00	14.98	49.90	51.45	53.54	39.38	37.21	49.78	19.18	14.32
RSTRSA21	56.00	37	9	13.72	0.00	13.72	49.90	51.45	53.54	38.15	35.27	53.27	19.18	12.97
RSTRSA21	56.00	37	10	4.40	0.00	4.40	49.90	51.45	53.54	28.80	25.14	46.86	19.18	3.43
RSTRSA21	56.00	37	11	12.97	0.00	12.97	49.90	51.45	53.54	39.04	31.38	53.85	19.18	12.18
RSTRSA21	56.00	37	12	4.49	0.00	4.49	49.90	51.45	53.54	31.69	21.63	45.63	19.18	3.52
RSTRSA21	56.00	37	13	13.77	0.00	13.77	49.90	51.45	53.54	43.84	30.06	53.42	19.18	13.02
RSTRSA21	56.00	37	14	14.71	0.00	14.71	49.90	51.45	53.54	46.40	30.74	52.82	19.18	14.03
RSTRSA21	56.00	37	15	10.83	0.00	10.83	49.90	51.45	53.54	42.22	26.70	46.54	19.18	9.96
RSTRSA21	56.00	39	1	2.62	-0.47	3.09	48.93	53.52	51.47	30.11	33.69	19.74	18.35	1.65
RSTRSA21	56.00	39	2	11.76	0.00	11.76	48.93	53.52	51.47	37.66	46.51	30.40	18.35	10.96
RSTRSA21	56.00	39	3	9.75	0.00	9.75	48.93	53.52	51.47	36.21	37.69	28.03	18.35	8.88
RSTRSA21	56.00	39	4	11.59	0.00	11.59	48.93	53.52	51.47	37.83	40.74	30.11	18.35	10.78
RSTRSA21	56.00	39	5	14.21	0.00	14.21	48.93	53.52	51.47	40.57	44.90	32.82	18.35	13.55
RSTRSA21	56.00	39	6	15.25	0.00	15.25	48.93	53.52	51.47	41.16	49.17	34.47	18.35	14.69
RSTRSA21	56.00	39	7	14.64	0.00	14.64	48.93	53.52	51.47	38.92	47.13	37.82	18.35	14.03
RSTRSA21	56.00	39	8	13.87	0.00	13.87	48.93	53.52	51.47	37.98	49.76	37.24	18.35	13.19
RSTRSA21	56.00	39	9	12.69	0.00	12.69	48.93	53.52	51.47	36.83	53.25	35.29	18.35	11.93
RSTRSA21	56.00	39	10	3.74	-0.40	4.14	48.93	53.52	51.47	27.91	46.83	25.16	18.35	2.77
RSTRSA21	56.00	39	11	12.73	0.00	12.73	48.93	53.52	51.47	38.62	53.82	31.41	18.35	11.98

RSTRSA21	56.00	39	12	4.45	0.00	4.45	48.93	53.52	51.47	31.58	45.60	21.65	18.35	3.49
RSTRSA21	56.00	39	13	13.68	0.00	13.68	48.93	53.52	51.47	43.61	53.40	30.08	18.35	12.99
RSTRSA21	56.00	39	14	14.56	0.00	14.56	48.93	53.52	51.47	45.71	52.79	30.76	18.35	13.94
RSTRSA21	56.00	39	15	10.42	0.00	10.42	48.93	53.52	51.47	40.02	46.52	26.72	18.35	9.56
RSTRSD21	56.00	25	1	-1.38	-1.89	0.51	50.06	20.45	53.54	31.03	15.34	39.09	-1.58	-1.36
RSTRSD21	56.00	25	2	3.80	0.00	3.80	50.06	20.45	53.54	38.44	25.01	44.19	-1.58	7.88
RSTRSD21	56.00	25	3	3.75	0.00	3.75	50.06	20.45	53.54	36.71	26.03	33.96	-1.58	7.72
RSTRSD21	56.00	25	4	4.13	0.00	4.13	50.06	20.45	53.54	38.39	26.99	36.58	-1.58	9.04
RSTRSD21	56.00	25	5	4.59	0.00	4.59	50.06	20.45	53.54	41.11	28.80	39.79	-1.58	11.19
RSTRSD21	56.00	25	6	4.63	0.00	4.63	50.06	20.45	53.54	41.75	28.75	43.19	-1.58	11.44
RSTRSD21	56.00	25	7	4.57	0.00	4.57	50.06	20.45	53.54	39.41	29.11	47.16	-1.58	11.05
RSTRSD21	56.00	25	8	4.42	0.00	4.42	50.06	20.45	53.54	38.51	28.40	49.78	-1.58	10.30
RSTRSD21	56.00	25	9	4.09	0.00	4.09	50.06	20.45	53.54	37.42	26.77	53.28	-1.58	8.88
RSTRSD21	56.00	25	10	-0.60	-1.81	1.21	50.06	20.45	53.54	28.55	17.35	46.87	-1.58	-0.35
RSTRSD21	56.00	25	11	3.79	0.00	3.79	50.06	20.45	53.54	39.26	24.70	54.02	-1.58	7.83
RSTRSD21	56.00	25	12	-0.88	-1.84	0.96	50.06	20.45	53.54	32.08	15.90	45.65	-1.58	-0.72
RSTRSD21	56.00	25	13	4.01	0.00	4.01	50.06	20.45	53.54	44.18	24.90	53.70	-1.58	8.59
RSTRSD21	56.00	25	14	4.33	0.00	4.33	50.06	20.45	53.54	46.87	26.09	53.33	-1.58	9.86
RSTRSD21	56.00	25	15	3.21	0.00	3.21	50.06	20.45	53.54	42.83	22.47	48.08	-1.58	6.21
RSTRSD21	56.00	27	1	2.74	-0.25	2.99	50.99	53.52	51.47	30.17	39.06	19.75	20.09	1.75
RSTRSD21	56.00	27	2	11.98	0.00	11.98	50.99	53.52	51.47	37.78	44.16	30.69	20.09	11.11
RSTRSD21	56.00	27	3	10.82	0.00	10.82	50.99	53.52	51.47	36.28	33.94	31.77	20.09	9.92
RSTRSD21	56.00	27	4	12.49	0.00	12.49	50.99	53.52	51.47	37.92	36.55	33.17	20.09	11.64
RSTRSD21	56.00	27	5	15.17	0.00	15.17	50.99	53.52	51.47	40.73	39.77	35.84	20.09	14.46
RSTRSD21	56.00	27	6	15.96	0.00	15.96	50.99	53.52	51.47	41.41	43.16	36.29	20.09	15.31
RSTRSD21	56.00	27	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.14	37.82	20.09	14.10
RSTRSD21	56.00	27	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSD21	56.00	27	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSD21	56.00	27	10	4.08	-0.93	5.01	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSD21	56.00	27	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.99	31.41	20.09	12.61
RSTRSD21	56.00	27	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.62	21.66	20.09	4.62
RSTRSD21	56.00	27	13	14.36	0.00	14.36	50.99	53.52	51.47	47.47	53.67	30.09	20.09	13.60
RSTRSD21	56.00	27	14	14.87	0.00	14.87	50.99	53.52	51.47	46.95	53.31	30.77	20.09	14.13
RSTRSD21	56.00	27	15	10.52	0.00	10.52	50.99	53.52	51.47	40.20	48.05	26.73	20.09	9.62
RSTRSD21	56.00	29	1	2.79	0.00	2.79	49.89	51.45	53.54	30.40	19.72	39.08	19.18	1.81
RSTRSD21	56.00	29	2	11.95	0.00	11.95	49.89	51.45	53.54	37.80	30.66	44.35	19.18	11.12
RSTRSD21	56.00	29	3	10.91	0.00	10.91	49.89	51.45	53.54	36.41	31.74	34.28	19.18	10.04
RSTRSD21	56.00	29	4	12.55	0.00	12.55	49.89	51.45	53.54	38.04	33.15	36.88	19.18	11.75
RSTRSD21	56.00	29	5	15.47	0.00	15.47	49.89	51.45	53.54	41.37	35.81	40.13	19.18	14.86
RSTRSD21	56.00	29	6	16.27	0.00	16.27	49.89	51.45	53.54	42.10	36.26	43.53	19.18	15.74
RSTRSD21	56.00	29	7	15.53	0.00	15.53	49.89	51.45	53.54	40.06	37.79	47.16	19.18	14.92
RSTRSD21	56.00	29	8	14.98	0.00	14.98	49.89	51.45	53.54	39.38	37.21	49.78	19.18	14.33
RSTRSD21	56.00	29	9	13.72	0.00	13.72	49.89	51.45	53.54	38.16	35.27	53.28	19.18	12.97
RSTRSD21	56.00	29	10	4.41	0.00	4.41	49.89	51.45	53.54	28.81	25.14	46.87	19.18	3.44
RSTRSD21	56.00	29	11	12.99	0.00	12.99	49.89	51.45	53.54	39.06	31.38	54.01	19.18	12.20
RSTRSD21	56.00	29	12	4.51	0.00	4.51	49.89	51.45	53.54	31.75	21.63	45.72	19.18	3.54
RSTRSD21	56.00	29	13	13.78	0.00	13.78	49.89	51.45	53.54	43.91	30.06	53.75	19.18	13.04
RSTRSD21	56.00	29	14	14.72	0.00	14.72	49.89	51.45	53.54	46.44	30.74	53.36	19.18	14.04
RSTRSD21	56.00	29	15	10.85	0.00	10.85	49.89	51.45	53.54	42.26	26.70	48.06	19.18	9.97
RSTRSD21	56.00	31	1	2.73	-0.25	2.98	50.99	53.52	51.47	30.17	39.05	19.74	20.09	1.75
RSTRSD21	56.00	31	2	11.90	0.00	11.90	50.99	53.52	51.47	37.77	44.32	30.50	20.09	11.03
RSTRSD21	56.00	31	3	9.96	0.00	9.96	50.99	53.52	51.47	36.28	34.25	28.96	20.09	9.04
RSTRSD21	56.00	31	4	11.78	0.00	11.78	50.99	53.52	51.47	37.92	36.86	30.91	20.09	10.91
RSTRSD21	56.00	31	5	14.48	0.00	14.48	50.99	53.52	51.47	40.73	40.11	33.61	20.09	13.72
RSTRSD21	56.00	31	6	15.56	0.00	15.56	50.99	53.52	51.47	41.41	43.50	35.00	20.09	14.88
RSTRSD21	56.00	31	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.14	37.82	20.09	14.10
RSTRSD21	56.00	31	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSD21	56.00	31	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSD21	56.00	31	10	4.08	-0.17	4.25	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSD21	56.00	31	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.99	31.41	20.09	12.61
RSTRSD21	56.00	31	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.69	21.65	20.09	4.61
RSTRSD21	56.00	31	13	14.35	0.00	14.35	50.99	53.52	51.47	47.47	53.72	30.08	20.09	13.59
RSTRSD21	56.00	31	14	14.86	0.00	14.86	50.99	53.52	51.47	46.94	53.33	30.76	20.09	14.13
RSTRSD21	56.00	31	15	10.52	0.00	10.52	50.99	53.52	51.47	40.19	48.04	26.73	20.09	9.62
RSTRSD21	56.00	33	1	2.79	0.00	2.79	49.90	51.45	53.54	30.39	19.72	39.05	19.18	1.81
RSTRSD21	56.00	33	2	11.89	0.00	11.89	49.90	51.45	53.54	37.79	30.47	46.63	19.18	11.06
RSTRSD21	56.00	33	3	10.39	0.00	10.39	49.90	51.45	53.54	36.41	28.94	40.26	19.18	9.51
RSTRSD21	56.00	33	4	12.13	0.00	12.13	49.90	51.45	53.54	38.04	30.88	42.84	19.18	11.31
RSTRSD21	56.00	33	5	15.04	0.00	15.04	49.90	51.45	53.54	41.37	33.59	48.12	19.18	14.39
RSTRSD21	56.00	33	6	16.02	0.00	16.02	49.90	51.45	53.54	42.10	34.97	51.26	19.18	15.46
RSTRSD21	56.00	33	7	15.53	0.00	15.53	49.90	51.45	53.54	40.06	37.79	47.16	19.18	14.92
RSTRSD21	56.00	33	8	14.98	0.00	14.98	49.90	51.45	53.54	39.38	37.21	49.78	19.18	14.33
RSTRSD21	56.00	33	9	13.72	0.00	13.72	49.90	51.45	53.54	38.16	35.27	53.28	19.18	12.97
RSTRSD21	56.00	33	10	4.41	0.00	4.41	49.90	51.45	53.54	28.81	25.14	46.87	19.18	3.44
RSTRSD21	56.00	33	11	12.99	0.00	12.99	49.90	51.45	53.54	39.06	31.38	54.01	19.18	12.20
RSTRSD21	56.00	33	12	4.51	0.00	4.51	49.90	51.45	53.54	31.75	21.63	46.01	19.18	3.54
RSTRSD21	56.00	33	13	13.78	0.00	13.78	49.90	51.45	53.54	43.90	30.05	53.92	19.18	13.04
RSTRSD21	56.00	33	14	14.71	0.00	14.71	49.90	51.45	53.54	46.43	30.74	53.43	19.18	14.04
RSTRSD21	56.00	33	15	10.84	0.00	10.84	49.90	51.45	53.54	42.25	26.70	48.12	19.18	9.97
RSTRSD21	56.00	35	1	2.73	-0.41	3.14	50.99	53.52	51.47	30.17	39.03	19.75	20.09	1.75
RSTRSD21	56.00	35	2	12.00	0.00	12.00	50.99	53.52	51.47	37.77	46.60	30.66	20.09	11.13
RSTRSD21	56.00	35	3	11.18	0.00	11.18	50.99	53.52	51.47	36.28	40.23	31.15	20.09	10.29
RSTRSD21	56.00	35	4	12.77	0.00	12.77	50.99	53.52	51.47	37.92	42.81	32.70	20.09	11.94
RSTRSD21	56.00	35	5	15.46	0.00	15.46	50.99	53.52	51.47	40.73	48.09	35.37	20.09	14.77
RSTRSD21	56.00	35	6	16.11	0.00	16.11	50.99	53.52	51.47	41.41	51.23	36.05	20.09	15.47
RSTRSD21	56.00	35	7	14.84	0.00	14.84	50.99	53.52	51.47	39.02	47.13	37.82	20.09	14.10
RSTRSD21	56.00	35	8	14.06	0.00	14.06	50.99	53.52	51.47	38.09	49.76	37.24	20.09	13.28
RSTRSD21	56.00	35	9	12.91	0.00	12.91	50.99	53.52	51.47	37.01	53.25	35.29	20.09	12.08
RSTRSD21	56.00	35	10	4.08	-0.22	4.30	50.99	53.52	51.47	28.35	46.84	25.16	20.09	3.10
RSTRSD21	56.00	35	11	13.42	0.00	13.42	50.99	53.52	51.47	39.87	53.98	31.41	20.09	12.61
RSTRSD21	56.00	35	12	5.58	0.00	5.58	50.99	53.52	51.47	35.38	45.98	21.66	20.09	4.61
RSTRSD21	56.00	35	13	14.36	0.00	14.36	50.99	53.52	51.47	47.47	53.89	30.08	20.09	13.59
RSTRSD21	56.00	35	14	14.86	0.00	14.86	50.99	53.52	51.47	46.94	53.40	30.77	20.09	14.13

RSTRSD21	56.00	35	15	10.52	0.00	10.52	50.99	53.52	51.47	40.19	48.10	26.73	20.09	9.62
RSTRSD21	56.00	37	1	2.71	0.00	2.71	49.90	51.45	53.54	30.37	19.72	33.71	19.18	1.73
RSTRSD21	56.00	37	2	11.96	0.00	11.96	49.90	51.45	53.54	37.78	30.63	46.53	19.18	11.13
RSTRSD21	56.00	37	3	11.09	0.00	11.09	49.90	51.45	53.54	36.41	31.12	37.72	19.18	10.22
RSTRSD21	56.00	37	4	12.72	0.00	12.72	49.90	51.45	53.54	38.04	32.68	40.77	19.18	11.92
RSTRSD21	56.00	37	5	15.65	0.00	15.65	49.90	51.45	53.54	41.36	35.35	44.93	19.18	15.05
RSTRSD21	56.00	37	6	16.38	0.00	16.38	49.90	51.45	53.54	42.09	36.02	49.19	19.18	15.86
RSTRSD21	56.00	37	7	15.53	0.00	15.53	49.90	51.45	53.54	40.05	37.79	47.15	19.18	14.92
RSTRSD21	56.00	37	8	14.98	0.00	14.98	49.90	51.45	53.54	39.38	37.21	49.78	19.18	14.32
RSTRSD21	56.00	37	9	13.72	0.00	13.72	49.90	51.45	53.54	38.15	35.27	53.27	19.18	12.97
RSTRSD21	56.00	37	10	4.40	0.00	4.40	49.90	51.45	53.54	28.80	25.14	46.86	19.18	3.43
RSTRSD21	56.00	37	11	12.97	0.00	12.97	49.90	51.45	53.54	39.04	31.38	53.85	19.18	12.18
RSTRSD21	56.00	37	12	4.49	0.00	4.49	49.90	51.45	53.54	31.69	21.63	45.63	19.18	3.52
RSTRSD21	56.00	37	13	13.77	0.00	13.77	49.90	51.45	53.54	43.84	30.06	53.42	19.18	13.02
RSTRSD21	56.00	37	14	14.71	0.00	14.71	49.90	51.45	53.54	46.40	30.74	52.82	19.18	14.03
RSTRSD21	56.00	37	15	10.83	0.00	10.83	49.90	51.45	53.54	42.22	26.70	46.54	19.18	9.96
RSTRSD21	56.00	39	1	2.62	-0.47	3.09	48.93	53.52	51.47	30.11	33.69	19.74	18.35	1.65
RSTRSD21	56.00	39	2	11.76	0.00	11.76	48.93	53.52	51.47	37.66	46.51	30.40	18.35	10.96
RSTRSD21	56.00	39	3	9.75	0.00	9.75	48.93	53.52	51.47	36.21	37.69	28.03	18.35	8.88
RSTRSD21	56.00	39	4	11.59	0.00	11.59	48.93	53.52	51.47	37.83	40.74	30.11	18.35	10.78
RSTRSD21	56.00	39	5	14.21	0.00	14.21	48.93	53.52	51.47	40.57	44.90	32.82	18.35	13.55
RSTRSD21	56.00	39	6	15.25	0.00	15.25	48.93	53.52	51.47	41.16	49.17	34.47	18.35	14.69
RSTRSD21	56.00	39	7	14.64	0.00	14.64	48.93	53.52	51.47	38.92	47.13	37.82	18.35	14.03
RSTRSD21	56.00	39	8	13.87	0.00	13.87	48.93	53.52	51.47	37.98	49.76	37.24	18.35	13.19
RSTRSD21	56.00	39	9	12.69	0.00	12.69	48.93	53.52	51.47	36.83	53.25	35.29	18.35	11.93
RSTRSD21	56.00	39	10	3.74	-0.40	4.14	48.93	53.52	51.47	27.91	46.83	25.16	18.35	2.77
RSTRSD21	56.00	39	11	12.73	0.00	12.73	48.93	53.52	51.47	38.62	53.82	31.41	18.35	11.98
RSTRSD21	56.00	39	12	4.45	0.00	4.45	48.93	53.52	51.47	31.58	45.60	21.65	18.35	3.49
RSTRSD21	56.00	39	13	13.68	0.00	13.68	48.93	53.52	51.47	43.61	53.40	30.08	18.35	12.99
RSTRSD21	56.00	39	14	14.56	0.00	14.56	48.93	53.52	51.47	45.71	52.79	30.76	18.35	13.94
RSTRSD21	56.00	39	15	10.42	0.00	10.42	48.93	53.52	51.47	40.02	46.52	26.72	18.35	9.56
RSTRSA22	56.00	26	1	7.00	0.00	7.00	50.83	51.45	53.82	30.62	37.87	32.15	19.98	6.05
RSTRSA22	56.00	26	2	13.98	0.00	13.98	50.83	51.45	53.82	37.36	46.59	46.81	19.98	13.20
RSTRSA22	56.00	26	3	9.34	0.00	9.34	50.83	51.45	53.82	32.65	40.16	40.19	19.98	8.41
RSTRSA22	56.00	26	4	11.52	0.00	11.52	50.83	51.45	53.82	34.88	42.36	42.45	19.98	10.64
RSTRSA22	56.00	26	5	14.43	0.00	14.43	50.83	51.45	53.82	37.94	44.86	45.36	19.98	13.68
RSTRSA22	56.00	26	6	16.33	0.00	16.33	50.83	51.45	53.82	40.04	45.71	46.67	19.98	15.72
RSTRSA22	56.00	26	7	16.12	0.00	16.12	50.83	51.45	53.82	40.16	42.85	43.14	19.98	15.49
RSTRSA22	56.00	26	8	15.54	0.00	15.54	50.83	51.45	53.82	39.51	42.25	42.66	19.98	14.86
RSTRSA22	56.00	26	9	14.54	0.00	14.54	50.83	51.45	53.82	38.37	41.53	42.34	19.98	13.80
RSTRSA22	56.00	26	10	5.81	-1.42	7.23	50.83	51.45	53.82	29.32	32.61	35.05	19.98	4.84
RSTRSA22	56.00	26	11	16.41	0.00	16.41	50.83	51.45	53.82	40.37	41.86	48.22	19.98	15.81
RSTRSA22	56.00	26	12	11.04	0.00	11.04	50.83	51.45	53.82	35.50	32.12	44.60	19.98	10.15
RSTRSA22	56.00	26	13	21.64	0.00	21.64	50.83	51.45	53.82	47.68	44.00	52.25	19.98	22.14
RSTRSA22	56.00	26	14	22.00	0.00	22.00	50.83	51.45	53.82	47.53	49.15	48.95	19.98	22.66
RSTRSA22	56.00	26	15	17.01	0.00	17.01	50.83	51.45	53.82	42.10	48.69	37.88	19.98	16.47
RSTRSA22	56.00	28	1	1.53	-0.04	1.57	49.55	53.80	51.67	24.70	32.12	37.97	18.92	0.55
RSTRSA22	56.00	28	2	10.92	0.00	10.92	49.55	53.80	51.67	34.13	46.78	46.78	18.92	10.06
RSTRSA22	56.00	28	3	9.18	0.00	9.18	49.55	53.80	51.67	32.49	40.16	40.51	18.92	8.27
RSTRSA22	56.00	28	4	11.05	0.00	11.05	49.55	53.80	51.67	34.40	42.42	42.75	18.92	10.20
RSTRSA22	56.00	28	5	13.91	0.00	13.91	49.55	53.80	51.67	37.37	45.33	47.26	18.92	13.19
RSTRSA22	56.00	28	6	15.17	0.00	15.17	49.55	53.80	51.67	38.72	46.64	48.96	18.92	14.55
RSTRSA22	56.00	28	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.43	18.92	14.59
RSTRSA22	56.00	28	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.04	18.92	13.96
RSTRSA22	56.00	28	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.91	18.92	12.61
RSTRSA22	56.00	28	10	4.17	-1.52	5.69	49.55	53.80	51.67	27.41	35.02	35.93	18.92	3.20
RSTRSA22	56.00	28	11	12.62	0.00	12.62	49.55	53.80	51.67	36.01	48.19	42.64	18.92	11.83
RSTRSA22	56.00	28	12	4.09	0.00	4.09	49.55	53.80	51.67	27.36	44.58	32.11	18.92	3.12
RSTRSA22	56.00	28	13	12.81	0.00	12.81	49.55	53.80	51.67	36.16	52.23	43.99	18.92	12.03
RSTRSA22	56.00	28	14	13.39	0.00	13.39	49.55	53.80	51.67	36.72	48.92	49.22	18.92	12.64
RSTRSA22	56.00	28	15	9.15	0.00	9.15	49.55	53.80	51.67	32.45	37.85	48.94	18.92	8.24
RSTRSA22	56.00	30	1	7.00	0.00	7.00	50.83	51.65	53.82	30.62	37.94	32.15	20.00	6.05
RSTRSA22	56.00	30	2	14.01	0.00	14.01	50.83	51.65	53.82	37.39	46.75	46.78	20.00	13.23
RSTRSA22	56.00	30	3	9.56	0.00	9.56	50.83	51.65	53.82	32.88	40.48	40.19	20.00	8.64
RSTRSA22	56.00	30	4	11.71	0.00	11.71	50.83	51.65	53.82	35.08	42.73	42.45	20.00	10.84
RSTRSA22	56.00	30	5	14.68	0.00	14.68	50.83	51.65	53.82	38.16	47.23	45.36	20.00	13.95
RSTRSA22	56.00	30	6	16.55	0.00	16.55	50.83	51.65	53.82	40.20	48.93	46.66	20.00	15.96
RSTRSA22	56.00	30	7	16.29	0.00	16.29	50.83	51.65	53.82	40.16	46.40	43.14	20.00	15.68
RSTRSA22	56.00	30	8	15.76	0.00	15.76	50.83	51.65	53.82	39.51	48.02	42.66	20.00	15.10
RSTRSA22	56.00	30	9	14.76	0.00	14.76	50.83	51.65	53.82	38.37	47.88	42.34	20.00	14.03
RSTRSA22	56.00	30	10	5.96	-1.49	7.45	50.83	51.65	53.82	29.32	35.91	35.05	20.00	5.00
RSTRSA22	56.00	30	11	16.48	0.00	16.48	50.83	51.65	53.82	40.37	42.62	48.21	20.00	15.88
RSTRSA22	56.00	30	12	11.03	0.00	11.03	50.83	51.65	53.82	35.51	32.08	44.58	20.00	10.15
RSTRSA22	56.00	30	13	21.64	0.00	21.64	50.83	51.65	53.82	47.69	43.96	52.23	20.00	22.14
RSTRSA22	56.00	30	14	22.01	0.00	22.01	50.83	51.65	53.82	47.54	49.19	48.94	20.00	22.66
RSTRSA22	56.00	30	15	17.01	0.00	17.01	50.83	51.65	53.82	42.09	48.91	37.88	20.00	16.47
RSTRSA22	56.00	32	1	1.51	-0.05	1.56	49.55	53.80	51.67	24.68	32.12	37.94	18.92	0.52
RSTRSA22	56.00	32	2	10.52	0.00	10.52	49.55	53.80	51.67	33.72	46.76	46.74	18.92	9.65
RSTRSA22	56.00	32	3	6.17	0.00	6.17	49.55	53.80	51.67	29.32	40.16	40.51	18.92	5.21
RSTRSA22	56.00	32	4	8.41	0.00	8.41	49.55	53.80	51.67	31.59	42.42	42.75	18.92	7.48
RSTRSA22	56.00	32	5	11.22	0.00	11.22	49.55	53.80	51.67	34.46	45.33	47.26	18.92	10.37
RSTRSA22	56.00	32	6	13.30	0.00	13.30	49.55	53.80	51.67	36.65	46.64	48.96	18.92	12.55
RSTRSA22	56.00	32	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.43	18.92	14.59
RSTRSA22	56.00	32	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.04	18.92	13.96
RSTRSA22	56.00	32	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.91	18.92	12.61
RSTRSA22	56.00	32	10	4.17	0.00	4.17	49.55	53.80	51.67	27.41	35.02	35.93	18.92	3.20
RSTRSA22	56.00	32	11	12.62	0.00	12.62	49.55	53.80	51.67	36.01	48.19	42.64	18.92	11.83
RSTRSA22	56.00	32	12	4.07	0.00	4.07	49.55	53.80	51.67	27.33	44.55	32.11	18.92	3.10
RSTRSA22	56.00	32	13	12.79	0.00	12.79	49.55	53.80	51.67	36.13	52.20	43.99	18.92	12.00
RSTRSA22	56.00	32	14	13.36	0.00	13.36	49.55	53.80	51.67	36.69	48.91	49.21	18.92	12.61
RSTRSA22	56.00	32	15	9.13	0.00	9.13	49.55	53.80	51.67	32.42	37.85	48.89	18.92	8.22
RSTRSA22	56.00	34	1	7.00	0.00	7.00	50.83	51.65	53.82	30.61	37.92	32.14	20.00	6.04
RSTRSA22	56.00	34	2	14.35	0.00	14.35	50.83	51.65	53.82	37.76	46.72	46.78	20.00	13.59

RSTRSA22	56.00	34	3	12.62	0.00	12.62	50.83	51.65	53.82	36.29	40.48	40.19	20.00	11.78
RSTRSA22	56.00	34	4	14.34	0.00	14.34	50.83	51.65	53.82	38.04	42.73	42.45	20.00	13.58
RSTRSA22	56.00	34	5	17.52	0.00	17.52	50.83	51.65	53.82	41.49	47.23	45.36	20.00	17.04
RSTRSA22	56.00	34	6	18.31	0.00	18.31	50.83	51.65	53.82	42.33	48.93	46.66	20.00	17.95
RSTRSA22	56.00	34	7	16.29	0.00	16.29	50.83	51.65	53.82	40.16	46.40	43.14	20.00	15.68
RSTRSA22	56.00	34	8	15.76	0.00	15.76	50.83	51.65	53.82	39.51	48.02	42.66	20.00	15.10
RSTRSA22	56.00	34	9	14.76	0.00	14.76	50.83	51.65	53.82	38.37	47.88	42.34	20.00	14.03
RSTRSA22	56.00	34	10	5.96	-1.50	7.46	50.83	51.65	53.82	29.32	35.91	35.05	20.00	5.00
RSTRSA22	56.00	34	11	16.48	0.00	16.48	50.83	51.65	53.82	40.37	42.62	48.21	20.00	15.88
RSTRSA22	56.00	34	12	11.05	0.00	11.05	50.83	51.65	53.82	35.54	32.08	44.58	20.00	10.17
RSTRSA22	56.00	34	13	21.66	0.00	21.66	50.83	51.65	53.82	47.73	43.96	52.24	20.00	22.17
RSTRSA22	56.00	34	14	22.02	0.00	22.02	50.83	51.65	53.82	47.56	49.18	48.93	20.00	22.68
RSTRSA22	56.00	34	15	17.02	0.00	17.02	50.83	51.65	53.82	42.11	48.87	37.87	20.00	16.48
RSTRSA22	56.00	36	1	1.52	-0.11	1.63	49.55	53.80	51.67	24.69	32.12	37.83	18.92	0.54
RSTRSA22	56.00	36	2	10.85	0.00	10.85	49.55	53.80	51.67	34.06	46.75	46.66	18.92	9.99
RSTRSA22	56.00	36	3	8.50	0.00	8.50	49.55	53.80	51.67	31.76	40.16	40.50	18.92	7.58
RSTRSA22	56.00	36	4	10.48	0.00	10.48	49.55	53.80	51.67	33.79	42.42	42.74	18.92	9.61
RSTRSA22	56.00	36	5	13.32	0.00	13.32	49.55	53.80	51.67	36.72	45.33	47.23	18.92	12.57
RSTRSA22	56.00	36	6	14.80	0.00	14.80	49.55	53.80	51.67	38.31	46.64	48.90	18.92	14.15
RSTRSA22	56.00	36	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.41	18.92	14.59
RSTRSA22	56.00	36	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.00	18.92	13.96
RSTRSA22	56.00	36	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.82	18.92	12.61
RSTRSA22	56.00	36	10	4.17	0.00	4.17	49.55	53.80	51.67	27.41	35.02	35.83	18.92	3.20
RSTRSA22	56.00	36	11	12.61	0.00	12.61	49.55	53.80	51.67	36.01	48.19	42.55	18.92	11.82
RSTRSA22	56.00	36	12	4.08	0.00	4.08	49.55	53.80	51.67	27.35	44.55	32.01	18.92	3.11
RSTRSA22	56.00	36	13	12.80	0.00	12.80	49.55	53.80	51.67	36.15	52.21	43.89	18.92	12.02
RSTRSA22	56.00	36	14	13.38	0.00	13.38	49.55	53.80	51.67	36.71	48.90	49.12	18.92	12.63
RSTRSA22	56.00	36	15	9.14	0.00	9.14	49.55	53.80	51.67	32.44	37.85	48.77	18.92	8.23
RSTRSA22	56.00	38	1	5.84	0.00	5.84	50.83	51.65	50.36	29.32	37.80	32.04	19.66	4.88
RSTRSA22	56.00	38	2	14.30	0.00	14.30	50.83	51.65	50.36	37.75	46.63	45.66	19.66	13.56
RSTRSA22	56.00	38	3	11.54	0.00	11.54	50.83	51.65	50.36	35.08	40.47	39.95	19.66	10.68
RSTRSA22	56.00	38	4	13.62	0.00	13.62	50.83	51.65	50.36	37.24	42.71	42.07	19.66	12.84
RSTRSA22	56.00	38	5	16.70	0.00	16.70	50.83	51.65	50.36	40.57	47.20	44.65	19.66	16.17
RSTRSA22	56.00	38	6	17.95	0.00	17.95	50.83	51.65	50.36	42.01	48.87	45.46	19.66	17.58
RSTRSA22	56.00	38	7	16.23	0.00	16.23	50.83	51.65	50.36	40.16	46.38	42.75	19.66	15.64
RSTRSA22	56.00	38	8	15.70	0.00	15.70	50.83	51.65	50.36	39.51	47.98	42.17	19.66	15.06
RSTRSA22	56.00	38	9	14.68	0.00	14.68	50.83	51.65	50.36	38.37	47.80	41.44	19.66	13.97
RSTRSA22	56.00	38	10	5.82	-1.61	7.43	50.83	51.65	50.36	29.32	35.81	32.46	19.66	4.86
RSTRSA22	56.00	38	11	16.12	0.00	16.12	50.83	51.65	50.36	40.37	42.52	41.59	19.66	15.52
RSTRSA22	56.00	38	12	10.04	0.00	10.04	50.83	51.65	50.36	35.50	31.98	31.85	19.66	9.14
RSTRSA22	56.00	38	13	20.79	0.00	20.79	50.83	51.65	50.36	47.61	43.87	43.46	19.66	21.09
RSTRSA22	56.00	38	14	21.61	0.00	21.61	50.83	51.65	50.36	47.39	49.09	46.45	19.66	22.24
RSTRSA22	56.00	38	15	16.67	0.00	16.67	50.83	51.65	50.36	41.65	48.74	37.74	19.66	16.13
RSTRSA22	56.00	40	1	1.68	0.00	1.68	49.83	50.34	50.36	24.83	32.01		19.26	0.70
RSTRSA22	56.00	40	2	10.59	0.00	10.59	49.83	50.34	50.36	33.76	45.63		19.26	9.71
RSTRSA22	56.00	40	3	5.30	0.00	5.30	49.83	50.34	50.36	28.38	39.92		19.26	4.33
RSTRSA22	56.00	40	4	7.64	0.00	7.64	49.83	50.34	50.36	30.75	42.05		19.26	6.70
RSTRSA22	56.00	40	5	10.43	0.00	10.43	49.83	50.34	50.36	33.60	44.62		19.26	9.54
RSTRSA22	56.00	40	6	12.78	0.00	12.78	49.83	50.34	50.36	36.05	45.43		19.26	11.98
RSTRSA22	56.00	40	7	15.72	0.00	15.72	49.83	50.34	50.36	39.44	42.72		19.26	15.12
RSTRSA22	56.00	40	8	15.17	0.00	15.17	49.83	50.34	50.36	38.83	42.14		19.26	14.52
RSTRSA22	56.00	40	9	13.90	0.00	13.90	49.83	50.34	50.36	37.42	41.41		19.26	13.16
RSTRSA22	56.00	40	10	4.68	0.00	4.68	49.83	50.34	50.36	27.95	32.43		19.26	3.71
RSTRSA22	56.00	40	11	12.90	0.00	12.90	49.83	50.34	50.36	36.30	41.57		19.26	12.10
RSTRSA22	56.00	40	12	4.16	0.00	4.16	49.83	50.34	50.36	27.43	31.82		19.26	3.19
RSTRSA22	56.00	40	13	12.83	0.00	12.83	49.83	50.34	50.36	36.16	43.44		19.26	12.03
RSTRSA22	56.00	40	14	13.42	0.00	13.42	49.83	50.34	50.36	36.72	46.42		19.26	12.65
RSTRSA22	56.00	40	15	9.19	0.00	9.19	49.83	50.34	50.36	32.47	37.71		19.26	8.27
RSTRSD22	56.00	26	1	7.00	0.00	7.00	50.83	51.45	53.82	30.62	37.87	32.15	19.98	6.05
RSTRSD22	56.00	26	2	13.98	0.00	13.98	50.83	51.45	53.82	37.36	46.59	46.81	19.98	13.20
RSTRSD22	56.00	26	3	9.34	0.00	9.34	50.83	51.45	53.82	32.65	40.16	40.19	19.98	8.41
RSTRSD22	56.00	26	4	11.52	0.00	11.52	50.83	51.45	53.82	34.88	42.36	42.45	19.98	10.64
RSTRSD22	56.00	26	5	14.43	0.00	14.43	50.83	51.45	53.82	37.94	44.86	45.36	19.98	13.68
RSTRSD22	56.00	26	6	16.33	0.00	16.33	50.83	51.45	53.82	40.04	45.71	46.67	19.98	15.72
RSTRSD22	56.00	26	7	16.12	0.00	16.12	50.83	51.45	53.82	40.16	42.85	43.14	19.98	15.49
RSTRSD22	56.00	26	8	15.54	0.00	15.54	50.83	51.45	53.82	39.51	42.25	42.66	19.98	14.86
RSTRSD22	56.00	26	9	14.54	0.00	14.54	50.83	51.45	53.82	38.37	41.53	42.34	19.98	13.80
RSTRSD22	56.00	26	10	5.81	-1.42	7.23	50.83	51.45	53.82	29.32	32.61	35.05	19.98	4.84
RSTRSD22	56.00	26	11	16.41	0.00	16.41	50.83	51.45	53.82	40.37	41.86	48.22	19.98	15.81
RSTRSD22	56.00	26	12	11.04	0.00	11.04	50.83	51.45	53.82	35.50	32.12	44.60	19.98	10.15
RSTRSD22	56.00	26	13	21.64	0.00	21.64	50.83	51.45	53.82	47.68	44.00	52.25	19.98	22.14
RSTRSD22	56.00	26	14	22.00	0.00	22.00	50.83	51.45	53.82	47.53	49.15	48.95	19.98	22.66
RSTRSD22	56.00	26	15	17.01	0.00	17.01	50.83	51.45	53.82	42.10	48.69	37.88	19.98	16.47
RSTRSD22	56.00	28	1	1.53	-0.04	1.57	49.55	53.80	51.67	24.70	32.12	37.97	18.92	0.55
RSTRSD22	56.00	28	2	10.92	0.00	10.92	49.55	53.80	51.67	34.13	46.78	46.78	18.92	10.06
RSTRSD22	56.00	28	3	9.18	0.00	9.18	49.55	53.80	51.67	32.49	40.16	40.51	18.92	8.27
RSTRSD22	56.00	28	4	11.05	0.00	11.05	49.55	53.80	51.67	34.40	42.42	42.75	18.92	10.20
RSTRSD22	56.00	28	5	13.91	0.00	13.91	49.55	53.80	51.67	37.37	45.33	47.26	18.92	13.19
RSTRSD22	56.00	28	6	15.17	0.00	15.17	49.55	53.80	51.67	38.72	46.64	48.96	18.92	14.55
RSTRSD22	56.00	28	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.43	18.92	14.59
RSTRSD22	56.00	28	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.04	18.92	13.96
RSTRSD22	56.00	28	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.91	18.92	12.61
RSTRSD22	56.00	28	10	4.17	-1.52	5.69	49.55	53.80	51.67	27.41	35.02	35.93	18.92	3.20
RSTRSD22	56.00	28	11	12.62	0.00	12.62	49.55	53.80	51.67	36.01	48.19	42.64	18.92	11.83
RSTRSD22	56.00	28	12	4.09	0.00	4.09	49.55	53.80	51.67	27.36	44.58	32.11	18.92	3.12
RSTRSD22	56.00	28	13	12.81	0.00	12.81	49.55	53.80	51.67	36.16	52.23	43.99	18.92	12.03
RSTRSD22	56.00	28	14	13.39	0.00	13.39	49.55	53.80	51.67	36.72	48.92	49.22	18.92	12.64
RSTRSD22	56.00	28	15	9.15	0.00	9.15	49.55	53.80	51.67	32.45	37.85	48.94	18.92	8.24
RSTRSD22	56.00	30	1	7.00	0.00	7.00	50.83	51.65	53.82	30.62	37.94	32.15	20.00	6.05
RSTRSD22	56.00	30	2	14.01	0.00	14.01	50.83	51.65	53.82	37.39	46.75	46.78	20.00	13.23
RSTRSD22	56.00	30	3	9.56	0.00	9.56	50.83	51.65	53.82	32.88	40.48	40.19	20.00	8.64
RSTRSD22	56.00	30	4	11.71	0.00	11.71	50.83	51.65	53.82	35.08	42.73	42.45	20.00	10.84
RSTRSD22	56.00	30	5	14.68	0.00	14.68	50.83	51.65	53.82	38.16	47.23	45.36	20.00	13.95

RSTRSD22	56.00	30	6	16.55	0.00	16.55	50.83	51.65	53.82	40.20	48.93	46.66	20.00	15.96
RSTRSD22	56.00	30	7	16.29	0.00	16.29	50.83	51.65	53.82	40.16	46.40	43.14	20.00	15.68
RSTRSD22	56.00	30	8	15.76	0.00	15.76	50.83	51.65	53.82	39.51	48.02	42.66	20.00	15.10
RSTRSD22	56.00	30	9	14.76	0.00	14.76	50.83	51.65	53.82	38.37	47.88	42.34	20.00	14.03
RSTRSD22	56.00	30	10	5.96	-1.49	7.45	50.83	51.65	53.82	29.32	35.91	35.05	20.00	5.00
RSTRSD22	56.00	30	11	16.48	0.00	16.48	50.83	51.65	53.82	40.37	42.62	48.21	20.00	15.88
RSTRSD22	56.00	30	12	11.03	0.00	11.03	50.83	51.65	53.82	35.51	32.08	44.58	20.00	10.15
RSTRSD22	56.00	30	13	21.64	0.00	21.64	50.83	51.65	53.82	47.69	43.96	52.23	20.00	22.14
RSTRSD22	56.00	30	14	22.01	0.00	22.01	50.83	51.65	53.82	47.54	49.19	48.94	20.00	22.66
RSTRSD22	56.00	30	15	17.01	0.00	17.01	50.83	51.65	53.82	42.09	48.91	37.88	20.00	16.47
RSTRSD22	56.00	32	1	1.51	-0.05	1.56	49.55	53.80	51.67	24.68	32.12	37.94	18.92	0.52
RSTRSD22	56.00	32	2	10.52	0.00	10.52	49.55	53.80	51.67	33.72	46.76	46.74	18.92	9.65
RSTRSD22	56.00	32	3	6.17	0.00	6.17	49.55	53.80	51.67	29.32	40.16	40.51	18.92	5.21
RSTRSD22	56.00	32	4	8.41	0.00	8.41	49.55	53.80	51.67	31.59	42.42	42.75	18.92	7.48
RSTRSD22	56.00	32	5	11.22	0.00	11.22	49.55	53.80	51.67	34.46	45.33	47.26	18.92	10.37
RSTRSD22	56.00	32	6	13.30	0.00	13.30	49.55	53.80	51.67	36.65	46.64	48.96	18.92	12.55
RSTRSD22	56.00	32	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.43	18.92	14.59
RSTRSD22	56.00	32	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.04	18.92	13.96
RSTRSD22	56.00	32	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.91	18.92	12.61
RSTRSD22	56.00	32	10	4.17	0.00	4.17	49.55	53.80	51.67	27.41	35.02	35.93	18.92	3.20
RSTRSD22	56.00	32	11	12.62	0.00	12.62	49.55	53.80	51.67	36.01	48.19	42.64	18.92	11.83
RSTRSD22	56.00	32	12	4.07	0.00	4.07	49.55	53.80	51.67	27.33	44.55	32.11	18.92	3.10
RSTRSD22	56.00	32	13	12.79	0.00	12.79	49.55	53.80	51.67	36.13	52.20	43.99	18.92	12.00
RSTRSD22	56.00	32	14	13.36	0.00	13.36	49.55	53.80	51.67	36.69	48.91	49.21	18.92	12.61
RSTRSD22	56.00	32	15	9.13	0.00	9.13	49.55	53.80	51.67	32.42	37.85	48.89	18.92	8.22
RSTRSD22	56.00	34	1	7.00	0.00	7.00	50.83	51.65	53.82	30.61	37.92	32.14	20.00	6.04
RSTRSD22	56.00	34	2	14.35	0.00	14.35	50.83	51.65	53.82	37.76	46.72	46.78	20.00	13.59
RSTRSD22	56.00	34	3	12.62	0.00	12.62	50.83	51.65	53.82	36.29	40.48	40.19	20.00	11.78
RSTRSD22	56.00	34	4	14.34	0.00	14.34	50.83	51.65	53.82	38.04	42.73	42.45	20.00	13.58
RSTRSD22	56.00	34	5	17.52	0.00	17.52	50.83	51.65	53.82	41.49	47.23	45.36	20.00	17.04
RSTRSD22	56.00	34	6	18.31	0.00	18.31	50.83	51.65	53.82	42.33	48.93	46.66	20.00	17.95
RSTRSD22	56.00	34	7	16.29	0.00	16.29	50.83	51.65	53.82	40.16	46.40	43.14	20.00	15.68
RSTRSD22	56.00	34	8	15.76	0.00	15.76	50.83	51.65	53.82	39.51	48.02	42.66	20.00	15.10
RSTRSD22	56.00	34	9	14.76	0.00	14.76	50.83	51.65	53.82	38.37	47.88	42.34	20.00	14.03
RSTRSD22	56.00	34	10	5.96	-1.50	7.46	50.83	51.65	53.82	29.32	35.91	35.05	20.00	5.00
RSTRSD22	56.00	34	11	16.48	0.00	16.48	50.83	51.65	53.82	40.37	42.62	48.21	20.00	15.88
RSTRSD22	56.00	34	12	11.05	0.00	11.05	50.83	51.65	53.82	35.54	32.08	44.58	20.00	10.17
RSTRSD22	56.00	34	13	21.66	0.00	21.66	50.83	51.65	53.82	47.73	43.96	52.24	20.00	22.17
RSTRSD22	56.00	34	14	22.02	0.00	22.02	50.83	51.65	53.82	47.56	49.18	48.93	20.00	22.68
RSTRSD22	56.00	34	15	17.02	0.00	17.02	50.83	51.65	53.82	42.11	48.87	37.87	20.00	16.48
RSTRSD22	56.00	36	1	1.52	-0.11	1.63	49.55	53.80	51.67	24.69	32.12	37.83	18.92	0.54
RSTRSD22	56.00	36	2	10.85	0.00	10.85	49.55	53.80	51.67	34.06	46.75	46.66	18.92	9.99
RSTRSD22	56.00	36	3	8.50	0.00	8.50	49.55	53.80	51.67	31.76	40.16	40.50	18.92	7.58
RSTRSD22	56.00	36	4	10.48	0.00	10.48	49.55	53.80	51.67	33.79	42.42	42.74	18.92	9.61
RSTRSD22	56.00	36	5	13.32	0.00	13.32	49.55	53.80	51.67	36.72	45.33	47.23	18.92	12.57
RSTRSD22	56.00	36	6	14.80	0.00	14.80	49.55	53.80	51.67	38.31	46.64	48.90	18.92	14.15
RSTRSD22	56.00	36	7	15.21	0.00	15.21	49.55	53.80	51.67	38.96	43.12	46.41	18.92	14.59
RSTRSD22	56.00	36	8	14.62	0.00	14.62	49.55	53.80	51.67	38.27	42.64	48.00	18.92	13.96
RSTRSD22	56.00	36	9	13.36	0.00	13.36	49.55	53.80	51.67	36.85	42.32	47.82	18.92	12.61
RSTRSD22	56.00	36	10	4.17	0.00	4.17	49.55	53.80	51.67	27.41	35.02	35.83	18.92	3.20
RSTRSD22	56.00	36	11	12.61	0.00	12.61	49.55	53.80	51.67	36.01	48.19	42.55	18.92	11.82
RSTRSD22	56.00	36	12	4.08	0.00	4.08	49.55	53.80	51.67	27.35	44.55	32.01	18.92	3.11
RSTRSD22	56.00	36	13	12.80	0.00	12.80	49.55	53.80	51.67	36.15	52.21	43.89	18.92	12.02
RSTRSD22	56.00	36	14	13.38	0.00	13.38	49.55	53.80	51.67	36.71	48.90	49.12	18.92	12.63
RSTRSD22	56.00	36	15	9.14	0.00	9.14	49.55	53.80	51.67	32.44	37.85	48.77	18.92	8.23
RSTRSD22	56.00	38	1	5.84	0.00	5.84	50.83	51.65	50.36	29.32	37.80	32.04	19.66	4.88
RSTRSD22	56.00	38	2	14.30	0.00	14.30	50.83	51.65	50.36	37.75	46.63	45.66	19.66	13.56
RSTRSD22	56.00	38	3	11.54	0.00	11.54	50.83	51.65	50.36	35.08	40.47	39.95	19.66	10.68
RSTRSD22	56.00	38	4	13.62	0.00	13.62	50.83	51.65	50.36	37.24	42.71	42.07	19.66	12.84
RSTRSD22	56.00	38	5	16.70	0.00	16.70	50.83	51.65	50.36	40.57	47.20	44.65	19.66	16.17
RSTRSD22	56.00	38	6	17.95	0.00	17.95	50.83	51.65	50.36	42.01	48.87	45.46	19.66	17.58
RSTRSD22	56.00	38	7	16.23	0.00	16.23	50.83	51.65	50.36	40.16	46.38	42.75	19.66	15.64
RSTRSD22	56.00	38	8	15.70	0.00	15.70	50.83	51.65	50.36	39.51	47.98	42.17	19.66	15.06
RSTRSD22	56.00	38	9	14.68	0.00	14.68	50.83	51.65	50.36	38.37	47.80	41.44	19.66	13.97
RSTRSD22	56.00	38	10	5.82	-1.61	7.43	50.83	51.65	50.36	29.32	35.81	32.46	19.66	4.86
RSTRSD22	56.00	38	11	16.12	0.00	16.12	50.83	51.65	50.36	40.37	42.52	41.59	19.66	15.52
RSTRSD22	56.00	38	12	10.04	0.00	10.04	50.83	51.65	50.36	35.50	31.98	31.85	19.66	9.14
RSTRSD22	56.00	38	13	20.79	0.00	20.79	50.83	51.65	50.36	47.61	43.87	43.46	19.66	21.09
RSTRSD22	56.00	38	14	21.61	0.00	21.61	50.83	51.65	50.36	47.39	49.09	46.45	19.66	22.24
RSTRSD22	56.00	38	15	16.67	0.00	16.67	50.83	51.65	50.36	41.65	48.74	37.74	19.66	16.13
RSTRSD22	56.00	40	1	1.68	0.00	1.68	49.83	50.34	50.36	24.83	32.01		19.26	0.70
RSTRSD22	56.00	40	2	10.59	0.00	10.59	49.83	50.34	50.36	33.76	45.63		19.26	9.71
RSTRSD22	56.00	40	3	5.30	0.00	5.30	49.83	50.34	50.36	28.38	39.92		19.26	4.33
RSTRSD22	56.00	40	4	7.64	0.00	7.64	49.83	50.34	50.36	30.75	42.05		19.26	6.70
RSTRSD22	56.00	40	5	10.43	0.00	10.43	49.83	50.34	50.36	33.60	44.62		19.26	9.54
RSTRSD22	56.00	40	6	12.78	0.00	12.78	49.83	50.34	50.36	36.05	45.43		19.26	11.98
RSTRSD22	56.00	40	7	15.72	0.00	15.72	49.83	50.34	50.36	39.44	42.72		19.26	15.12
RSTRSD22	56.00	40	8	15.17	0.00	15.17	49.83	50.34	50.36	38.83	42.14		19.26	14.52
RSTRSD22	56.00	40	9	13.90	0.00	13.90	49.83	50.34	50.36	37.42	41.41		19.26	13.16
RSTRSD22	56.00	40	10	4.68	0.00	4.68	49.83	50.34	50.36	27.95	32.43		19.26	3.71
RSTRSD22	56.00	40	11	12.90	0.00	12.90	49.83	50.34	50.36	36.30	41.57		19.26	12.10
RSTRSD22	56.00	40	12	4.16	0.00	4.16	49.83	50.34	50.36	27.43	31.82		19.26	3.19
RSTRSD22	56.00	40	13	12.83	0.00	12.83	49.83	50.34	50.36	36.16	43.44		19.26	12.03
RSTRSD22	56.00	40	14	13.42	0.00	13.42	49.83	50.34	50.36	36.72	46.42		19.26	12.65
RSTRSD22	56.00	40	15	9.19	0.00	9.19	49.83	50.34	50.36	32.47	37.71		19.26	8.27
RSTRSA31	86.00	25	1	8.94	0.00	8.94	47.37	34.03	58.80	33.18	33.33	46.29	10.91	8.53
RSTRSA31	86.00	25	2	10.59	0.00	10.59	47.37	34.03	58.80	35.25	34.46	52.90	10.91	10.49
RSTRSA31	86.00	25	3	13.01	0.00	13.01	47.37	34.03	58.80	39.13	35.29	56.99	10.91	13.71
RSTRSA31	86.00	25	4	8.62	0.00	8.62	47.37	34.03	58.80	33.39	30.30	50.74	10.91	8.16
RSTRSA31	86.00	25	5	6.41	0.00	6.41	47.37	34.03	58.80	31.76	26.06	44.94	10.91	5.73
RSTRSA31	86.00	25	6	9.86	0.00	9.86	47.37	34.03	58.80	34.76	32.17	44.64	10.91	9.61
RSTRSA31	86.00	25	7	10.56	0.00	10.56	47.37	34.03	58.80	35.16	34.68	55.26	10.91	10.44
RSTRSA31	86.00	25	8	4.89	0.00	4.89	47.37	34.03	58.80	28.71	29.03	50.62	10.91	4.11

RSTRSA31	86.00	25	9	1.55	-0.49	2.04	47.37	34.03	58.80	25.39	24.72	50.57	10.91	0.65
RSTRSA31	86.00	25	10	5.61	0.00	5.61	47.37	34.03	58.80	29.39	30.38	59.21	10.91	4.88
RSTRSA31	86.00	25	11	11.67	0.00	11.67	47.37	34.03	58.80	36.59	35.85	65.17	10.91	11.84
RSTRSA31	86.00	25	12	12.29	0.00	12.29	47.37	34.03	58.80	37.17	38.38		10.91	12.68
RSTRSA31	86.00	25	13	12.04	0.00	12.04	47.37	34.03	58.80	36.98	37.00	66.53	10.91	12.34
RSTRSA31	86.00	25	14	10.52	0.00	10.52	47.37	34.03	58.80	35.06	34.99	50.63	10.91	10.39
RSTRSA31	86.00	27	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSA31	86.00	27	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSA31	86.00	27	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.96	40.08	23.70	14.93
RSTRSA31	86.00	27	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.72	34.17	23.70	8.82
RSTRSA31	86.00	27	5	8.99	0.00	8.99	54.22	58.78	57.63	33.91	44.91	28.65	23.70	8.02
RSTRSA31	86.00	27	6	18.70	0.00	18.70	54.22	58.78	57.63	50.06	44.62	35.19	23.70	17.98
RSTRSA31	86.00	27	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSA31	86.00	27	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSA31	86.00	27	9	4.85	-0.81	5.66	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSA31	86.00	27	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSA31	86.00	27	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSA31	86.00	27	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSA31	86.00	27	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52
RSTRSA31	86.00	27	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSA31	86.00	29	1	10.06	0.00	10.06	47.48	57.62	58.80	33.43	39.55	46.29	17.36	9.23
RSTRSA31	86.00	29	2	12.19	0.00	12.19	47.48	57.62	58.80	35.70	40.44	52.89	17.36	11.46
RSTRSA31	86.00	29	3	16.04	0.00	16.04	47.48	57.62	58.80	40.43	40.05	56.97	17.36	15.73
RSTRSA31	86.00	29	4	9.28	0.00	9.28	47.48	57.62	58.80	32.92	34.15	50.73	17.36	8.42
RSTRSA31	86.00	29	5	7.10	0.00	7.10	47.48	57.62	58.80	31.33	28.62	45.09	17.36	6.18
RSTRSA31	86.00	29	6	10.86	0.00	10.86	47.48	57.62	58.80	34.70	35.16	44.64	17.36	10.06
RSTRSA31	86.00	29	7	12.11	0.00	12.11	47.48	57.62	58.80	35.72	38.61	55.25	17.36	11.37
RSTRSA31	86.00	29	8	6.58	0.00	6.58	47.48	57.62	58.80	29.88	34.77	50.62	17.36	5.66
RSTRSA31	86.00	29	9	5.18	0.00	5.18	47.48	57.62	58.80	28.55	31.88	50.57	17.36	4.24
RSTRSA31	86.00	29	10	11.94	0.00	11.94	47.48	57.62	58.80	35.98	35.05	59.21	17.36	11.20
RSTRSA31	86.00	29	11	18.91	0.00	18.91	47.48	57.62	58.80	44.84	40.79	65.17	17.36	19.36
RSTRSA31	86.00	29	12	18.26	0.00	18.26	47.48	57.62	58.80	42.49			17.36	18.49
RSTRSA31	86.00	29	13	15.52	0.00	15.52	47.48	57.62	58.80	39.37	43.73	66.53	17.36	15.12
RSTRSA31	86.00	29	14	12.28	0.00	12.28	47.48	57.62	58.80	35.77	41.32	50.63	17.36	11.56
RSTRSA31	86.00	31	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSA31	86.00	31	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSA31	86.00	31	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.94	40.08	23.70	14.93
RSTRSA31	86.00	31	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.70	34.17	23.70	8.82
RSTRSA31	86.00	31	5	8.96	0.00	8.96	54.22	58.78	57.63	33.90	45.07	28.57	23.70	7.99
RSTRSA31	86.00	31	6	18.69	0.00	18.69	54.22	58.78	57.63	50.04	44.61	35.18	23.70	17.98
RSTRSA31	86.00	31	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSA31	86.00	31	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSA31	86.00	31	9	4.85	-0.87	5.72	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSA31	86.00	31	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSA31	86.00	31	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSA31	86.00	31	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSA31	86.00	31	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52
RSTRSA31	86.00	31	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSA31	86.00	33	1	10.06	0.00	10.06	47.48	57.62	58.80	33.43	39.55	46.29	17.36	9.23
RSTRSA31	86.00	33	2	12.19	0.00	12.19	47.48	57.62	58.80	35.70	40.44	52.89	17.36	11.46
RSTRSA31	86.00	33	3	16.04	0.00	16.04	47.48	57.62	58.80	40.43	40.05	56.97	17.36	15.73
RSTRSA31	86.00	33	4	9.28	0.00	9.28	47.48	57.62	58.80	32.92	34.14	50.70	17.36	8.42
RSTRSA31	86.00	33	5	7.09	0.00	7.09	47.48	57.62	58.80	31.33	28.54	45.81	17.36	6.17
RSTRSA31	86.00	33	6	10.86	0.00	10.86	47.48	57.62	58.80	34.70	35.16	44.64	17.36	10.06
RSTRSA31	86.00	33	7	12.11	0.00	12.11	47.48	57.62	58.80	35.72	38.61	55.25	17.36	11.37
RSTRSA31	86.00	33	8	6.58	0.00	6.58	47.48	57.62	58.80	29.88	34.77	50.62	17.36	5.66
RSTRSA31	86.00	33	9	5.18	0.00	5.18	47.48	57.62	58.80	28.55	31.88	50.57	17.36	4.24
RSTRSA31	86.00	33	10	11.94	0.00	11.94	47.48	57.62	58.80	35.98	35.05	59.21	17.36	11.20
RSTRSA31	86.00	33	11	18.91	0.00	18.91	47.48	57.62	58.80	44.84	40.79	65.17	17.36	19.36
RSTRSA31	86.00	33	12	18.26	0.00	18.26	47.48	57.62	58.80	42.49			17.36	18.49
RSTRSA31	86.00	33	13	15.52	0.00	15.52	47.48	57.62	58.80	39.37	43.73	66.53	17.36	15.12
RSTRSA31	86.00	33	14	12.28	0.00	12.28	47.48	57.62	58.80	35.77	41.32	50.63	17.36	11.56
RSTRSA31	86.00	35	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSA31	86.00	35	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSA31	86.00	35	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.94	40.08	23.70	14.93
RSTRSA31	86.00	35	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.67	34.17	23.70	8.82
RSTRSA31	86.00	35	5	8.99	0.00	8.99	54.22	58.78	57.63	33.90	45.78	28.63	23.70	8.02
RSTRSA31	86.00	35	6	18.69	0.00	18.69	54.22	58.78	57.63	50.03	44.61	35.18	23.70	17.97
RSTRSA31	86.00	35	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSA31	86.00	35	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSA31	86.00	35	9	4.85	-0.85	5.70	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSA31	86.00	35	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSA31	86.00	35	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSA31	86.00	35	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSA31	86.00	35	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52
RSTRSA31	86.00	35	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSA31	86.00	37	1	10.06	0.00	10.06	47.48	57.62	58.77	33.42	39.55	46.29	17.36	9.23
RSTRSA31	86.00	37	2	12.19	0.00	12.19	47.48	57.62	58.77	35.70	40.44	52.89	17.36	11.46
RSTRSA31	86.00	37	3	16.02	0.00	16.02	47.48	57.62	58.77	40.41	40.05	56.95	17.36	15.70
RSTRSA31	86.00	37	4	9.26	0.00	9.26	47.48	57.62	58.77	32.90	34.14	50.17	17.36	8.40
RSTRSA31	86.00	37	5	7.06	0.00	7.06	47.48	57.62	58.77	31.28	28.61	44.88	17.36	6.14
RSTRSA31	86.00	37	6	10.78	0.00	10.78	47.48	57.62	58.77	34.60	35.16	44.63	17.36	9.98
RSTRSA31	86.00	37	7	12.02	0.00	12.02	47.48	57.62	58.77	35.62	38.61	55.25	17.36	11.28
RSTRSA31	86.00	37	8	6.49	0.00	6.49	47.48	57.62	58.77	29.78	34.77	50.62	17.36	5.56
RSTRSA31	86.00	37	9	5.09	0.00	5.09	47.48	57.62	58.77	28.45	31.88	50.57	17.36	4.14
RSTRSA31	86.00	37	10	11.86	0.00	11.86	47.48	57.62	58.77	35.88	35.05	59.21	17.36	11.12
RSTRSA31	86.00	37	11	18.86	0.00	18.86	47.48	57.62	58.77	44.74	40.79	65.17	17.36	19.29
RSTRSA31	86.00	37	12	18.26	0.00	18.26	47.48	57.62	58.77	42.48			17.36	18.48
RSTRSA31	86.00	37	13	15.51	0.00	15.51	47.48	57.62	58.77	39.37	43.73	66.53	17.36	15.12
RSTRSA31	86.00	37	14	12.28	0.00	12.28	47.48	57.62	58.77	35.77	41.32	50.63	17.36	11.56
RSTRSA31	86.00	39	1	9.22	0.00	9.22	47.27	58.76	57.63	32.52	46.26	39.57	17.16	8.36
RSTRSA31	86.00	39	2	11.20	0.00	11.20	47.27	58.76	57.63	34.61	52.87	40.47	17.16	10.43
RSTRSA31	86.00	39	3	14.67	0.00	14.67	47.27	58.76	57.63	38.66	56.92	40.08	17.16	14.18
RSTRSA31	86.00	39	4	9.04	0.00	9.04	47.27	58.76	57.63	32.65	50.15	34.17	17.16	8.18

RSTRSA31	86.00	39	5	6.97	0.00	6.97	47.27	58.76	57.63	31.20	44.86	28.52	17.16	6.06
RSTRSA31	86.00	39	6	10.73	0.00	10.73	47.27	58.76	57.63	34.55	44.61	35.18	17.16	9.93
RSTRSA31	86.00	39	7	11.44	0.00	11.44	47.27	58.76	57.63	34.98	55.22	38.64	17.16	10.68
RSTRSA31	86.00	39	8	5.33	0.00	5.33	47.27	58.76	57.63	28.55	50.60	34.79	17.16	4.39
RSTRSA31	86.00	39	9	2.12	-1.85	3.97	47.27	58.76	57.63	25.29	50.54	31.91	17.16	1.14
RSTRSA31	86.00	39	10	6.09	0.00	6.09	47.27	58.76	57.63	29.34	59.19	35.08	17.16	5.16
RSTRSA31	86.00	39	11	12.96	0.00	12.96	47.27	58.76	57.63	36.55	65.14	40.82	17.16	12.30
RSTRSA31	86.00	39	12	13.56	0.00	13.56	47.27	58.76	57.63	36.95			17.16	12.95
RSTRSA31	86.00	39	13	13.07	0.00	13.07	47.27	58.76	57.63	36.55	66.50	43.75	17.16	12.42
RSTRSA31	86.00	39	14	11.08	0.00	11.08	47.27	58.76	57.63	34.45	50.60	41.34	17.16	10.30
RSTRSD31	86.00	25	1	8.94	0.00	8.94	47.37	34.03	58.80	33.18	33.33	46.29	10.91	8.53
RSTRSD31	86.00	25	2	10.59	0.00	10.59	47.37	34.03	58.80	35.25	34.46	52.90	10.91	10.49
RSTRSD31	86.00	25	3	13.01	0.00	13.01	47.37	34.03	58.80	39.13	35.29	56.99	10.91	13.71
RSTRSD31	86.00	25	4	8.62	0.00	8.62	47.37	34.03	58.80	33.39	30.30	50.74	10.91	8.16
RSTRSD31	86.00	25	5	6.41	0.00	6.41	47.37	34.03	58.80	31.76	26.06	44.94	10.91	5.73
RSTRSD31	86.00	25	6	9.86	0.00	9.86	47.37	34.03	58.80	34.76	32.17	44.64	10.91	9.61
RSTRSD31	86.00	25	7	10.56	0.00	10.56	47.37	34.03	58.80	35.16	34.68	55.26	10.91	10.44
RSTRSD31	86.00	25	8	4.89	0.00	4.89	47.37	34.03	58.80	28.71	29.03	50.62	10.91	4.11
RSTRSD31	86.00	25	9	1.55	-0.49	2.04	47.37	34.03	58.80	25.39	24.72	50.57	10.91	0.65
RSTRSD31	86.00	25	10	5.61	0.00	5.61	47.37	34.03	58.80	29.39	30.38	59.21	10.91	4.88
RSTRSD31	86.00	25	11	11.67	0.00	11.67	47.37	34.03	58.80	36.59	35.85	65.17	10.91	11.84
RSTRSD31	86.00	25	12	12.29	0.00	12.29	47.37	34.03	58.80	37.17	38.38		10.91	12.68
RSTRSD31	86.00	25	13	12.04	0.00	12.04	47.37	34.03	58.80	36.98	37.00	66.53	10.91	12.34
RSTRSD31	86.00	25	14	10.52	0.00	10.52	47.37	34.03	58.80	35.06	34.99	50.63	10.91	10.39
RSTRSD31	86.00	27	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSD31	86.00	27	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSD31	86.00	27	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.96	40.08	23.70	14.93
RSTRSD31	86.00	27	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.72	34.17	23.70	8.82
RSTRSD31	86.00	27	5	8.99	0.00	8.99	54.22	58.78	57.63	33.91	44.91	28.65	23.70	8.02
RSTRSD31	86.00	27	6	18.70	0.00	18.70	54.22	58.78	57.63	50.06	44.62	35.19	23.70	17.98
RSTRSD31	86.00	27	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSD31	86.00	27	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSD31	86.00	27	9	4.85	-0.81	5.66	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSD31	86.00	27	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSD31	86.00	27	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSD31	86.00	27	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSD31	86.00	27	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52
RSTRSD31	86.00	27	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSD31	86.00	29	1	10.06	0.00	10.06	47.48	57.62	58.80	33.43	39.55	46.29	17.36	9.23
RSTRSD31	86.00	29	2	12.19	0.00	12.19	47.48	57.62	58.80	35.70	40.44	52.89	17.36	11.46
RSTRSD31	86.00	29	3	16.04	0.00	16.04	47.48	57.62	58.80	40.43	40.05	56.97	17.36	15.73
RSTRSD31	86.00	29	4	9.28	0.00	9.28	47.48	57.62	58.80	32.92	34.15	50.73	17.36	8.42
RSTRSD31	86.00	29	5	7.10	0.00	7.10	47.48	57.62	58.80	31.33	28.62	45.09	17.36	6.18
RSTRSD31	86.00	29	6	10.86	0.00	10.86	47.48	57.62	58.80	34.70	35.16	44.64	17.36	10.06
RSTRSD31	86.00	29	7	12.11	0.00	12.11	47.48	57.62	58.80	35.72	38.61	55.25	17.36	11.37
RSTRSD31	86.00	29	8	6.58	0.00	6.58	47.48	57.62	58.80	29.88	34.77	50.62	17.36	5.66
RSTRSD31	86.00	29	9	5.18	0.00	5.18	47.48	57.62	58.80	28.55	31.88	50.57	17.36	4.24
RSTRSD31	86.00	29	10	11.94	0.00	11.94	47.48	57.62	58.80	35.98	35.05	59.21	17.36	11.20
RSTRSD31	86.00	29	11	18.91	0.00	18.91	47.48	57.62	58.80	44.84	40.79	65.17	17.36	19.36
RSTRSD31	86.00	29	12	18.26	0.00	18.26	47.48	57.62	58.80	42.49			17.36	18.49
RSTRSD31	86.00	29	13	15.52	0.00	15.52	47.48	57.62	58.80	39.37	43.73	66.53	17.36	15.12
RSTRSD31	86.00	29	14	12.28	0.00	12.28	47.48	57.62	58.80	35.77	41.32	50.63	17.36	11.56
RSTRSD31	86.00	31	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSD31	86.00	31	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSD31	86.00	31	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.94	40.08	23.70	14.93
RSTRSD31	86.00	31	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.70	34.17	23.70	8.82
RSTRSD31	86.00	31	5	8.96	0.00	8.96	54.22	58.78	57.63	33.90	45.07	28.57	23.70	7.99
RSTRSD31	86.00	31	6	18.69	0.00	18.69	54.22	58.78	57.63	50.04	44.61	35.18	23.70	17.98
RSTRSD31	86.00	31	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSD31	86.00	31	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSD31	86.00	31	9	4.85	-0.87	5.72	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSD31	86.00	31	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSD31	86.00	31	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSD31	86.00	31	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSD31	86.00	31	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52
RSTRSD31	86.00	31	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSD31	86.00	33	1	10.06	0.00	10.06	47.48	57.62	58.80	33.43	39.55	46.29	17.36	9.23
RSTRSD31	86.00	33	2	12.19	0.00	12.19	47.48	57.62	58.80	35.70	40.44	52.89	17.36	11.46
RSTRSD31	86.00	33	3	16.04	0.00	16.04	47.48	57.62	58.80	40.43	40.05	56.97	17.36	15.73
RSTRSD31	86.00	33	4	9.28	0.00	9.28	47.48	57.62	58.80	32.92	34.14	50.70	17.36	8.42
RSTRSD31	86.00	33	5	7.09	0.00	7.09	47.48	57.62	58.80	31.33	28.54	45.81	17.36	6.17
RSTRSD31	86.00	33	6	10.86	0.00	10.86	47.48	57.62	58.80	34.70	35.16	44.64	17.36	10.06
RSTRSD31	86.00	33	7	12.11	0.00	12.11	47.48	57.62	58.80	35.72	38.61	55.25	17.36	11.37
RSTRSD31	86.00	33	8	6.58	0.00	6.58	47.48	57.62	58.80	29.88	34.77	50.62	17.36	5.66
RSTRSD31	86.00	33	9	5.18	0.00	5.18	47.48	57.62	58.80	28.55	31.88	50.57	17.36	4.24
RSTRSD31	86.00	33	10	11.94	0.00	11.94	47.48	57.62	58.80	35.98	35.05	59.21	17.36	11.20
RSTRSD31	86.00	33	11	18.91	0.00	18.91	47.48	57.62	58.80	44.84	40.79	65.17	17.36	19.36
RSTRSD31	86.00	33	12	18.26	0.00	18.26	47.48	57.62	58.80	42.49			17.36	18.49
RSTRSD31	86.00	33	13	15.52	0.00	15.52	47.48	57.62	58.80	39.37	43.73	66.53	17.36	15.12
RSTRSD31	86.00	33	14	12.28	0.00	12.28	47.48	57.62	58.80	35.77	41.32	50.63	17.36	11.56
RSTRSD31	86.00	35	1	9.41	0.00	9.41	54.22	58.78	57.63	32.60	46.26	39.57	23.70	8.44
RSTRSD31	86.00	35	2	11.53	0.00	11.53	54.22	58.78	57.63	34.77	52.87	40.47	23.70	10.58
RSTRSD31	86.00	35	3	15.79	0.00	15.79	54.22	58.78	57.63	39.50	56.94	40.08	23.70	14.93
RSTRSD31	86.00	35	4	9.78	0.00	9.78	54.22	58.78	57.63	33.37	50.67	34.17	23.70	8.82
RSTRSD31	86.00	35	5	8.99	0.00	8.99	54.22	58.78	57.63	33.90	45.78	28.63	23.70	8.02
RSTRSD31	86.00	35	6	18.69	0.00	18.69	54.22	58.78	57.63	50.03	44.61	35.18	23.70	17.97
RSTRSD31	86.00	35	7	18.43	0.00	18.43	54.22	58.78	57.63	43.42	55.23	38.64	23.70	17.70
RSTRSD31	86.00	35	8	10.93	0.00	10.93	54.22	58.78	57.63	34.60	50.60	34.79	23.70	9.98
RSTRSD31	86.00	35	9	4.85	-0.85	5.70	54.22	58.78	57.63	28.14	50.54	31.91	23.70	3.86
RSTRSD31	86.00	35	10	7.17	0.00	7.17	54.22	58.78	57.63	30.42	59.19	35.08	23.70	6.19
RSTRSD31	86.00	35	11	13.86	0.00	13.86	54.22	58.78	57.63	37.24	65.14	40.82	23.70	12.95
RSTRSD31	86.00	35	12	13.98	0.00	13.98	54.22	58.78	57.63	37.08			23.70	13.08
RSTRSD31	86.00	35	13	13.44	0.00	13.44	54.22	58.78	57.63	36.66	66.50	43.75	23.70	12.52

RSTRSD31	86.00	35	14	11.35	0.00	11.35	54.22	58.78	57.63	34.56	50.60	41.34	23.70	10.40
RSTRSD31	86.00	37	1	10.06	0.00	10.06	47.48	57.62	58.77	33.42	39.55	46.29	17.36	9.23
RSTRSD31	86.00	37	2	12.19	0.00	12.19	47.48	57.62	58.77	35.70	40.44	52.89	17.36	11.46
RSTRSD31	86.00	37	3	16.02	0.00	16.02	47.48	57.62	58.77	40.41	40.05	56.95	17.36	15.70
RSTRSD31	86.00	37	4	9.26	0.00	9.26	47.48	57.62	58.77	32.90	34.14	50.17	17.36	8.40
RSTRSD31	86.00	37	5	7.06	0.00	7.06	47.48	57.62	58.77	31.28	28.61	44.88	17.36	6.14
RSTRSD31	86.00	37	6	10.78	0.00	10.78	47.48	57.62	58.77	34.60	35.16	44.63	17.36	9.98
RSTRSD31	86.00	37	7	12.02	0.00	12.02	47.48	57.62	58.77	35.62	38.61	55.25	17.36	11.28
RSTRSD31	86.00	37	8	6.49	0.00	6.49	47.48	57.62	58.77	29.78	34.77	50.62	17.36	5.56
RSTRSD31	86.00	37	9	5.09	0.00	5.09	47.48	57.62	58.77	28.45	31.88	50.57	17.36	4.14
RSTRSD31	86.00	37	10	11.86	0.00	11.86	47.48	57.62	58.77	35.88	35.05	59.21	17.36	11.12
RSTRSD31	86.00	37	11	18.86	0.00	18.86	47.48	57.62	58.77	44.74	40.79	65.17	17.36	19.29
RSTRSD31	86.00	37	12	18.26	0.00	18.26	47.48	57.62	58.77	42.48			17.36	18.48
RSTRSD31	86.00	37	13	15.51	0.00	15.51	47.48	57.62	58.77	39.37	43.73	66.53	17.36	15.12
RSTRSD31	86.00	37	14	12.28	0.00	12.28	47.48	57.62	58.77	35.77	41.32	50.63	17.36	11.56
RSTRSD31	86.00	39	1	9.22	0.00	9.22	47.27	58.76	57.63	32.52	46.26	39.57	17.16	8.36
RSTRSD31	86.00	39	2	11.20	0.00	11.20	47.27	58.76	57.63	34.61	52.87	40.47	17.16	10.43
RSTRSD31	86.00	39	3	14.67	0.00	14.67	47.27	58.76	57.63	38.66	56.92	40.08	17.16	14.18
RSTRSD31	86.00	39	4	9.04	0.00	9.04	47.27	58.76	57.63	32.65	50.15	34.17	17.16	8.18
RSTRSD31	86.00	39	5	6.97	0.00	6.97	47.27	58.76	57.63	31.20	44.86	28.52	17.16	6.06
RSTRSD31	86.00	39	6	10.73	0.00	10.73	47.27	58.76	57.63	34.55	44.61	35.18	17.16	9.93
RSTRSD31	86.00	39	7	11.44	0.00	11.44	47.27	58.76	57.63	34.98	55.22	38.64	17.16	10.68
RSTRSD31	86.00	39	8	5.33	0.00	5.33	47.27	58.76	57.63	28.55	50.60	34.79	17.16	4.39
RSTRSD31	86.00	39	9	2.12	-1.85	3.97	47.27	58.76	57.63	25.29	50.54	31.91	17.16	1.14
RSTRSD31	86.00	39	10	6.09	0.00	6.09	47.27	58.76	57.63	29.34	59.19	35.08	17.16	5.16
RSTRSD31	86.00	39	11	12.96	0.00	12.96	47.27	58.76	57.63	36.55	65.14	40.82	17.16	12.30
RSTRSD31	86.00	39	12	13.56	0.00	13.56	47.27	58.76	57.63	36.95			17.16	12.95
RSTRSD31	86.00	39	13	13.07	0.00	13.07	47.27	58.76	57.63	36.55	66.50	43.75	17.16	12.42
RSTRSD31	86.00	39	14	11.08	0.00	11.08	47.27	58.76	57.63	34.45	50.60	41.34	17.16	10.30
RSTRSA32	86.00	26	1	10.02	0.00	10.02	54.96	47.49	57.04	33.51	37.74	38.97	21.99	9.08
RSTRSA32	86.00	26	2	12.26	0.00	12.26	54.96	47.49	57.04	35.88	38.83	40.96	21.99	11.35
RSTRSA32	86.00	26	3	16.80	0.00	16.80	54.96	47.49	57.04	41.67	38.34	43.38	21.99	16.07
RSTRSA32	86.00	26	4	9.97	0.00	9.97	54.96	47.49	57.04	33.64	34.25	44.41	21.99	9.03
RSTRSA32	86.00	26	5	8.91	0.00	8.91	54.96	47.49	57.04	33.94	28.39	44.54	21.99	7.95
RSTRSA32	86.00	26	6	12.87	0.00	12.87	54.96	47.49	57.04	44.39	28.67	51.01	21.99	11.97
RSTRSA32	86.00	26	7	13.97	0.00	13.97	54.96	47.49	57.04	53.70	29.37	43.55	21.99	13.11
RSTRSA32	86.00	26	8	7.90	0.00	7.90	54.96	47.49	57.04	49.17	23.30	34.66	21.99	6.93
RSTRSA32	86.00	26	9	5.35	0.00	5.35	54.96	47.49	57.04	48.31	21.21	28.17	21.99	4.37
RSTRSA32	86.00	26	10	10.24	0.00	10.24	54.96	47.49	57.04	53.20	26.95	30.45	21.99	9.30
RSTRSA32	86.00	26	11	17.48	0.00	17.48	54.96	47.49	57.04	58.60	34.83	37.28	21.99	16.80
RSTRSA32	86.00	26	12	16.71	0.00	16.71	54.96	47.49	57.04	42.93	37.73	38.40	21.99	15.97
RSTRSA32	86.00	26	13	15.13	0.00	15.13	54.96	47.49	57.04	39.57	38.92	39.77	21.99	14.31
RSTRSA32	86.00	26	14	12.22	0.00	12.22	54.96	47.49	57.04	35.90	38.69	39.94	21.99	11.31
RSTRSA32	86.00	28	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.94	21.81	8.50
RSTRSA32	86.00	28	2	11.31	0.00	11.31	54.43	57.02	47.72	34.65	40.93	42.56	21.81	10.38
RSTRSA32	86.00	28	3	14.10	0.00	14.10	54.43	57.02	47.72	37.84	43.35	39.85	21.81	13.25
RSTRSA32	86.00	28	4	7.57	0.00	7.57	54.43	57.02	47.72	30.93	44.38	34.51	21.81	6.61
RSTRSA32	86.00	28	5	4.02	0.00	4.02	54.43	57.02	47.72	27.59	44.52	28.34	21.81	3.04
RSTRSA32	86.00	28	6	9.74	0.00	9.74	54.43	57.02	47.72	35.14	50.99	28.61	21.81	8.80
RSTRSA32	86.00	28	7	11.79	0.00	11.79	54.43	57.02	47.72	38.59	43.53	29.46	21.81	10.88
RSTRSA32	86.00	28	8	6.61	0.00	6.61	54.43	57.02	47.72	34.74	34.63	23.56	21.81	5.63
RSTRSA32	86.00	28	9	4.27	0.00	4.27	54.43	57.02	47.72	31.85	28.15	22.12	21.81	3.29
RSTRSA32	86.00	28	10	8.91	0.00	8.91	54.43	57.02	47.72	35.02	30.42	29.47	21.81	7.95
RSTRSA32	86.00	28	11	15.44	0.00	15.44	54.43	57.02	47.72	40.75	37.26	38.44	21.81	14.64
RSTRSA32	86.00	28	12	17.74	0.00	17.74	54.43	57.02	47.72	42.93	38.37	46.27	21.81	17.09
RSTRSA32	86.00	28	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.41	21.81	13.62
RSTRSA32	86.00	28	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.73	21.81	10.62
RSTRSA32	86.00	30	1	10.17	0.00	10.17	54.96	47.70	57.04	33.51	41.91	38.97	22.08	9.23
RSTRSA32	86.00	30	2	12.44	0.00	12.44	54.96	47.70	57.04	35.88	42.53	40.96	22.08	11.54
RSTRSA32	86.00	30	3	17.09	0.00	17.09	54.96	47.70	57.04	41.67	39.82	43.38	22.08	16.37
RSTRSA32	86.00	30	4	10.00	0.00	10.00	54.96	47.70	57.04	33.64	34.49	44.40	22.08	9.05
RSTRSA32	86.00	30	5	8.89	0.00	8.89	54.96	47.70	57.04	33.95	28.32	44.47	22.08	7.93
RSTRSA32	86.00	30	6	12.80	0.00	12.80	54.96	47.70	57.04	44.39	28.59	50.99	22.08	11.90
RSTRSA32	86.00	30	7	14.03	0.00	14.03	54.96	47.70	57.04	53.70	29.43	43.55	22.08	13.17
RSTRSA32	86.00	30	8	8.11	0.00	8.11	54.96	47.70	57.04	49.17	23.53	34.66	22.08	7.14
RSTRSA32	86.00	30	9	6.06	0.00	6.06	54.96	47.70	57.04	48.31	22.09	28.17	22.08	5.08
RSTRSA32	86.00	30	10	11.76	0.00	11.76	54.96	47.70	57.04	53.20	29.44	30.45	22.08	10.84
RSTRSA32	86.00	30	11	19.21	0.00	19.21	54.96	47.70	57.04	58.60	38.41	37.28	22.08	18.69
RSTRSA32	86.00	30	12	17.77	0.00	17.77	54.96	47.70	57.04	42.93	46.24	38.40	22.08	17.10
RSTRSA32	86.00	30	13	15.63	0.00	15.63	54.96	47.70	57.04	39.57	46.38	39.77	22.08	14.84
RSTRSA32	86.00	30	14	12.44	0.00	12.44	54.96	47.70	57.04	35.90	43.71	39.94	22.08	11.53
RSTRSA32	86.00	32	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.94	21.81	8.50
RSTRSA32	86.00	32	2	11.31	0.00	11.31	54.43	57.02	47.72	34.65	40.93	42.56	21.81	10.38
RSTRSA32	86.00	32	3	14.10	0.00	14.10	54.43	57.02	47.72	37.84	43.35	39.85	21.81	13.25
RSTRSA32	86.00	32	4	7.57	0.00	7.57	54.43	57.02	47.72	30.93	44.37	34.51	21.81	6.60
RSTRSA32	86.00	32	5	3.97	0.00	3.97	54.43	57.02	47.72	27.53	44.45	28.34	21.81	2.98
RSTRSA32	86.00	32	6	9.74	0.00	9.74	54.43	57.02	47.72	35.14	50.97	28.61	21.81	8.80
RSTRSA32	86.00	32	7	11.79	0.00	11.79	54.43	57.02	47.72	38.59	43.53	29.46	21.81	10.88
RSTRSA32	86.00	32	8	6.61	0.00	6.61	54.43	57.02	47.72	34.74	34.63	23.56	21.81	5.63
RSTRSA32	86.00	32	9	4.27	0.00	4.27	54.43	57.02	47.72	31.85	28.15	22.12	21.81	3.29
RSTRSA32	86.00	32	10	8.91	0.00	8.91	54.43	57.02	47.72	35.02	30.42	29.47	21.81	7.95
RSTRSA32	86.00	32	11	15.44	0.00	15.44	54.43	57.02	47.72	40.75	37.26	38.44	21.81	14.64
RSTRSA32	86.00	32	12	17.74	0.00	17.74	54.43	57.02	47.72	42.93	38.37	46.27	21.81	17.09
RSTRSA32	86.00	32	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.41	21.81	13.62
RSTRSA32	86.00	32	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.73	21.81	10.62
RSTRSA32	86.00	34	1	10.17	0.00	10.17	54.96	47.70	57.04	33.51	41.91	38.97	22.08	9.23
RSTRSA32	86.00	34	2	12.44	0.00	12.44	54.96	47.70	57.04	35.88	42.53	40.96	22.08	11.54
RSTRSA32	86.00	34	3	17.09	0.00	17.09	54.96	47.70	57.04	41.67	39.82	43.38	22.08	16.37
RSTRSA32	86.00	34	4	10.00	0.00	10.00	54.96	47.70	57.04	33.64	34.49	44.39	22.08	9.05
RSTRSA32	86.00	34	5	8.92	0.00	8.92	54.96	47.70	57.04	34.01	28.32	44.49	22.08	7.96
RSTRSA32	86.00	34	6	12.79	0.00	12.79	54.96	47.70	57.04	44.39	28.59	50.98	22.08	11.90
RSTRSA32	86.00	34	7	14.03	0.00	14.03	54.96	47.70	57.04	53.70	29.43	43.55	22.08	13.17
RSTRSA32	86.00	34	8	8.11	0.00	8.11	54.96	47.70	57.04	49.17	23.53	34.66	22.08	7.14

RSTRSA32	86.00	34	9	6.06	0.00	6.06	54.96	47.70	57.04	48.31	22.09	28.17	22.08	5.08
RSTRSA32	86.00	34	10	11.76	0.00	11.76	54.96	47.70	57.04	53.20	29.44	30.45	22.08	10.84
RSTRSA32	86.00	34	11	19.21	0.00	19.21	54.96	47.70	57.04	58.60	38.41	37.28	22.08	18.69
RSTRSA32	86.00	34	12	17.77	0.00	17.77	54.96	47.70	57.04	42.93	46.24	38.40	22.08	17.10
RSTRSA32	86.00	34	13	15.63	0.00	15.63	54.96	47.70	57.04	39.57	46.38	39.77	22.08	14.84
RSTRSA32	86.00	34	14	12.44	0.00	12.44	54.96	47.70	57.04	35.90	43.71	39.94	22.08	11.53
RSTRSA32	86.00	36	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.87	21.81	8.50
RSTRSA32	86.00	36	2	11.30	0.00	11.30	54.43	57.02	47.72	34.65	40.93	42.47	21.81	10.38
RSTRSA32	86.00	36	3	14.09	0.00	14.09	54.43	57.02	47.72	37.84	43.35	39.75	21.81	13.24
RSTRSA32	86.00	36	4	7.57	0.00	7.57	54.43	57.02	47.72	30.92	44.37	34.41	21.81	6.60
RSTRSA32	86.00	36	5	4.00	0.00	4.00	54.43	57.02	47.72	27.58	44.46	28.24	21.81	3.02
RSTRSA32	86.00	36	6	9.70	0.00	9.70	54.43	57.02	47.72	35.14	50.95	28.51	21.81	8.75
RSTRSA32	86.00	36	7	11.74	0.00	11.74	54.43	57.02	47.72	38.59	43.53	29.36	21.81	10.83
RSTRSA32	86.00	36	8	6.54	0.00	6.54	54.43	57.02	47.72	34.74	34.63	23.46	21.81	5.57
RSTRSA32	86.00	36	9	4.22	0.00	4.22	54.43	57.02	47.72	31.85	28.15	22.02	21.81	3.23
RSTRSA32	86.00	36	10	8.88	0.00	8.88	54.43	57.02	47.72	35.02	30.42	29.37	21.81	7.92
RSTRSA32	86.00	36	11	15.42	0.00	15.42	54.43	57.02	47.72	40.75	37.26	38.33	21.81	14.62
RSTRSA32	86.00	36	12	17.73	0.00	17.73	54.43	57.02	47.72	42.93	38.37	46.17	21.81	17.09
RSTRSA32	86.00	36	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.31	21.81	13.62
RSTRSA32	86.00	36	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.65	21.81	10.62
RSTRSA32	86.00	38	1	10.09	0.00	10.09	54.95	47.70	47.48	33.51	41.85	37.71	20.59	9.17
RSTRSA32	86.00	38	2	12.28	0.00	12.28	54.95	47.70	47.48	35.88	42.44	38.77	20.59	11.40
RSTRSA32	86.00	38	3	16.30	0.00	16.30	54.95	47.70	47.48	41.67	39.72	38.22	20.59	15.63
RSTRSA32	86.00	38	4	9.50	0.00	9.50	54.95	47.70	47.48	33.63	34.39	34.07	20.59	8.57
RSTRSA32	86.00	38	5	7.50	0.00	7.50	54.95	47.70	47.48	33.94	28.22	28.20	20.59	6.54
RSTRSA32	86.00	38	6	10.07	0.00	10.07	54.95	47.70	47.48	44.38	28.49	28.50	20.59	9.14
RSTRSA32	86.00	38	7	11.11	0.00	11.11	54.95	47.70	47.48	53.70	29.33	29.20	20.59	10.21
RSTRSA32	86.00	38	8	5.22	0.00	5.22	54.95	47.70	47.48	49.17	23.43	23.14	20.59	4.24
RSTRSA32	86.00	38	9	3.45	0.00	3.45	54.95	47.70	47.48	48.31	21.99	21.08	20.59	2.47
RSTRSA32	86.00	38	10	9.81	0.00	9.81	54.95	47.70	47.48	53.20	29.34	26.87	20.59	8.88
RSTRSA32	86.00	38	11	17.64	0.00	17.64	54.95	47.70	47.48	58.60	38.31	34.77	20.59	17.10
RSTRSA32	86.00	38	12	17.44	0.00	17.44	54.95	47.70	47.48	42.93	46.14	37.73	20.59	16.89
RSTRSA32	86.00	38	13	15.44	0.00	15.44	54.95	47.70	47.48	39.57	46.28	38.90	20.59	14.71
RSTRSA32	86.00	38	14	12.31	0.00	12.31	54.95	47.70	47.48	35.90	43.63	38.65	20.59	11.44
RSTRSA32	86.00	40	1	10.11	0.00	10.11	54.88	47.46	47.48	33.42	37.68		22.15	9.17
RSTRSA32	86.00	40	2	11.90	0.00	11.90	54.88	47.46	47.48	35.28	38.74		22.15	10.98
RSTRSA32	86.00	40	3	14.38	0.00	14.38	54.88	47.46	47.48	38.17	38.19		22.15	13.53
RSTRSA32	86.00	40	4	7.97	0.00	7.97	54.88	47.46	47.48	31.36	34.04		22.15	7.01
RSTRSA32	86.00	40	5	4.08	0.00	4.08	54.88	47.46	47.48	27.66	28.17		22.15	3.09
RSTRSA32	86.00	40	6	9.70	0.00	9.70	54.88	47.46	47.48	35.15	28.47		22.15	8.75
RSTRSA32	86.00	40	7	11.74	0.00	11.74	54.88	47.46	47.48	38.59	29.17		22.15	10.81
RSTRSA32	86.00	40	8	6.53	0.00	6.53	54.88	47.46	47.48	34.74	23.12		22.15	5.55
RSTRSA32	86.00	40	9	4.21	0.00	4.21	54.88	47.46	47.48	31.86	21.05		22.15	3.22
RSTRSA32	86.00	40	10	8.88	0.00	8.88	54.88	47.46	47.48	35.02	26.84		22.15	7.92
RSTRSA32	86.00	40	11	15.44	0.00	15.44	54.88	47.46	47.48	40.76	34.74		22.15	14.63
RSTRSA32	86.00	40	12	18.27	0.00	18.27	54.88	47.46	47.48	43.81	37.70		22.15	17.64
RSTRSA32	86.00	40	13	14.99	0.00	14.99	54.88	47.46	47.48	38.78	38.87		22.15	14.16
RSTRSA32	86.00	40	14	12.17	0.00	12.17	54.88	47.46	47.48	35.58	38.63		22.15	11.25
RSTRSD32	86.00	26	1	10.02	0.00	10.02	54.96	47.49	57.04	33.51	37.74	38.97	21.99	9.08
RSTRSD32	86.00	26	2	12.26	0.00	12.26	54.96	47.49	57.04	35.88	38.83	40.96	21.99	11.35
RSTRSD32	86.00	26	3	16.80	0.00	16.80	54.96	47.49	57.04	41.67	38.34	43.38	21.99	16.07
RSTRSD32	86.00	26	4	9.97	0.00	9.97	54.96	47.49	57.04	33.64	34.25	44.41	21.99	9.03
RSTRSD32	86.00	26	5	8.91	0.00	8.91	54.96	47.49	57.04	33.94	28.39	44.54	21.99	7.95
RSTRSD32	86.00	26	6	12.87	0.00	12.87	54.96	47.49	57.04	44.39	28.67	51.01	21.99	11.97
RSTRSD32	86.00	26	7	13.97	0.00	13.97	54.96	47.49	57.04	53.70	29.37	43.55	21.99	13.11
RSTRSD32	86.00	26	8	7.90	0.00	7.90	54.96	47.49	57.04	49.17	23.30	34.66	21.99	6.93
RSTRSD32	86.00	26	9	5.35	0.00	5.35	54.96	47.49	57.04	48.31	21.21	28.17	21.99	4.37
RSTRSD32	86.00	26	10	10.24	0.00	10.24	54.96	47.49	57.04	53.20	26.95	30.45	21.99	9.30
RSTRSD32	86.00	26	11	17.48	0.00	17.48	54.96	47.49	57.04	58.60	34.83	37.28	21.99	16.80
RSTRSD32	86.00	26	12	16.71	0.00	16.71	54.96	47.49	57.04	42.93	37.73	38.40	21.99	15.97
RSTRSD32	86.00	26	13	15.13	0.00	15.13	54.96	47.49	57.04	39.57	38.92	39.77	21.99	14.31
RSTRSD32	86.00	26	14	12.22	0.00	12.22	54.96	47.49	57.04	35.90	38.69	39.94	21.99	11.31
RSTRSD32	86.00	28	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.94	21.81	8.50
RSTRSD32	86.00	28	2	11.31	0.00	11.31	54.43	57.02	47.72	34.65	40.93	42.56	21.81	10.38
RSTRSD32	86.00	28	3	14.10	0.00	14.10	54.43	57.02	47.72	37.84	43.35	39.85	21.81	13.25
RSTRSD32	86.00	28	4	7.57	0.00	7.57	54.43	57.02	47.72	30.93	44.38	34.51	21.81	6.61
RSTRSD32	86.00	28	5	4.02	0.00	4.02	54.43	57.02	47.72	27.59	44.52	28.34	21.81	3.04
RSTRSD32	86.00	28	6	9.74	0.00	9.74	54.43	57.02	47.72	35.14	50.99	28.61	21.81	8.80
RSTRSD32	86.00	28	7	11.79	0.00	11.79	54.43	57.02	47.72	38.59	43.53	29.46	21.81	10.88
RSTRSD32	86.00	28	8	6.61	0.00	6.61	54.43	57.02	47.72	34.74	34.63	23.56	21.81	5.63
RSTRSD32	86.00	28	9	4.27	0.00	4.27	54.43	57.02	47.72	31.85	28.15	22.12	21.81	3.29
RSTRSD32	86.00	28	10	8.91	0.00	8.91	54.43	57.02	47.72	35.02	30.42	29.47	21.81	7.95
RSTRSD32	86.00	28	11	15.44	0.00	15.44	54.43	57.02	47.72	40.75	37.26	38.44	21.81	14.64
RSTRSD32	86.00	28	12	17.74	0.00	17.74	54.43	57.02	47.72	42.93	38.37	46.27	21.81	17.09
RSTRSD32	86.00	28	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.41	21.81	13.62
RSTRSD32	86.00	28	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.73	21.81	10.62
RSTRSD32	86.00	30	1	10.17	0.00	10.17	54.96	47.70	57.04	33.51	41.91	38.97	22.08	9.23
RSTRSD32	86.00	30	2	12.44	0.00	12.44	54.96	47.70	57.04	35.88	42.53	40.96	22.08	11.54
RSTRSD32	86.00	30	3	17.09	0.00	17.09	54.96	47.70	57.04	41.67	39.82	43.38	22.08	16.37
RSTRSD32	86.00	30	4	10.00	0.00	10.00	54.96	47.70	57.04	33.64	34.49	44.40	22.08	9.05
RSTRSD32	86.00	30	5	8.89	0.00	8.89	54.96	47.70	57.04	33.95	28.32	44.47	22.08	7.93
RSTRSD32	86.00	30	6	12.80	0.00	12.80	54.96	47.70	57.04	44.39	28.59	50.99	22.08	11.90
RSTRSD32	86.00	30	7	14.03	0.00	14.03	54.96	47.70	57.04	53.70	29.43	43.55	22.08	13.17
RSTRSD32	86.00	30	8	8.11	0.00	8.11	54.96	47.70	57.04	49.17	23.53	34.66	22.08	7.14
RSTRSD32	86.00	30	9	6.06	0.00	6.06	54.96	47.70	57.04	48.31	22.09	28.17	22.08	5.08
RSTRSD32	86.00	30	10	11.76	0.00	11.76	54.96	47.70	57.04	53.20	29.44	30.45	22.08	10.84
RSTRSD32	86.00	30	11	19.21	0.00	19.21	54.96	47.70	57.04	58.60	38.41	37.28	22.08	18.69
RSTRSD32	86.00	30	12	17.77	0.00	17.77	54.96	47.70	57.04	42.93	46.24	38.40	22.08	17.10
RSTRSD32	86.00	30	13	15.63	0.00	15.63	54.96	47.70	57.04	39.57	46.38	39.77	22.08	14.84
RSTRSD32	86.00	30	14	12.44	0.00	12.44	54.96	47.70	57.04	35.90	43.71	39.94	22.08	11.53
RSTRSD32	86.00	32	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.94	21.81	8.50
RSTRSD32	86.00	32	2	11.31	0.00	11.31	54.43	57.02	47.72	34.65	40.93	42.56	21.81	10.38
RSTRSD32	86.00	32	3	14.10	0.00	14.10	54.43	57.02	47.72	37.84	43.35	39.85	21.81	13.25

RSTRSD32	86.00	32	4	7.57	0.00	7.57	54.43	57.02	47.72	30.93	44.37	34.51	21.81	6.60
RSTRSD32	86.00	32	5	3.97	0.00	3.97	54.43	57.02	47.72	27.53	44.45	28.34	21.81	2.98
RSTRSD32	86.00	32	6	9.74	0.00	9.74	54.43	57.02	47.72	35.14	50.97	28.61	21.81	8.80
RSTRSD32	86.00	32	7	11.79	0.00	11.79	54.43	57.02	47.72	38.59	43.53	29.46	21.81	10.88
RSTRSD32	86.00	32	8	6.61	0.00	6.61	54.43	57.02	47.72	34.74	34.63	23.56	21.81	5.63
RSTRSD32	86.00	32	9	4.27	0.00	4.27	54.43	57.02	47.72	31.85	28.15	22.12	21.81	3.29
RSTRSD32	86.00	32	10	8.91	0.00	8.91	54.43	57.02	47.72	35.02	30.42	29.47	21.81	7.95
RSTRSD32	86.00	32	11	15.44	0.00	15.44	54.43	57.02	47.72	40.75	37.26	38.44	21.81	14.64
RSTRSD32	86.00	32	12	17.74	0.00	17.74	54.43	57.02	47.72	42.93	38.37	46.27	21.81	17.09
RSTRSD32	86.00	32	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.41	21.81	13.62
RSTRSD32	86.00	32	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.73	21.81	10.62
RSTRSD32	86.00	34	1	10.17	0.00	10.17	54.96	47.70	57.04	33.51	41.91	38.97	22.08	9.23
RSTRSD32	86.00	34	2	12.44	0.00	12.44	54.96	47.70	57.04	35.88	42.53	40.96	22.08	11.54
RSTRSD32	86.00	34	3	17.09	0.00	17.09	54.96	47.70	57.04	41.67	39.82	43.38	22.08	16.37
RSTRSD32	86.00	34	4	10.00	0.00	10.00	54.96	47.70	57.04	33.64	34.49	44.39	22.08	9.05
RSTRSD32	86.00	34	5	8.92	0.00	8.92	54.96	47.70	57.04	34.01	28.32	44.49	22.08	7.96
RSTRSD32	86.00	34	6	12.79	0.00	12.79	54.96	47.70	57.04	44.39	28.59	50.98	22.08	11.90
RSTRSD32	86.00	34	7	14.03	0.00	14.03	54.96	47.70	57.04	53.70	29.43	43.55	22.08	13.17
RSTRSD32	86.00	34	8	8.11	0.00	8.11	54.96	47.70	57.04	49.17	23.53	34.66	22.08	7.14
RSTRSD32	86.00	34	9	6.06	0.00	6.06	54.96	47.70	57.04	48.31	22.09	28.17	22.08	5.08
RSTRSD32	86.00	34	10	11.76	0.00	11.76	54.96	47.70	57.04	53.20	29.44	30.45	22.08	10.84
RSTRSD32	86.00	34	11	19.21	0.00	19.21	54.96	47.70	57.04	58.60	38.41	37.28	22.08	18.69
RSTRSD32	86.00	34	12	17.77	0.00	17.77	54.96	47.70	57.04	42.93	46.24	38.40	22.08	17.10
RSTRSD32	86.00	34	13	15.63	0.00	15.63	54.96	47.70	57.04	39.57	46.38	39.77	22.08	14.84
RSTRSD32	86.00	34	14	12.44	0.00	12.44	54.96	47.70	57.04	35.90	43.71	39.94	22.08	11.53
RSTRSD32	86.00	36	1	9.45	0.00	9.45	54.43	57.02	47.72	32.74	38.94	41.87	21.81	8.50
RSTRSD32	86.00	36	2	11.30	0.00	11.30	54.43	57.02	47.72	34.65	40.93	42.47	21.81	10.38
RSTRSD32	86.00	36	3	14.09	0.00	14.09	54.43	57.02	47.72	37.84	43.35	39.75	21.81	13.24
RSTRSD32	86.00	36	4	7.57	0.00	7.57	54.43	57.02	47.72	30.92	44.37	34.41	21.81	6.60
RSTRSD32	86.00	36	5	4.00	0.00	4.00	54.43	57.02	47.72	27.58	44.46	28.24	21.81	3.02
RSTRSD32	86.00	36	6	9.70	0.00	9.70	54.43	57.02	47.72	35.14	50.95	28.51	21.81	8.75
RSTRSD32	86.00	36	7	11.74	0.00	11.74	54.43	57.02	47.72	38.59	43.53	29.36	21.81	10.83
RSTRSD32	86.00	36	8	6.54	0.00	6.54	54.43	57.02	47.72	34.74	34.63	23.46	21.81	5.57
RSTRSD32	86.00	36	9	4.22	0.00	4.22	54.43	57.02	47.72	31.85	28.15	22.02	21.81	3.23
RSTRSD32	86.00	36	10	8.88	0.00	8.88	54.43	57.02	47.72	35.02	30.42	29.37	21.81	7.92
RSTRSD32	86.00	36	11	15.42	0.00	15.42	54.43	57.02	47.72	40.75	37.26	38.33	21.81	14.62
RSTRSD32	86.00	36	12	17.73	0.00	17.73	54.43	57.02	47.72	42.93	38.37	46.17	21.81	17.09
RSTRSD32	86.00	36	13	14.46	0.00	14.46	54.43	57.02	47.72	38.17	39.74	46.31	21.81	13.62
RSTRSD32	86.00	36	14	11.54	0.00	11.54	54.43	57.02	47.72	34.92	39.91	43.65	21.81	10.62
RSTRSD32	86.00	38	1	10.09	0.00	10.09	54.95	47.70	47.48	33.51	41.85	37.71	20.59	9.17
RSTRSD32	86.00	38	2	12.28	0.00	12.28	54.95	47.70	47.48	35.88	42.44	38.77	20.59	11.40
RSTRSD32	86.00	38	3	16.30	0.00	16.30	54.95	47.70	47.48	41.67	39.72	38.22	20.59	15.63
RSTRSD32	86.00	38	4	9.50	0.00	9.50	54.95	47.70	47.48	33.63	34.39	34.07	20.59	8.57
RSTRSD32	86.00	38	5	7.50	0.00	7.50	54.95	47.70	47.48	33.94	28.22	28.20	20.59	6.54
RSTRSD32	86.00	38	6	10.07	0.00	10.07	54.95	47.70	47.48	44.38	28.49	28.50	20.59	9.14
RSTRSD32	86.00	38	7	11.11	0.00	11.11	54.95	47.70	47.48	53.70	29.33	29.20	20.59	10.21
RSTRSD32	86.00	38	8	5.22	0.00	5.22	54.95	47.70	47.48	49.17	23.43	23.14	20.59	4.24
RSTRSD32	86.00	38	9	3.45	0.00	3.45	54.95	47.70	47.48	48.31	21.99	21.08	20.59	2.47
RSTRSD32	86.00	38	10	9.81	0.00	9.81	54.95	47.70	47.48	53.20	29.34	26.87	20.59	8.88
RSTRSD32	86.00	38	11	17.64	0.00	17.64	54.95	47.70	47.48	58.60	38.31	34.77	20.59	17.10
RSTRSD32	86.00	38	12	17.44	0.00	17.44	54.95	47.70	47.48	42.93	46.14	37.73	20.59	16.89
RSTRSD32	86.00	38	13	15.44	0.00	15.44	54.95	47.70	47.48	39.57	46.28	38.90	20.59	14.71
RSTRSD32	86.00	38	14	12.31	0.00	12.31	54.95	47.70	47.48	35.90	43.63	38.65	20.59	11.44
RSTRSD32	86.00	40	1	10.11	0.00	10.11	54.88	47.46	47.48	33.42	37.68		22.15	9.17
RSTRSD32	86.00	40	2	11.90	0.00	11.90	54.88	47.46	47.48	35.28	38.74		22.15	10.98
RSTRSD32	86.00	40	3	14.38	0.00	14.38	54.88	47.46	47.48	38.17	38.19		22.15	13.53
RSTRSD32	86.00	40	4	7.97	0.00	7.97	54.88	47.46	47.48	31.36	34.04		22.15	7.01
RSTRSD32	86.00	40	5	4.08	0.00	4.08	54.88	47.46	47.48	27.66	28.17		22.15	3.09
RSTRSD32	86.00	40	6	9.70	0.00	9.70	54.88	47.46	47.48	35.15	28.47		22.15	8.75
RSTRSD32	86.00	40	7	11.74	0.00	11.74	54.88	47.46	47.48	38.59	29.17		22.15	10.81
RSTRSD32	86.00	40	8	6.53	0.00	6.53	54.88	47.46	47.48	34.74	23.12		22.15	5.55
RSTRSD32	86.00	40	9	4.21	0.00	4.21	54.88	47.46	47.48	31.86	21.05		22.15	3.22
RSTRSD32	86.00	40	10	8.88	0.00	8.88	54.88	47.46	47.48	35.02	26.84		22.15	7.92
RSTRSD32	86.00	40	11	15.44	0.00	15.44	54.88	47.46	47.48	40.76	34.74		22.15	14.63
RSTRSD32	86.00	40	12	18.27	0.00	18.27	54.88	47.46	47.48	43.81	37.70		22.15	17.64
RSTRSD32	86.00	40	13	14.99	0.00	14.99	54.88	47.46	47.48	38.78	38.87		22.15	14.16
RSTRSD32	86.00	40	14	12.17	0.00	12.17	54.88	47.46	47.48	35.58	38.63		22.15	11.25
RSTRSA51	140.00	25	1	9.67	-29.06	38.73	53.11	61.21	74.83	32.72	53.56		23.00	8.71
RSTRSA51	140.00	25	2	10.66	-28.56	39.22	53.11	61.21	74.83	33.72	54.21		23.00	9.71
RSTRSA51	140.00	25	3	10.37	-28.06	38.43	53.11	61.21	74.83	33.44	48.73		23.00	9.42
RSTRSA51	140.00	25	4	19.17	-25.73	44.90	53.11	61.21	74.83	42.57	56.24		23.00	18.55
RSTRSA51	140.00	25	5	19.52	-25.28	44.80	53.11	61.21	74.83	42.94	58.95		23.00	18.93
RSTRSA51	140.00	25	6	18.55	-24.95	43.50	53.11	61.21	74.83	41.88	59.17		23.00	17.87
RSTRSA51	140.00	25	7	17.15	-25.04	42.19	53.11	61.21	74.83	40.39	60.14		23.00	16.38
RSTRSA51	140.00	25	8	15.28	-24.98	40.26	53.11	61.21	74.83	38.43	61.10		23.00	14.43
RSTRSA51	140.00	25	9	29.91	-25.05	54.96	53.11	61.21	74.83		61.79		23.00	45.79
RSTRSA51	140.00	25	10	29.88	-24.96	54.84	53.11	61.21	74.83		60.20		23.00	44.20
RSTRSA51	140.00	25	11	14.14	-25.92	40.06	53.11	61.21	74.83	37.25	62.34		23.00	13.25
RSTRSA51	140.00	25	12	13.48	-26.41	39.89	53.11	61.21	74.83	36.58	61.76		23.00	12.57
RSTRSA51	140.00	25	13	13.28	-26.68	39.96	53.11	61.21	74.83	36.38	57.95		23.00	12.38
RSTRSA51	140.00	27	1	9.67	-29.04	38.71	54.47	74.81	63.73	32.70			24.39	8.70
RSTRSA51	140.00	27	2	10.67	-28.54	39.21	54.47	74.81	63.73	33.71			24.39	9.71
RSTRSA51	140.00	27	3	16.01	-28.03	44.04	54.47	74.81	63.73	39.14			24.39	15.14
RSTRSA51	140.00	27	4	19.29	-25.71	45.00	54.47	74.81	63.73	42.57			24.39	18.57
RSTRSA51	140.00	27	5	19.64	-25.26	44.90	54.47	74.81	63.73	42.94			24.39	18.94
RSTRSA51	140.00	27	6	18.64	-24.93	43.57	54.47	74.81	63.73	41.88			24.39	17.88
RSTRSA51	140.00	27	7	17.22	-25.02	42.24	54.47	74.81	63.73	40.39			24.39	16.39
RSTRSA51	140.00	27	8	15.33	-24.96	40.29	54.47	74.81	63.73	38.43			24.39	14.43
RSTRSA51	140.00	27	9	31.39	-25.03	56.42	54.47	74.81	63.73				24.39	
RSTRSA51	140.00	27	10	31.39	-24.95	56.34	54.47	74.81	63.73				24.39	
RSTRSA51	140.00	27	11	14.17	-25.90	40.07	54.47	74.81	63.73	37.25			24.39	13.25
RSTRSA51	140.00	27	12	13.50	-26.39	39.89	54.47	74.81	63.73	36.58			24.39	12.58
RSTRSA51	140.00	27	13	13.31	-26.66	39.97	54.47	74.81	63.73	36.38			24.39	12.38

RSTRSA51	140.00	29	1	24.42	-29.06	53.48	53.48	63.71	74.83	48.68			23.41	24.68
RSTRSA51	140.00	29	2	27.18	-28.56	55.74	53.48	63.71	74.83	52.97			23.41	28.97
RSTRSA51	140.00	29	3	11.64	-28.06	39.70	53.48	63.71	74.83	34.69			23.41	10.69
RSTRSA51	140.00	29	4	30.20	-25.73	55.93	53.48	63.71	74.83	66.36			23.41	42.36
RSTRSA51	140.00	29	5	30.25	-25.28	55.53	53.48	63.71	74.83	67.75			23.41	43.75
RSTRSA51	140.00	29	6	30.41	-24.95	55.36	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	7	30.41	-25.04	55.45	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	8	30.41	-24.98	55.39	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	9	30.41	-25.05	55.46	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	10	30.41	-24.96	55.37	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	11	30.41	-25.92	56.33	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	12	30.41	-26.41	56.82	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	29	13	30.41	-26.68	57.09	53.48	63.71	74.83				23.41	
RSTRSA51	140.00	31	1	9.67	-29.10	38.77	54.47	74.81	63.73	32.70			24.39	8.70
RSTRSA51	140.00	31	2	10.67	-28.60	39.27	54.47	74.81	63.73	33.71			24.39	9.71
RSTRSA51	140.00	31	3	16.01	-28.09	44.10	54.47	74.81	63.73	39.14			24.39	15.14
RSTRSA51	140.00	31	4	19.29	-25.73	45.02	54.47	74.81	63.73	42.57			24.39	18.57
RSTRSA51	140.00	31	5	19.64	-25.27	44.91	54.47	74.81	63.73	42.94			24.39	18.94
RSTRSA51	140.00	31	6	18.64	-24.93	43.57	54.47	74.81	63.73	41.88			24.39	17.88
RSTRSA51	140.00	31	7	17.22	-25.03	42.25	54.47	74.81	63.73	40.39			24.39	16.39
RSTRSA51	140.00	31	8	15.33	-24.96	40.29	54.47	74.81	63.73	38.43			24.39	14.43
RSTRSA51	140.00	31	9	31.39	-25.04	56.43	54.47	74.81	63.73				24.39	
RSTRSA51	140.00	31	10	31.39	-24.95	56.34	54.47	74.81	63.73				24.39	
RSTRSA51	140.00	31	11	14.17	-25.92	40.09	54.47	74.81	63.73	37.25			24.39	13.25
RSTRSA51	140.00	31	12	13.50	-26.42	39.92	54.47	74.81	63.73	36.58			24.39	12.58
RSTRSA51	140.00	31	13	13.31	-26.69	40.00	54.47	74.81	63.73	36.38			24.39	12.38
RSTRSA51	140.00	33	1	24.42	-29.12	53.54	53.48	63.71	76.39	48.68			23.41	24.68
RSTRSA51	140.00	33	2	27.18	-28.62	55.80	53.48	63.71	76.39	52.97			23.41	28.97
RSTRSA51	140.00	33	3	11.64	-28.11	39.75	53.48	63.71	76.39	34.69			23.41	10.69
RSTRSA51	140.00	33	4	30.20	-25.75	55.95	53.48	63.71	76.39	66.36			23.41	42.36
RSTRSA51	140.00	33	5	30.26	-25.29	55.55	53.48	63.71	76.39	67.75			23.41	43.75
RSTRSA51	140.00	33	6	30.41	-24.95	55.36	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	7	30.41	-25.05	55.46	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	8	30.41	-24.98	55.39	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	9	30.41	-25.06	55.47	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	10	30.41	-24.97	55.38	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	11	30.41	-25.94	56.35	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	12	30.41	-26.44	56.85	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	33	13	30.41	-26.71	57.12	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	35	1	9.67	-29.16	38.83	54.47	76.37	63.73	32.70			24.39	8.70
RSTRSA51	140.00	35	2	10.67	-28.66	39.33	54.47	76.37	63.73	33.71			24.39	9.71
RSTRSA51	140.00	35	3	16.01	-28.14	44.15	54.47	76.37	63.73	39.14			24.39	15.14
RSTRSA51	140.00	35	4	19.29	-25.75	45.04	54.47	76.37	63.73	42.57			24.39	18.57
RSTRSA51	140.00	35	5	19.64	-25.28	44.92	54.47	76.37	63.73	42.94			24.39	18.94
RSTRSA51	140.00	35	6	18.64	-24.94	43.58	54.47	76.37	63.73	41.88			24.39	17.88
RSTRSA51	140.00	35	7	17.22	-25.03	42.25	54.47	76.37	63.73	40.39			24.39	16.39
RSTRSA51	140.00	35	8	15.33	-24.96	40.29	54.47	76.37	63.73	38.43			24.39	14.43
RSTRSA51	140.00	35	9	31.39	-25.04	56.43	54.47	76.37	63.73				24.39	
RSTRSA51	140.00	35	10	31.39	-24.95	56.34	54.47	76.37	63.73				24.39	
RSTRSA51	140.00	35	11	14.17	-25.95	40.12	54.47	76.37	63.73	37.25			24.39	13.25
RSTRSA51	140.00	35	12	13.50	-26.45	39.95	54.47	76.37	63.73	36.58			24.39	12.58
RSTRSA51	140.00	35	13	13.31	-26.73	40.04	54.47	76.37	63.73	36.38			24.39	12.38
RSTRSA51	140.00	37	1	24.42	-29.18	53.60	53.48	63.71	76.39	48.68			23.41	24.68
RSTRSA51	140.00	37	2	27.18	-28.68	55.86	53.48	63.71	76.39	52.97			23.41	28.97
RSTRSA51	140.00	37	3	11.54	-28.16	39.70	53.48	63.71	76.39	34.59			23.41	10.59
RSTRSA51	140.00	37	4	30.20	-25.77	55.97	53.48	63.71	76.39	66.36			23.41	42.36
RSTRSA51	140.00	37	5	30.26	-25.30	55.56	53.48	63.71	76.39	67.75			23.41	43.75
RSTRSA51	140.00	37	6	30.41	-24.96	55.37	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	7	30.41	-25.05	55.46	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	8	30.41	-24.98	55.39	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	9	30.41	-25.06	55.47	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	10	30.41	-24.97	55.38	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	11	30.41	-25.97	56.38	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	12	30.41	-26.47	56.88	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	37	13	30.41	-26.75	57.16	53.48	63.71	76.39				23.41	
RSTRSA51	140.00	39	1	9.65	-29.16	38.81	52.72	76.37	63.73	32.70			22.66	8.70
RSTRSA51	140.00	39	2	10.65	-28.66	39.31	52.72	76.37	63.73	33.71			22.66	9.71
RSTRSA51	140.00	39	3	10.24	-28.14	38.38	52.72	76.37	63.73	33.29			22.66	9.29
RSTRSA51	140.00	39	4	19.17	-25.75	44.92	52.72	76.37	63.73	42.57			22.66	18.57
RSTRSA51	140.00	39	5	19.50	-25.28	44.78	52.72	76.37	63.73	42.94			22.66	18.94
RSTRSA51	140.00	39	6	18.53	-24.94	43.47	52.72	76.37	63.73	41.88			22.66	17.88
RSTRSA51	140.00	39	7	17.14	-25.03	42.17	52.72	76.37	63.73	40.39			22.66	16.39
RSTRSA51	140.00	39	8	15.27	-24.97	40.24	52.72	76.37	63.73	38.43			22.66	14.43
RSTRSA51	140.00	39	9	29.66	-25.04	54.70	52.72	76.37	63.73				22.66	
RSTRSA51	140.00	39	10	29.66	-24.95	54.61	52.72	76.37	63.73				22.66	
RSTRSA51	140.00	39	11	14.13	-25.95	40.08	52.72	76.37	63.73	37.25			22.66	13.25
RSTRSA51	140.00	39	12	13.47	-26.45	39.92	52.72	76.37	63.73	36.58			22.66	12.58
RSTRSA51	140.00	39	13	13.28	-26.73	40.01	52.72	76.37	63.73	36.38			22.66	12.38
RSTRSD51	140.00	25	1	9.67	-29.06	38.73	53.11	61.21	74.83	32.72	53.56		23.00	8.71
RSTRSD51	140.00	25	2	10.66	-28.56	39.22	53.11	61.21	74.83	33.72	54.21		23.00	9.71
RSTRSD51	140.00	25	3	10.37	-28.06	38.43	53.11	61.21	74.83	33.44	48.73		23.00	9.42
RSTRSD51	140.00	25	4	19.17	-25.73	44.90	53.11	61.21	74.83	42.57	56.24		23.00	18.55
RSTRSD51	140.00	25	5	19.52	-25.28	44.80	53.11	61.21	74.83	42.94	58.95		23.00	18.93
RSTRSD51	140.00	25	6	18.55	-24.95	43.50	53.11	61.21	74.83	41.88	59.17		23.00	17.87
RSTRSD51	140.00	25	7	17.15	-25.04	42.19	53.11	61.21	74.83	40.39	60.14		23.00	16.38
RSTRSD51	140.00	25	8	15.28	-24.98	40.26	53.11	61.21	74.83	38.43	61.10		23.00	14.43
RSTRSD51	140.00	25	9	29.91	-25.05	54.96	53.11	61.21	74.83		61.79		23.00	45.79
RSTRSD51	140.00	25	10	29.88	-24.96	54.84	53.11	61.21	74.83		60.20		23.00	44.20
RSTRSD51	140.00	25	11	14.14	-25.92	40.06	53.11	61.21	74.83	37.25	62.34		23.00	13.25
RSTRSD51	140.00	25	12	13.48	-26.41	39.89	53.11	61.21	74.83	36.58	61.76		23.00	12.57
RSTRSD51	140.00	25	13	13.28	-26.68	39.96	53.11	61.21	74.83	36.38	57.95		23.00	12.38
RSTRSD51	140.00	27	1	9.67	-29.04	38.71	54.47	74.81	63.73	32.70			24.39	8.70
RSTRSD51	140.00	27	2	10.67	-28.54	39.21	54.47	74.81	63.73	33.71			24.39	9.71

RSTRSD51	140.00	27	3	16.01	-28.03	44.04	54.47	74.81	63.73	39.14			24.39	15.14
RSTRSD51	140.00	27	4	19.29	-25.71	45.00	54.47	74.81	63.73	42.57			24.39	18.57
RSTRSD51	140.00	27	5	19.64	-25.26	44.90	54.47	74.81	63.73	42.94			24.39	18.94
RSTRSD51	140.00	27	6	18.64	-24.93	43.57	54.47	74.81	63.73	41.88			24.39	17.88
RSTRSD51	140.00	27	7	17.22	-25.02	42.24	54.47	74.81	63.73	40.39			24.39	16.39
RSTRSD51	140.00	27	8	15.33	-24.96	40.29	54.47	74.81	63.73	38.43			24.39	14.43
RSTRSD51	140.00	27	9	31.39	-25.03	56.42	54.47	74.81	63.73				24.39	
RSTRSD51	140.00	27	10	31.39	-24.95	56.34	54.47	74.81	63.73				24.39	
RSTRSD51	140.00	27	11	14.17	-25.90	40.07	54.47	74.81	63.73	37.25			24.39	13.25
RSTRSD51	140.00	27	12	13.50	-26.39	39.89	54.47	74.81	63.73	36.58			24.39	12.58
RSTRSD51	140.00	27	13	13.31	-26.66	39.97	54.47	74.81	63.73	36.38			24.39	12.38
RSTRSD51	140.00	29	1	24.42	-29.06	53.48	53.48	63.71	74.83	48.68			23.41	24.68
RSTRSD51	140.00	29	2	27.18	-28.56	55.74	53.48	63.71	74.83	52.97			23.41	28.97
RSTRSD51	140.00	29	3	11.64	-28.06	39.70	53.48	63.71	74.83	34.69			23.41	10.69
RSTRSD51	140.00	29	4	30.20	-25.73	55.93	53.48	63.71	74.83	66.36			23.41	42.36
RSTRSD51	140.00	29	5	30.25	-25.28	55.53	53.48	63.71	74.83	67.75			23.41	43.75
RSTRSD51	140.00	29	6	30.41	-24.95	55.36	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	7	30.41	-25.04	55.45	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	8	30.41	-24.98	55.39	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	9	30.41	-25.05	55.46	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	10	30.41	-24.96	55.37	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	11	30.41	-25.92	56.33	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	12	30.41	-26.41	56.82	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	29	13	30.41	-26.68	57.09	53.48	63.71	74.83				23.41	
RSTRSD51	140.00	31	1	9.67	-29.10	38.77	54.47	74.81	63.73	32.70			24.39	8.70
RSTRSD51	140.00	31	2	10.67	-28.60	39.27	54.47	74.81	63.73	33.71			24.39	9.71
RSTRSD51	140.00	31	3	16.01	-28.09	44.10	54.47	74.81	63.73	39.14			24.39	15.14
RSTRSD51	140.00	31	4	19.29	-25.73	45.02	54.47	74.81	63.73	42.57			24.39	18.57
RSTRSD51	140.00	31	5	19.64	-25.27	44.91	54.47	74.81	63.73	42.94			24.39	18.94
RSTRSD51	140.00	31	6	18.64	-24.93	43.57	54.47	74.81	63.73	41.88			24.39	17.88
RSTRSD51	140.00	31	7	17.22	-25.03	42.25	54.47	74.81	63.73	40.39			24.39	16.39
RSTRSD51	140.00	31	8	15.33	-24.96	40.29	54.47	74.81	63.73	38.43			24.39	14.43
RSTRSD51	140.00	31	9	31.39	-25.04	56.43	54.47	74.81	63.73				24.39	
RSTRSD51	140.00	31	10	31.39	-24.95	56.34	54.47	74.81	63.73				24.39	
RSTRSD51	140.00	31	11	14.17	-25.92	40.09	54.47	74.81	63.73	37.25			24.39	13.25
RSTRSD51	140.00	31	12	13.50	-26.42	39.92	54.47	74.81	63.73	36.58			24.39	12.58
RSTRSD51	140.00	31	13	13.31	-26.69	40.00	54.47	74.81	63.73	36.38			24.39	12.38
RSTRSD51	140.00	33	1	24.42	-29.12	53.54	53.48	63.71	76.39	48.68			23.41	24.68
RSTRSD51	140.00	33	2	27.18	-28.62	55.80	53.48	63.71	76.39	52.97			23.41	28.97
RSTRSD51	140.00	33	3	11.64	-28.11	39.75	53.48	63.71	76.39	34.69			23.41	10.69
RSTRSD51	140.00	33	4	30.20	-25.75	55.95	53.48	63.71	76.39	66.36			23.41	42.36
RSTRSD51	140.00	33	5	30.26	-25.29	55.55	53.48	63.71	76.39	67.75			23.41	43.75
RSTRSD51	140.00	33	6	30.41	-24.95	55.36	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	7	30.41	-25.05	55.46	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	8	30.41	-24.98	55.39	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	9	30.41	-25.06	55.47	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	10	30.41	-24.97	55.38	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	11	30.41	-25.94	56.35	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	12	30.41	-26.44	56.85	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	33	13	30.41	-26.71	57.12	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	35	1	9.67	-29.16	38.83	54.47	76.37	63.73	32.70			24.39	8.70
RSTRSD51	140.00	35	2	10.67	-28.66	39.33	54.47	76.37	63.73	33.71			24.39	9.71
RSTRSD51	140.00	35	3	16.01	-28.14	44.15	54.47	76.37	63.73	39.14			24.39	15.14
RSTRSD51	140.00	35	4	19.29	-25.75	45.04	54.47	76.37	63.73	42.57			24.39	18.57
RSTRSD51	140.00	35	5	19.64	-25.28	44.92	54.47	76.37	63.73	42.94			24.39	18.94
RSTRSD51	140.00	35	6	18.64	-24.94	43.58	54.47	76.37	63.73	41.88			24.39	17.88
RSTRSD51	140.00	35	7	17.22	-25.03	42.25	54.47	76.37	63.73	40.39			24.39	16.39
RSTRSD51	140.00	35	8	15.33	-24.96	40.29	54.47	76.37	63.73	38.43			24.39	14.43
RSTRSD51	140.00	35	9	31.39	-25.04	56.43	54.47	76.37	63.73				24.39	
RSTRSD51	140.00	35	10	31.39	-24.95	56.34	54.47	76.37	63.73				24.39	
RSTRSD51	140.00	35	11	14.17	-25.95	40.12	54.47	76.37	63.73	37.25			24.39	13.25
RSTRSD51	140.00	35	12	13.50	-26.45	39.95	54.47	76.37	63.73	36.58			24.39	12.58
RSTRSD51	140.00	35	13	13.31	-26.73	40.04	54.47	76.37	63.73	36.38			24.39	12.38
RSTRSD51	140.00	37	1	24.42	-29.18	53.60	53.48	63.71	76.39	48.68			23.41	24.68
RSTRSD51	140.00	37	2	27.18	-28.68	55.86	53.48	63.71	76.39	52.97			23.41	28.97
RSTRSD51	140.00	37	3	11.54	-28.16	39.70	53.48	63.71	76.39	34.59			23.41	10.59
RSTRSD51	140.00	37	4	30.20	-25.77	55.97	53.48	63.71	76.39	66.36			23.41	42.36
RSTRSD51	140.00	37	5	30.26	-25.30	55.56	53.48	63.71	76.39	67.75			23.41	43.75
RSTRSD51	140.00	37	6	30.41	-24.96	55.37	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	7	30.41	-25.05	55.46	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	8	30.41	-24.98	55.39	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	9	30.41	-25.06	55.47	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	10	30.41	-24.97	55.38	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	11	30.41	-25.97	56.38	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	12	30.41	-26.47	56.88	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	37	13	30.41	-26.75	57.16	53.48	63.71	76.39				23.41	
RSTRSD51	140.00	39	1	9.65	-29.16	38.81	52.72	76.37	63.73	32.70			22.66	8.70
RSTRSD51	140.00	39	2	10.65	-28.66	39.31	52.72	76.37	63.73	33.71			22.66	9.71
RSTRSD51	140.00	39	3	10.24	-28.14	38.38	52.72	76.37	63.73	33.29			22.66	9.29
RSTRSD51	140.00	39	4	19.17	-25.75	44.92	52.72	76.37	63.73	42.57			22.66	18.57
RSTRSD51	140.00	39	5	19.50	-25.28	44.78	52.72	76.37	63.73	42.94			22.66	18.94
RSTRSD51	140.00	39	6	18.53	-24.94	43.47	52.72	76.37	63.73	41.88			22.66	17.88
RSTRSD51	140.00	39	7	17.14	-25.03	42.17	52.72	76.37	63.73	40.39			22.66	16.39
RSTRSD51	140.00	39	8	15.27	-24.97	40.24	52.72	76.37	63.73	38.43			22.66	14.43
RSTRSD51	140.00	39	9	29.66	-25.04	54.70	52.72	76.37	63.73				22.66	
RSTRSD51	140.00	39	10	29.66	-24.95	54.61	52.72	76.37	63.73				22.66	
RSTRSD51	140.00	39	11	14.13	-25.95	40.08	52.72	76.37	63.73	37.25			22.66	13.25
RSTRSD51	140.00	39	12	13.47	-26.45	39.92	52.72	76.37	63.73	36.58			22.66	12.58
RSTRSD51	140.00	39	13	13.28	-26.73	40.01	52.72	76.37	63.73	36.38			22.66	12.38
RSTRSA52	140.00	26	1	14.38	-36.28	50.66	55.67	55.55	60.36	48.68	32.79	32.82	24.82	13.46
RSTRSA52	140.00	26	2	15.49	-36.14	51.63	55.67	55.55	60.36	52.97	33.75	33.77	24.82	14.59
RSTRSA52	140.00	26	3	17.23	-36.84	54.07	55.67	55.55	60.36	62.50	33.43	39.17	24.82	16.38
RSTRSA52	140.00	26	4	23.78	-35.53	59.31	55.67	55.55	60.36	66.36	42.58	42.60	24.82	23.52

RSTRSA52	140.00	26	5	24.10	-35.10	59.20	55.67	55.55	60.36	67.75	42.94	42.97	24.82	23.90
RSTRSA52	140.00	26	6	23.23	-35.30	58.53	55.67	55.55	60.36		41.87	41.90	24.82	22.87
RSTRSA52	140.00	26	7	21.91	-35.23	57.14	55.67	55.55	60.36		40.37	40.40	24.82	21.38
RSTRSA52	140.00	26	8	20.12	-35.53	55.65	55.67	55.55	60.36		38.42	38.45	24.82	19.42
RSTRSA52	140.00	26	9	31.82	-35.43	67.25	55.67	55.55	60.36				24.82	
RSTRSA52	140.00	26	10	31.82	-35.74	67.56	55.67	55.55	60.36				24.82	
RSTRSA52	140.00	26	11	19.01	-35.34	54.35	55.67	55.55	60.36		37.24	37.27	24.82	18.24
RSTRSA52	140.00	26	12	18.36	-35.46	53.82	55.67	55.55	60.36		36.56	36.59	24.82	17.56
RSTRSA52	140.00	26	13	18.18	-35.52	53.70	55.67	55.55	60.36		36.37	36.40	24.82	17.37
RSTRSA52	140.00	28	1	16.98	-11.12	28.10	55.08	60.35	57.30	48.68	32.79		24.50	16.14
RSTRSA52	140.00	28	2	18.22	-10.43	28.65	55.08	60.35	57.30	52.97	33.75		24.50	17.43
RSTRSA52	140.00	28	3	18.14	-10.30	28.44	55.08	60.35	57.30	62.50	39.15	34.72	24.50	17.34
RSTRSA52	140.00	28	4	26.02	-6.12	32.14	55.08	60.35	57.30	66.36	42.58		24.50	26.46
RSTRSA52	140.00	28	5	26.29	-4.91	31.20	55.08	60.35	57.30	67.75	42.94		24.50	26.85
RSTRSA52	140.00	28	6	25.58	-4.83	30.41	55.08	60.35	57.30		41.87		24.50	25.87
RSTRSA52	140.00	28	7	24.42	-4.68	29.10	55.08	60.35	57.30		40.37		24.50	24.37
RSTRSA52	140.00	28	8	22.79	-5.14	27.93	55.08	60.35	57.30		38.42		24.50	22.42
RSTRSA52	140.00	28	9	31.50	-5.00	36.50	55.08	60.35	57.30				24.50	
RSTRSA52	140.00	28	10	31.50	-5.55	37.05	55.08	60.35	57.30				24.50	
RSTRSA52	140.00	28	11	21.75	-6.38	28.13	55.08	60.35	57.30		37.24		24.50	21.24
RSTRSA52	140.00	28	12	21.14	-7.30	28.44	55.08	60.35	57.30		36.56		24.50	20.56
RSTRSA52	140.00	28	13	20.97	-7.75	28.72	55.08	60.35	57.30		36.37		24.50	20.37
RSTRSA52	140.00	30	1	17.02	-36.28	53.30	55.67	57.28	60.36	48.68		32.82	25.02	16.16
RSTRSA52	140.00	30	2	18.27	-36.14	54.41	55.67	57.28	60.36	52.97		33.77	25.02	17.46
RSTRSA52	140.00	30	3	18.15	-36.84	54.99	55.67	57.28	60.36	62.50	34.69	39.17	25.02	17.33
RSTRSA52	140.00	30	4	26.18	-35.53	61.71	55.67	57.28	60.36	66.36		42.60	25.02	26.49
RSTRSA52	140.00	30	5	26.46	-35.10	61.56	55.67	57.28	60.36	67.75		42.97	25.02	26.88
RSTRSA52	140.00	30	6	25.73	-35.30	61.03	55.67	57.28	60.36			41.90	25.02	25.90
RSTRSA52	140.00	30	7	24.54	-35.23	59.77	55.67	57.28	60.36			40.40	25.02	24.40
RSTRSA52	140.00	30	8	22.88	-35.53	58.41	55.67	57.28	60.36			38.45	25.02	22.45
RSTRSA52	140.00	30	9	32.02	-35.43	67.45	55.67	57.28	60.36				25.02	
RSTRSA52	140.00	30	10	32.02	-35.74	67.76	55.67	57.28	60.36				25.02	
RSTRSA52	140.00	30	11	21.83	-35.34	57.17	55.67	57.28	60.36			37.27	25.02	21.27
RSTRSA52	140.00	30	12	21.21	-35.46	56.67	55.67	57.28	60.36			36.59	25.02	20.59
RSTRSA52	140.00	30	13	21.03	-35.52	56.55	55.67	57.28	60.36			36.40	25.02	20.40
RSTRSA52	140.00	32	1	16.98	-11.20	28.18	55.08	60.35	57.31	48.68	32.79		24.50	16.14
RSTRSA52	140.00	32	2	18.22	-10.52	28.74	55.08	60.35	57.31	52.97	33.75		24.50	17.43
RSTRSA52	140.00	32	3	18.14	-10.39	28.53	55.08	60.35	57.31	62.50	39.15	34.71	24.50	17.34
RSTRSA52	140.00	32	4	26.02	-6.17	32.19	55.08	60.35	57.31	66.36	42.58		24.50	26.46
RSTRSA52	140.00	32	5	26.29	-4.96	31.25	55.08	60.35	57.31	67.75	42.94		24.50	26.85
RSTRSA52	140.00	32	6	25.58	-4.87	30.45	55.08	60.35	57.31		41.87		24.50	25.87
RSTRSA52	140.00	32	7	24.42	-4.72	29.14	55.08	60.35	57.31		40.37		24.50	24.37
RSTRSA52	140.00	32	8	22.79	-5.19	27.98	55.08	60.35	57.31		38.42		24.50	22.42
RSTRSA52	140.00	32	9	31.50	-5.04	36.54	55.08	60.35	57.31				24.50	
RSTRSA52	140.00	32	10	31.50	-5.61	37.11	55.08	60.35	57.31				24.50	
RSTRSA52	140.00	32	11	21.75	-6.44	28.19	55.08	60.35	57.31		37.24		24.50	21.24
RSTRSA52	140.00	32	12	21.14	-7.37	28.51	55.08	60.35	57.31		36.56		24.50	20.56
RSTRSA52	140.00	32	13	20.97	-7.82	28.79	55.08	60.35	57.31		36.37		24.50	20.37
RSTRSA52	140.00	34	1	17.02	-36.34	53.36	55.70	57.29	60.36	48.68		32.82	25.04	16.16
RSTRSA52	140.00	34	2	18.27	-36.19	54.46	55.70	57.29	60.36	52.97		33.77	25.04	17.46
RSTRSA52	140.00	34	3	18.15	-36.91	55.06	55.70	57.29	60.36	62.50	34.69	39.17	25.04	17.33
RSTRSA52	140.00	34	4	26.18	-35.57	61.75	55.70	57.29	60.36	66.36		42.60	25.04	26.49
RSTRSA52	140.00	34	5	26.47	-35.15	61.62	55.70	57.29	60.36	67.75		42.97	25.04	26.88
RSTRSA52	140.00	34	6	25.74	-35.35	61.09	55.70	57.29	60.36			41.90	25.04	25.90
RSTRSA52	140.00	34	7	24.55	-35.27	59.82	55.70	57.29	60.36			40.40	25.04	24.40
RSTRSA52	140.00	34	8	22.88	-35.58	58.46	55.70	57.29	60.36			38.45	25.04	22.45
RSTRSA52	140.00	34	9	32.04	-35.48	67.52	55.70	57.29	60.36				25.04	
RSTRSA52	140.00	34	10	32.04	-35.79	67.83	55.70	57.29	60.36				25.04	
RSTRSA52	140.00	34	11	21.83	-35.39	57.22	55.70	57.29	60.36			37.27	25.04	21.27
RSTRSA52	140.00	34	12	21.21	-35.51	56.72	55.70	57.29	60.36			36.59	25.04	20.59
RSTRSA52	140.00	34	13	21.04	-35.57	56.61	55.70	57.29	60.36			36.40	25.04	20.40
RSTRSA52	140.00	36	1	16.98	-11.29	28.27	55.08	60.35	57.31	48.68	32.79		24.50	16.14
RSTRSA52	140.00	36	2	18.22	-10.60	28.82	55.08	60.35	57.31	52.97	33.75		24.50	17.43
RSTRSA52	140.00	36	3	18.07	-10.47	28.54	55.08	60.35	57.31	62.50	39.15	34.61	24.50	17.27
RSTRSA52	140.00	36	4	26.02	-6.23	32.25	55.08	60.35	57.31	66.36	42.58		24.50	26.46
RSTRSA52	140.00	36	5	26.29	-5.00	31.29	55.08	60.35	57.31	67.75	42.94		24.50	26.85
RSTRSA52	140.00	36	6	25.58	-4.92	30.50	55.08	60.35	57.31		41.87		24.50	25.87
RSTRSA52	140.00	36	7	24.43	-4.76	29.19	55.08	60.35	57.31		40.37		24.50	24.37
RSTRSA52	140.00	36	8	22.79	-5.23	28.02	55.08	60.35	57.31		38.42		24.50	22.42
RSTRSA52	140.00	36	9	31.50	-5.09	36.59	55.08	60.35	57.31				24.50	
RSTRSA52	140.00	36	10	31.50	-5.66	37.16	55.08	60.35	57.31				24.50	
RSTRSA52	140.00	36	11	21.75	-6.50	28.25	55.08	60.35	57.31		37.24		24.50	21.24
RSTRSA52	140.00	36	12	21.14	-7.44	28.58	55.08	60.35	57.31		36.56		24.50	20.56
RSTRSA52	140.00	36	13	20.97	-7.89	28.86	55.08	60.35	57.31		36.37		24.50	20.37
RSTRSA52	140.00	38	1	17.01	-36.39	53.40	55.70	57.29	55.62	48.68		32.82	24.65	16.16
RSTRSA52	140.00	38	2	18.25	-36.24	54.49	55.70	57.29	55.62	52.97		33.77	24.65	17.46
RSTRSA52	140.00	38	3	15.76	-36.97	52.73	55.70	57.29	55.62	62.50	34.59	33.31	24.65	14.87
RSTRSA52	140.00	38	4	26.08	-35.62	61.70	55.70	57.29	55.62	66.36		42.60	24.65	26.49
RSTRSA52	140.00	38	5	26.36	-35.19	61.55	55.70	57.29	55.62	67.75		42.97	24.65	26.88
RSTRSA52	140.00	38	6	25.64	-35.39	61.03	55.70	57.29	55.62			41.90	24.65	25.90
RSTRSA52	140.00	38	7	24.48	-35.32	59.80	55.70	57.29	55.62			40.40	24.65	24.40
RSTRSA52	140.00	38	8	22.84	-35.62	58.46	55.70	57.29	55.62			38.45	24.65	22.45
RSTRSA52	140.00	38	9	31.65	-35.53	67.18	55.70	57.29	55.62				24.65	
RSTRSA52	140.00	38	10	31.65	-35.83	67.48	55.70	57.29	55.62				24.65	
RSTRSA52	140.00	38	11	21.79	-35.43	57.22	55.70	57.29	55.62			37.27	24.65	21.27
RSTRSA52	140.00	38	12	21.18	-35.56	56.74	55.70	57.29	55.62			36.59	24.65	20.59
RSTRSA52	140.00	38	13	21.00	-35.62	56.62	55.70	57.29	55.62			36.40	24.65	20.40
RSTRSA52	140.00	40	1	17.11	-11.29	28.40	55.83	55.61	55.62	49.55	32.79		25.16	16.25
RSTRSA52	140.00	40	2	18.30	-10.60	28.90	55.83	55.61	55.62	53.85	33.75		25.16	17.49
RSTRSA52	140.00	40	3	18.08	-10.47	28.55	55.83	55.61	55.62	63.37	33.28		25.16	17.26
RSTRSA52	140.00	40	4	26.21	-6.23	32.44	55.83	55.61	55.62	67.24	42.58		25.16	26.48
RSTRSA52	140.00	40	5	26.49	-5.00	31.49	55.83	55.61	55.62	68.62	42.94		25.16	26.87
RSTRSA52	140.00	40	6	25.74	-4.92	30.66	55.83	55.61	55.62		41.87		25.16	25.87
RSTRSA52	140.00	40	7	24.55	-4.76	29.31	55.83	55.61	55.62		40.37		25.16	24.37

RSTRSA52	140.00	40	8	22.88	-5.23	28.11	55.83	55.61	55.62		38.42		25.16	22.42
RSTRSA52	140.00	40	9	32.16	-5.09	37.25	55.83	55.61	55.62				25.16	
RSTRSA52	140.00	40	10	32.16	-5.66	37.82	55.83	55.61	55.62				25.16	
RSTRSA52	140.00	40	11	21.82	-6.50	28.32	55.83	55.61	55.62		37.24		25.16	21.24
RSTRSA52	140.00	40	12	21.20	-7.44	28.64	55.83	55.61	55.62		36.56		25.16	20.56
RSTRSA52	140.00	40	13	21.02	-7.89	28.91	55.83	55.61	55.62		36.37		25.16	20.37
RSTRSD52	140.00	26	1	14.38	-36.28	50.66	55.67	55.55	60.36	48.68	32.79	32.82	24.82	13.46
RSTRSD52	140.00	26	2	15.49	-36.14	51.63	55.67	55.55	60.36	52.97	33.75	33.77	24.82	14.59
RSTRSD52	140.00	26	3	17.23	-36.84	54.07	55.67	55.55	60.36	62.50	33.43	39.17	24.82	16.38
RSTRSD52	140.00	26	4	23.78	-35.53	59.31	55.67	55.55	60.36	66.36	42.58	42.60	24.82	23.52
RSTRSD52	140.00	26	5	24.10	-35.10	59.20	55.67	55.55	60.36	67.75	42.94	42.97	24.82	23.90
RSTRSD52	140.00	26	6	23.23	-35.30	58.53	55.67	55.55	60.36		41.87	41.90	24.82	22.87
RSTRSD52	140.00	26	7	21.91	-35.23	57.14	55.67	55.55	60.36		40.37	40.40	24.82	21.38
RSTRSD52	140.00	26	8	20.12	-35.53	55.65	55.67	55.55	60.36		38.42	38.45	24.82	19.42
RSTRSD52	140.00	26	9	31.82	-35.43	67.25	55.67	55.55	60.36				24.82	
RSTRSD52	140.00	26	10	31.82	-35.74	67.56	55.67	55.55	60.36				24.82	
RSTRSD52	140.00	26	11	19.01	-35.34	54.35	55.67	55.55	60.36		37.24	37.27	24.82	18.24
RSTRSD52	140.00	26	12	18.36	-35.46	53.82	55.67	55.55	60.36		36.56	36.59	24.82	17.56
RSTRSD52	140.00	26	13	18.18	-35.52	53.70	55.67	55.55	60.36		36.37	36.40	24.82	17.37
RSTRSD52	140.00	28	1	16.98	-11.12	28.10	55.08	60.35	57.30	48.68	32.79		24.50	16.14
RSTRSD52	140.00	28	2	18.22	-10.43	28.65	55.08	60.35	57.30	52.97	33.75		24.50	17.43
RSTRSD52	140.00	28	3	18.14	-10.30	28.44	55.08	60.35	57.30	62.50	39.15	34.72	24.50	17.34
RSTRSD52	140.00	28	4	26.02	-6.12	32.14	55.08	60.35	57.30	66.36	42.58		24.50	26.46
RSTRSD52	140.00	28	5	26.29	-4.91	31.20	55.08	60.35	57.30	67.75	42.94		24.50	26.85
RSTRSD52	140.00	28	6	25.58	-4.83	30.41	55.08	60.35	57.30		41.87		24.50	25.87
RSTRSD52	140.00	28	7	24.42	-4.68	29.10	55.08	60.35	57.30		40.37		24.50	24.37
RSTRSD52	140.00	28	8	22.79	-5.14	27.93	55.08	60.35	57.30		38.42		24.50	22.42
RSTRSD52	140.00	28	9	31.50	-5.00	36.50	55.08	60.35	57.30				24.50	
RSTRSD52	140.00	28	10	31.50	-5.55	37.05	55.08	60.35	57.30				24.50	
RSTRSD52	140.00	28	11	21.75	-6.38	28.13	55.08	60.35	57.30		37.24		24.50	21.24
RSTRSD52	140.00	28	12	21.14	-7.30	28.44	55.08	60.35	57.30		36.56		24.50	20.56
RSTRSD52	140.00	28	13	20.97	-7.75	28.72	55.08	60.35	57.30		36.37		24.50	20.37
RSTRSD52	140.00	30	1	17.02	-36.28	53.30	55.67	57.28	60.36	48.68		32.82	25.02	16.16
RSTRSD52	140.00	30	2	18.27	-36.14	54.41	55.67	57.28	60.36	52.97		33.77	25.02	17.46
RSTRSD52	140.00	30	3	18.15	-36.84	54.99	55.67	57.28	60.36	62.50	34.69	39.17	25.02	17.33
RSTRSD52	140.00	30	4	26.18	-35.53	61.71	55.67	57.28	60.36	66.36		42.60	25.02	26.49
RSTRSD52	140.00	30	5	26.46	-35.10	61.56	55.67	57.28	60.36	67.75		42.97	25.02	26.88
RSTRSD52	140.00	30	6	25.73	-35.30	61.03	55.67	57.28	60.36			41.90	25.02	25.90
RSTRSD52	140.00	30	7	24.54	-35.23	59.77	55.67	57.28	60.36			40.40	25.02	24.40
RSTRSD52	140.00	30	8	22.88	-35.53	58.41	55.67	57.28	60.36			38.45	25.02	22.45
RSTRSD52	140.00	30	9	32.02	-35.43	67.45	55.67	57.28	60.36				25.02	
RSTRSD52	140.00	30	10	32.02	-35.74	67.76	55.67	57.28	60.36				25.02	
RSTRSD52	140.00	30	11	21.83	-35.34	57.17	55.67	57.28	60.36			37.27	25.02	21.27
RSTRSD52	140.00	30	12	21.21	-35.46	56.67	55.67	57.28	60.36			36.59	25.02	20.59
RSTRSD52	140.00	30	13	21.03	-35.52	56.55	55.67	57.28	60.36			36.40	25.02	20.40
RSTRSD52	140.00	32	1	16.98	-11.20	28.18	55.08	60.35	57.31	48.68	32.79		24.50	16.14
RSTRSD52	140.00	32	2	18.22	-10.52	28.74	55.08	60.35	57.31	52.97	33.75		24.50	17.43
RSTRSD52	140.00	32	3	18.14	-10.39	28.53	55.08	60.35	57.31	62.50	39.15	34.71	24.50	17.34
RSTRSD52	140.00	32	4	26.02	-6.17	32.19	55.08	60.35	57.31	66.36	42.58		24.50	26.46
RSTRSD52	140.00	32	5	26.29	-4.96	31.25	55.08	60.35	57.31	67.75	42.94		24.50	26.85
RSTRSD52	140.00	32	6	25.58	-4.87	30.45	55.08	60.35	57.31		41.87		24.50	25.87
RSTRSD52	140.00	32	7	24.42	-4.72	29.14	55.08	60.35	57.31		40.37		24.50	24.37
RSTRSD52	140.00	32	8	22.79	-5.19	27.98	55.08	60.35	57.31		38.42		24.50	22.42
RSTRSD52	140.00	32	9	31.50	-5.04	36.54	55.08	60.35	57.31				24.50	
RSTRSD52	140.00	32	10	31.50	-5.61	37.11	55.08	60.35	57.31				24.50	
RSTRSD52	140.00	32	11	21.75	-6.44	28.19	55.08	60.35	57.31		37.24		24.50	21.24
RSTRSD52	140.00	32	12	21.14	-7.37	28.51	55.08	60.35	57.31		36.56		24.50	20.56
RSTRSD52	140.00	32	13	20.97	-7.82	28.79	55.08	60.35	57.31		36.37		24.50	20.37
RSTRSD52	140.00	34	1	17.02	-36.34	53.36	55.70	57.29	60.36	48.68		32.82	25.04	16.16
RSTRSD52	140.00	34	2	18.27	-36.19	54.46	55.70	57.29	60.36	52.97		33.77	25.04	17.46
RSTRSD52	140.00	34	3	18.15	-36.91	55.06	55.70	57.29	60.36	62.50	34.69	39.17	25.04	17.33
RSTRSD52	140.00	34	4	26.18	-35.57	61.75	55.70	57.29	60.36	66.36		42.60	25.04	26.49
RSTRSD52	140.00	34	5	26.47	-35.15	61.62	55.70	57.29	60.36	67.75		42.97	25.04	26.88
RSTRSD52	140.00	34	6	25.74	-35.35	61.09	55.70	57.29	60.36			41.90	25.04	25.90
RSTRSD52	140.00	34	7	24.55	-35.27	59.82	55.70	57.29	60.36			40.40	25.04	24.40
RSTRSD52	140.00	34	8	22.88	-35.58	58.46	55.70	57.29	60.36			38.45	25.04	22.45
RSTRSD52	140.00	34	9	32.04	-35.48	67.52	55.70	57.29	60.36				25.04	
RSTRSD52	140.00	34	10	32.04	-35.79	67.83	55.70	57.29	60.36				25.04	
RSTRSD52	140.00	34	11	21.83	-35.39	57.22	55.70	57.29	60.36			37.27	25.04	21.27
RSTRSD52	140.00	34	12	21.21	-35.51	56.72	55.70	57.29	60.36			36.59	25.04	20.59
RSTRSD52	140.00	34	13	21.04	-35.57	56.61	55.70	57.29	60.36			36.40	25.04	20.40
RSTRSD52	140.00	36	1	16.98	-11.29	28.27	55.08	60.35	57.31	48.68	32.79		24.50	16.14
RSTRSD52	140.00	36	2	18.22	-10.60	28.82	55.08	60.35	57.31	52.97	33.75		24.50	17.43
RSTRSD52	140.00	36	3	18.07	-10.47	28.54	55.08	60.35	57.31	62.50	39.15	34.61	24.50	17.27
RSTRSD52	140.00	36	4	26.02	-6.23	32.25	55.08	60.35	57.31	66.36	42.58		24.50	26.46
RSTRSD52	140.00	36	5	26.29	-5.00	31.29	55.08	60.35	57.31	67.75	42.94		24.50	26.85
RSTRSD52	140.00	36	6	25.58	-4.92	30.50	55.08	60.35	57.31		41.87		24.50	25.87
RSTRSD52	140.00	36	7	24.43	-4.76	29.19	55.08	60.35	57.31		40.37		24.50	24.37
RSTRSD52	140.00	36	8	22.79	-5.23	28.02	55.08	60.35	57.31		38.42		24.50	22.42
RSTRSD52	140.00	36	9	31.50	-5.09	36.59	55.08	60.35	57.31				24.50	
RSTRSD52	140.00	36	10	31.50	-5.66	37.16	55.08	60.35	57.31				24.50	
RSTRSD52	140.00	36	11	21.75	-6.50	28.25	55.08	60.35	57.31		37.24		24.50	21.24
RSTRSD52	140.00	36	12	21.14	-7.44	28.58	55.08	60.35	57.31		36.56		24.50	20.56
RSTRSD52	140.00	36	13	20.97	-7.89	28.86	55.08	60.35	57.31		36.37		24.50	20.37
RSTRSD52	140.00	38	1	17.01	-36.39	53.40	55.70	57.29	55.62	48.68		32.82	24.65	16.16
RSTRSD52	140.00	38	2	18.25	-36.24	54.49	55.70	57.29	55.62	52.97		33.77	24.65	17.46
RSTRSD52	140.00	38	3	15.76	-36.97	52.73	55.70	57.29	55.62	62.50	34.59	33.31	24.65	14.87
RSTRSD52	140.00	38	4	26.08	-35.62	61.70	55.70	57.29	55.62	66.36		42.60	24.65	26.49
RSTRSD52	140.00	38	5	26.36	-35.19	61.55	55.70	57.29	55.62	67.75		42.97	24.65	26.88
RSTRSD52	140.00	38	6	25.64	-35.39	61.03	55.70	57.29	55.62			41.90	24.65	25.90
RSTRSD52	140.00	38	7	24.48	-35.32	59.80	55.70	57.29	55.62			40.40	24.65	24.40
RSTRSD52	140.00	38	8	22.84	-35.62	58.46	55.70	57.29	55.62			38.45	24.65	22.45
RSTRSD52	140.00	38	9	31.65	-35.53	67.18	55.70	57.29	55.62				24.65	

RSTRSD52	140.00	38	10	31.65	-35.83	67.48	55.70	57.29	55.62				24.65	
RSTRSD52	140.00	38	11	21.79	-35.43	57.22	55.70	57.29	55.62			37.27	24.65	21.27
RSTRSD52	140.00	38	12	21.18	-35.56	56.74	55.70	57.29	55.62			36.59	24.65	20.59
RSTRSD52	140.00	38	13	21.00	-35.62	56.62	55.70	57.29	55.62			36.40	24.65	20.40
RSTRSD52	140.00	40	1	17.11	-11.29	28.40	55.83	55.61	55.62	49.55	32.79		25.16	16.25
RSTRSD52	140.00	40	2	18.30	-10.60	28.90	55.83	55.61	55.62	53.85	33.75		25.16	17.49
RSTRSD52	140.00	40	3	18.08	-10.47	28.55	55.83	55.61	55.62	63.37	33.28		25.16	17.26
RSTRSD52	140.00	40	4	26.21	-6.23	32.44	55.83	55.61	55.62	67.24	42.58		25.16	26.48
RSTRSD52	140.00	40	5	26.49	-5.00	31.49	55.83	55.61	55.62	68.62	42.94		25.16	26.87
RSTRSD52	140.00	40	6	25.74	-4.92	30.66	55.83	55.61	55.62		41.87		25.16	25.87
RSTRSD52	140.00	40	7	24.55	-4.76	29.31	55.83	55.61	55.62		40.37		25.16	24.37
RSTRSD52	140.00	40	8	22.88	-5.23	28.11	55.83	55.61	55.62		38.42		25.16	22.42
RSTRSD52	140.00	40	9	32.16	-5.09	37.25	55.83	55.61	55.62				25.16	
RSTRSD52	140.00	40	10	32.16	-5.66	37.82	55.83	55.61	55.62				25.16	
RSTRSD52	140.00	40	11	21.82	-6.50	28.32	55.83	55.61	55.62		37.24		25.16	21.24
RSTRSD52	140.00	40	12	21.20	-7.44	28.64	55.83	55.61	55.62		36.56		25.16	20.56
RSTRSD52	140.00	40	13	21.02	-7.89	28.91	55.83	55.61	55.62		36.37		25.16	20.37
BIFROS21	-0.80	23	1	-1.21	-1.20	-0.01	34.78	28.76	24.60	32.21	18.76	17.50	-0.39	-1.43
BIFROS21	-0.80	23	2	-1.13	-1.13	0.00	34.78	28.76	24.60	31.82	19.05	17.56	-0.39	-1.33
BIFROS21	-0.80	23	3	-0.87	-0.87	0.00	34.78	28.76	24.60	31.52	19.53	17.92	-0.39	-1.01
BIFROS21	-0.80	23	4	-1.44	-1.47	0.03	34.78	28.76	24.60	37.06	18.06	16.92	-0.39	-1.70
BIFROS21	-0.80	23	5	-30.27	-30.31	0.04	34.78	28.76	24.60	7.47	-11.91	-12.31	-0.39	-31.27
BIFROS21	-0.80	23	6	-30.45	-30.49	0.04	34.78	28.76	24.60	6.88	-12.08	-12.46	-0.39	-31.45
BIFROS21	-0.80	23	7	-5.90	-6.05	0.15	34.78	28.76	24.60	31.09	12.78	12.33	-0.39	-6.65
BIFROS21	-0.80	23	8	-3.42	-3.64	0.22	34.78	28.76	24.60	33.64	15.56	14.95	-0.39	-3.96
BIFROS21	-0.80	23	9	-1.68	-1.84	0.16	34.78	28.76	24.60	35.43	17.65	16.86	-0.39	-1.98
BIFROS21	-0.80	23	10	-1.32	-1.27	-0.05	34.78	28.76	24.60	33.29	18.35	17.36	-0.39	-1.56
BIFROS21	-0.80	27	1	-0.97	-0.99	0.02	34.77	28.76	24.60	32.33	18.93	17.91	-0.39	-1.14
BIFROS21	-0.80	27	2	-0.89	-0.93	0.04	34.77	28.76	24.60	31.86	19.24	17.98	-0.39	-1.05
BIFROS21	-0.80	27	3	-0.64	-0.69	0.05	34.77	28.76	24.60	31.55	19.72	18.33	-0.39	-0.74
BIFROS21	-0.80	27	4	-1.19	-1.26	0.07	34.77	28.76	24.60	36.10	18.25	17.40	-0.39	-1.40
BIFROS21	-0.80	27	5	-29.95	-30.04	0.09	34.77	28.76	24.60	6.28	-11.71	-11.74	-0.39	-30.95
BIFROS21	-0.80	27	6	-30.12	-30.21	0.09	34.77	28.76	24.60	5.90	-11.89	-11.88	-0.39	-31.12
BIFROS21	-0.80	27	7	-5.65	-5.80	0.15	34.77	28.76	24.60	29.88	12.95	12.84	-0.39	-6.38
BIFROS21	-0.80	27	8	-3.18	-3.34	0.16	34.77	28.76	24.60	32.65	15.73	15.43	-0.39	-3.69
BIFROS21	-0.80	27	9	-1.42	-1.53	0.11	34.77	28.76	24.60	34.95	17.83	17.33	-0.39	-1.68
BIFROS21	-0.80	27	10	-1.06	-1.06	0.00	34.77	28.76	24.60	33.48	18.53	17.80	-0.39	-1.25
BIFROS21	-0.80	31	1	-2.76	-2.77	0.01	34.77	28.76	24.54	32.26	19.26	14.30	-0.42	-3.22
BIFROS21	-0.80	31	2	-2.70	-2.72	0.02	34.77	28.76	24.54	31.77	19.60	14.35	-0.42	-3.15
BIFROS21	-0.80	31	3	-2.39	-2.42	0.03	34.77	28.76	24.54	31.45	20.08	14.75	-0.42	-2.80
BIFROS21	-0.80	31	4	-3.31	-3.35	0.04	34.77	28.76	24.54	36.08	18.64	13.42	-0.42	-3.84
BIFROS21	-0.80	31	5	-32.57	-32.62	0.05	34.77	28.76	24.54	6.27	-11.33	-16.24	-0.42	-33.57
BIFROS21	-0.80	31	6	-32.74	-32.79	0.05	34.77	28.76	24.54	5.89	-11.51	-16.40	-0.42	-33.74
BIFROS21	-0.80	31	7	-7.92	-8.01	0.09	34.77	28.76	24.54	29.88	13.29	8.68	-0.42	-8.77
BIFROS21	-0.80	31	8	-5.31	-5.41	0.10	34.77	28.76	24.54	32.65	16.05	11.41	-0.42	-6.02
BIFROS21	-0.80	31	9	-3.47	-3.54	0.07	34.77	28.76	24.54	34.94	18.17	13.37	-0.42	-4.02
BIFROS21	-0.80	31	10	-2.93	-2.94	0.01	34.77	28.76	24.54	33.45	18.85	14.06	-0.42	-3.42
BIFROS21	-0.80	35	1	-0.98	-1.00	0.02	34.77	28.76	24.60	32.27	20.34	17.05	-0.39	-1.15
BIFROS21	-0.80	35	2	-0.56	-0.60	0.04	34.77	28.76	24.60	31.81	22.67	17.10	-0.39	-0.63
BIFROS21	-0.80	35	3	-0.24	-0.30	0.06	34.77	28.76	24.60	31.50	23.73	17.48	-0.39	-0.24
BIFROS21	-0.80	35	4	-1.44	-1.51	0.07	34.77	28.76	24.60	36.08	18.94	16.42	-0.39	-1.70
BIFROS21	-0.80	35	5	-29.94	-30.03	0.09	34.77	28.76	24.60	6.27	-10.07	-12.90	-0.39	-30.94
BIFROS21	-0.80	35	6	-30.24	-30.33	0.09	34.77	28.76	24.60	5.89	-10.63	-13.05	-0.39	-31.24
BIFROS21	-0.80	35	7	-4.92	-5.11	0.19	34.77	28.76	24.60	29.88	17.28	11.80	-0.39	-5.61
BIFROS21	-0.80	35	8	-2.62	-2.81	0.19	34.77	28.76	24.60	32.65	19.39	14.44	-0.39	-3.07
BIFROS21	-0.80	35	9	-1.42	-1.54	0.12	34.77	28.76	24.60	34.94	19.28	16.35	-0.39	-1.68
BIFROS21	-0.80	35	10	-1.44	-1.45	0.01	34.77	28.76	24.60	33.45	18.58	16.89	-0.39	-1.70
BIFROS21	-0.80	39	1	-3.28	-3.29	0.01	34.77	28.76	24.54	32.20	20.53	13.22	-0.42	-3.80
BIFROS21	-0.80	39	2	-3.48	-3.50	0.02	34.77	28.76	24.54	31.72	19.23	13.25	-0.42	-4.03
BIFROS21	-0.80	39	3	-3.29	-3.31	0.02	34.77	28.76	24.54	31.39	18.92	13.66	-0.42	-3.81
BIFROS21	-0.80	39	4	-4.09	-4.13	0.04	34.77	28.76	24.54	36.03	18.75	12.27	-0.42	-4.70
BIFROS21	-0.80	39	5	-33.36	-33.41	0.05	34.77	28.76	24.54	6.22	-10.53	-17.47	-0.42	-34.36
BIFROS21	-0.80	39	6	-33.55	-33.59	0.04	34.77	28.76	24.54	5.85	-10.79	-17.63	-0.42	-34.55
BIFROS21	-0.80	39	7	-8.32	-8.41	0.09	34.77	28.76	24.54	29.83	16.28	7.50	-0.42	-9.18
BIFROS21	-0.80	39	8	-5.66	-5.76	0.10	34.77	28.76	24.54	32.62	19.23	10.26	-0.42	-6.40
BIFROS21	-0.80	39	9	-3.92	-3.98	0.06	34.77	28.76	24.54	34.92	20.47	12.22	-0.42	-4.51
BIFROS21	-0.80	39	10	-3.30	-3.31	0.01	34.77	28.76	24.54	33.42	21.50	12.95	-0.42	-3.83
BIFROS22	-0.80	2	1	0.89	0.00	0.89	34.05	22.65	27.54	29.03	22.84	25.23	-1.86	1.94
BIFROS22	-0.80	2	2	1.58	0.00	1.58	34.05	22.65	27.54	29.28	25.17	27.46	-1.86	3.10
BIFROS22	-0.80	2	3	1.83	0.00	1.83	34.05	22.65	27.54	29.26	26.27	29.13	-1.86	3.56
BIFROS22	-0.80	2	4	-0.07	-0.11	0.04	34.05	22.65	27.54	25.04	27.44	30.45	-1.86	0.48
BIFROS22	-0.80	2	5	-28.62	-28.66	0.04	34.05	22.65	27.54	-5.04	-2.57	-0.18	-1.86	-29.62
BIFROS22	-0.80	2	6	-28.79	-28.83	0.04	34.05	22.65	27.54	-5.20	-2.75	-0.58	-1.86	-29.79
BIFROS22	-0.80	2	7	-4.50	-4.52	0.02	34.05	22.65	27.54	20.15	19.77	20.93	-1.86	-5.00
BIFROS22	-0.80	2	8	-2.29	-2.30	0.01	34.05	22.65	27.54	23.01	21.11	23.34	-1.86	-2.43
BIFROS22	-0.80	2	9	-0.53	-0.53	0.00	34.05	22.65	27.54	25.11	23.70	26.38	-1.86	-0.15
BIFROS22	-0.80	2	10	0.13	-0.22	0.35	34.05	22.65	27.54	28.15	20.62	25.68	-1.86	0.77
BIFROS22	-0.80	6	1	0.85	0.00	0.85	34.05	22.65	27.54	28.96	22.77	25.17	-1.86	1.87
BIFROS22	-0.80	6	2	1.54	0.00	1.54	34.05	22.65	27.54	29.21	25.10	27.40	-1.86	3.04
BIFROS22	-0.80	6	3	1.80	0.00	1.80	34.05	22.65	27.54	29.19	26.20	29.08	-1.86	3.50
BIFROS22	-0.80	6	4	-0.14	-0.18	0.04	34.05	22.65	27.54	24.94	27.36	30.37	-1.86	0.39
BIFROS22	-0.80	6	5	-28.71	-28.75	0.04	34.05	22.65	27.54	-5.14	-2.66	-0.27	-1.86	-29.71
BIFROS22	-0.80	6	6	-28.88	-28.92	0.04	34.05	22.65	27.54	-5.29	-2.84	-0.67	-1.86	-29.88
BIFROS22	-0.80	6	7	-4.58	-4.60	0.02	34.05	22.65	27.54	20.06	19.69	20.84	-1.86	-5.10
BIFROS22	-0.80	6	8	-2.37	-2.37	0.00	34.05	22.65	27.54	22.91	21.03	23.26	-1.86	-2.52
BIFROS22	-0.80	6	9	-0.59	-0.60	0.01	34.05	22.65	27.54	25.02	23.61	26.30	-1.86	-0.24
BIFROS22	-0.80	6	10	0.07	-0.29	0.36	34.05	22.65	27.54	28.06	20.52	25.61	-1.86	0.68
BIFROS22	-0.80	10	1	0.83	0.00	0.83	34.05	22.65	27.54	28.92	22.77	25.17	-1.86	1.85
BIFROS22	-0.80	10	2	1.52	0.00	1.52	34.05	22.65	27.54	29.15	25.10	27.40	-1.86	3.00
BIFROS22	-0.80	10	3	1.77	0.00	1.77	34.05	22.65	27.54	29.13	26.20	29.08	-1.86	3.45
BIFROS22	-0.80	10	4	-0.20	-0.23	0.03	34.05	22.65	27.54	24.85	27.35	30.37	-1.86	0.31
BIFROS22	-0.80	10	5	-28.79	-28.83	0.04	34.05	22.65	27.54	-5.23	-2.66	-0.27	-1.86	-29.79

BIFROS22	-0.80	10	6	-28.96	-29.00	0.04	34.05	22.65	27.54	-5.39	-2.84	-0.67	-1.86	-29.96
BIFROS22	-0.80	10	7	-4.65	-4.66	0.01	34.05	22.65	27.54	19.97	19.69	20.84	-1.86	-5.16
BIFROS22	-0.80	10	8	-2.42	-2.42	0.00	34.05	22.65	27.54	22.82	21.03	23.26	-1.86	-2.59
BIFROS22	-0.80	10	9	-0.64	-0.65	0.01	34.05	22.65	27.54	24.93	23.61	26.30	-1.86	-0.31
BIFROS22	-0.80	10	10	0.04	-0.31	0.35	34.05	22.65	27.54	27.99	20.52	25.61	-1.86	0.65
BIFROS22	-0.80	14	1	0.41	0.00	0.41	34.05	22.65	27.54	27.70	22.69	25.19	-1.86	1.18
BIFROS22	-0.80	14	2	0.68	0.00	0.68	34.05	22.65	27.54	27.06	25.03	27.42	-1.86	1.60
BIFROS22	-0.80	14	3	0.87	0.00	0.87	34.05	22.65	27.54	27.03	26.12	29.07	-1.86	1.91
BIFROS22	-0.80	14	4	1.24	0.00	1.24	34.05	22.65	27.54	27.49	27.27	30.28	-1.86	2.52
BIFROS22	-0.80	14	5	-26.10	-26.16	0.06	34.05	22.65	27.54	-1.96	-2.75	-0.35	-1.86	-27.10
BIFROS22	-0.80	14	6	-26.35	-26.43	0.08	34.05	22.65	27.54	-2.21	-2.93	-0.75	-1.86	-27.35
BIFROS22	-0.80	14	7	-2.21	-2.23	0.02	34.05	22.65	27.54	24.29	19.60	20.75	-1.86	-2.32
BIFROS22	-0.80	14	8	-0.39	-0.39	0.00	34.05	22.65	27.54	27.20	20.94	23.18	-1.86	0.04
BIFROS22	-0.80	14	9	1.05	0.00	1.05	34.05	22.65	27.54	28.79	23.52	26.22	-1.86	2.19
BIFROS22	-0.80	14	10	0.31	-0.07	0.38	34.05	22.65	27.54	28.99	20.43	25.57	-1.86	1.03
BIFROS22	-0.80	18	1	0.41	0.00	0.41	34.05	22.65	27.54	27.68	22.69	25.31	-1.86	1.19
BIFROS22	-0.80	18	2	0.68	0.00	0.68	34.05	22.65	27.54	27.04	25.03	27.53	-1.86	1.60
BIFROS22	-0.80	18	3	0.87	0.00	0.87	34.05	22.65	27.54	27.01	26.12	29.15	-1.86	1.90
BIFROS22	-0.80	18	4	1.23	0.00	1.23	34.05	22.65	27.54	27.46	27.27	30.28	-1.86	2.50
BIFROS22	-0.80	18	5	-26.12	-26.14	0.02	34.05	22.65	27.54	-1.98	-2.75	-0.35	-1.86	-27.12
BIFROS22	-0.80	18	6	-26.37	-26.42	0.05	34.05	22.65	27.54	-2.23	-2.93	-0.75	-1.86	-27.37
BIFROS22	-0.80	18	7	-2.23	-2.22	-0.01	34.05	22.65	27.54	24.25	19.60	20.75	-1.86	-2.35
BIFROS22	-0.80	18	8	-0.40	-0.39	-0.01	34.05	22.65	27.54	27.15	20.94	23.18	-1.86	0.02
BIFROS22	-0.80	18	9	1.04	0.00	1.04	34.05	22.65	27.54	28.76	23.52	26.23	-1.86	2.17
BIFROS22	-0.80	18	10	0.30	-0.08	0.38	34.05	22.65	27.54	28.96	20.43	25.62	-1.86	1.03
BIFROS22	-0.80	24	1	-0.62	-0.68	0.06	35.12	24.54	25.44	26.33	21.71	21.70	-1.20	-0.50
BIFROS22	-0.80	24	2	-0.16	-0.17	0.01	35.12	24.54	25.44	26.41	21.11	26.41	-1.20	0.12
BIFROS22	-0.80	24	3	0.03	0.00	0.03	35.12	24.54	25.44	26.86	20.86	27.21	-1.20	0.36
BIFROS22	-0.80	24	4	-0.09	-0.12	0.03	35.12	24.54	25.44	25.88	22.23	27.69	-1.20	0.20
BIFROS22	-0.80	24	5	-28.13	-28.18	0.05	35.12	24.54	25.44	-4.08	-4.35	-2.26	-1.20	-29.13
BIFROS22	-0.80	24	6	-28.30	-28.34	0.04	35.12	24.54	25.44	-4.27	-4.42	-2.38	-1.20	-29.29
BIFROS22	-0.80	24	7	-4.13	-4.20	0.07	35.12	24.54	25.44	20.82	18.53	21.38	-1.20	-4.67
BIFROS22	-0.80	24	8	-1.88	-1.95	0.07	35.12	24.54	25.44	23.64	20.49	23.69	-1.20	-2.07
BIFROS22	-0.80	24	9	-0.33	-0.36	0.03	35.12	24.54	25.44	25.68	22.20	25.66	-1.20	-0.11
BIFROS22	-0.80	24	10	-0.83	-0.92	0.09	35.12	24.54	25.44	26.38	22.07	20.34	-1.20	-0.77
BIFROS22	-0.80	28	1	-0.42	-0.49	0.07	35.11	24.54	25.44	26.83	21.73	21.72	-1.20	-0.24
BIFROS22	-0.80	28	2	0.07	0.00	0.07	35.11	24.54	25.44	26.92	21.14	26.42	-1.20	0.42
BIFROS22	-0.80	28	3	0.24	0.00	0.24	35.11	24.54	25.44	27.36	20.88	27.21	-1.20	0.65
BIFROS22	-0.80	28	4	0.17	0.00	0.17	35.11	24.54	25.44	26.41	22.23	27.69	-1.20	0.55
BIFROS22	-0.80	28	5	-27.73	-27.80	0.07	35.11	24.54	25.44	-3.56	-4.35	-2.26	-1.20	-28.73
BIFROS22	-0.80	28	6	-27.88	-27.95	0.07	35.11	24.54	25.44	-3.74	-4.41	-2.38	-1.20	-28.88
BIFROS22	-0.80	28	7	-3.85	-3.92	0.07	35.11	24.54	25.44	21.26	18.55	21.38	-1.20	-4.35
BIFROS22	-0.80	28	8	-1.64	-1.68	0.04	35.11	24.54	25.44	24.09	20.50	23.69	-1.20	-1.77
BIFROS22	-0.80	28	9	-0.07	-0.10	0.03	35.11	24.54	25.44	26.20	22.21	25.66	-1.20	0.23
BIFROS22	-0.80	28	10	-0.63	-0.73	0.10	35.11	24.54	25.44	26.93	22.10	20.34	-1.20	-0.51
BIFROS22	-0.80	32	1	-2.52	-2.56	0.04	34.49	24.54	25.44	22.66	21.71	21.62	-1.35	-2.80
BIFROS22	-0.80	32	2	-2.21	-2.22	0.01	34.49	24.54	25.44	22.71	21.09	26.33	-1.35	-2.43
BIFROS22	-0.80	32	3	-1.94	-1.95	0.01	34.49	24.54	25.44	23.14	20.83	27.13	-1.35	-2.11
BIFROS22	-0.80	32	4	-2.65	-2.67	0.02	34.49	24.54	25.44	21.78	22.23	27.60	-1.35	-2.96
BIFROS22	-0.80	32	5	-31.64	-31.67	0.03	34.49	24.54	25.44	-8.20	-4.35	-2.35	-1.35	-32.64
BIFROS22	-0.80	32	6	-31.80	-31.83	0.03	34.49	24.54	25.44	-8.37	-4.41	-2.47	-1.35	-32.80
BIFROS22	-0.80	32	7	-7.08	-7.12	0.04	34.49	24.54	25.44	16.81	18.55	21.29	-1.35	-7.85
BIFROS22	-0.80	32	8	-4.56	-4.59	0.03	34.49	24.54	25.44	19.64	20.50	23.60	-1.35	-5.13
BIFROS22	-0.80	32	9	-2.80	-2.81	0.01	34.49	24.54	25.44	21.68	22.21	25.58	-1.35	-3.13
BIFROS22	-0.80	32	10	-2.78	-2.84	0.06	34.49	24.54	25.44	22.48	22.09	20.24	-1.35	-3.10
BIFROS22	-0.80	36	1	-0.87	-0.93	0.06	35.11	24.54	25.44	25.79	21.72	21.60	-1.20	-0.81
BIFROS22	-0.80	36	2	-0.42	-0.43	0.01	35.11	24.54	25.44	25.85	21.12	26.32	-1.20	-0.23
BIFROS22	-0.80	36	3	-0.22	-0.23	0.01	35.11	24.54	25.44	26.30	20.86	27.13	-1.20	0.03
BIFROS22	-0.80	36	4	-0.46	-0.49	0.03	35.11	24.54	25.44	25.19	22.23	27.60	-1.20	-0.28
BIFROS22	-0.80	36	5	-28.69	-28.75	0.06	35.11	24.54	25.44	-4.78	-4.35	-2.36	-1.20	-29.69
BIFROS22	-0.80	36	6	-28.85	-28.90	0.05	35.11	24.54	25.44	-4.96	-4.41	-2.47	-1.20	-29.85
BIFROS22	-0.80	36	7	-4.60	-4.66	0.06	35.11	24.54	25.44	20.11	18.55	21.29	-1.20	-5.19
BIFROS22	-0.80	36	8	-2.29	-2.33	0.04	35.11	24.54	25.44	22.95	20.50	23.60	-1.20	-2.56
BIFROS22	-0.80	36	9	-0.67	-0.69	0.02	35.11	24.54	25.44	25.02	22.21	25.57	-1.20	-0.57
BIFROS22	-0.80	36	10	-1.09	-1.19	0.10	35.11	24.54	25.44	25.77	22.09	20.24	-1.20	-1.10
BIFROS22	-0.80	40	1	-2.58	-2.61	0.03	34.49	24.54	25.44	21.49	21.70		0.40	-3.12
BIFROS22	-0.80	40	2	-2.64	-2.64	0.00	34.49	24.54	25.44	21.52	21.07		0.40	-3.18
BIFROS22	-0.80	40	3	-2.34	-2.35	0.01	34.49	24.54	25.44	21.96	20.80		0.40	-2.86
BIFROS22	-0.80	40	4	-3.29	-3.31	0.02	34.49	24.54	25.44	20.54	22.22		0.40	-3.91
BIFROS22	-0.80	40	5	-32.64	-32.67	0.03	34.49	24.54	25.44	-9.44	-4.36		0.40	-33.64
BIFROS22	-0.80	40	6	-32.81	-32.83	0.02	34.49	24.54	25.44	-9.60	-4.42		0.40	-33.81
BIFROS22	-0.80	40	7	-7.87	-7.90	0.03	34.49	24.54	25.44	15.60	18.54		0.40	-8.74
BIFROS22	-0.80	40	8	-5.22	-5.25	0.03	34.49	24.54	25.44	18.43	20.50		0.40	-5.98
BIFROS22	-0.80	40	9	-3.36	-3.38	0.02	34.49	24.54	25.44	20.45	22.21		0.40	-3.98
BIFROS22	-0.80	40	10	-2.72	-2.75	0.03	34.49	24.54	25.44	21.26	22.09		0.40	-3.28
ARM06400	23.00	24	1	6.45	0.00	6.45	48.78	30.56	32.62	34.72	25.89	30.22	6.21	6.47
ARM06400	23.00	24	2	7.96	0.00	7.96	48.78	30.56	32.62	36.38	28.12	32.57	6.21	8.50
ARM06400	23.00	24	3	7.99	0.00	7.99	48.78	30.56	32.62	36.48	28.04	32.77	6.21	8.54
ARM06400	23.00	24	4	6.25	0.00	6.25	48.78	30.56	32.62	33.88	25.88	30.80	6.21	6.22
ARM06400	23.00	24	5	7.73	0.00	7.73	48.78	30.56	32.62	36.34	27.56	32.21	6.21	8.18
ARM06400	23.00	24	6	7.07	0.00	7.07	48.78	30.56	32.62	35.31	26.85	31.09	6.21	7.28
ARM06400	23.00	28	1	6.22	0.00	6.22	48.77	30.56	32.62	33.94	25.93	30.22	6.21	6.18
ARM06400	23.00	28	2	7.84	0.00	7.84	48.77	30.56	32.62	35.90	28.19	32.57	6.21	8.33
ARM06400	23.00	28	3	7.85	0.00	7.85	48.77	30.56	32.62	35.96	28.08	32.77	6.21	8.34
ARM06400	23.00	28	4	6.16	0.00	6.16	48.77	30.56	32.62	33.54	25.97	30.80	6.21	6.11
ARM06400	23.00	28	5	7.53	0.00	7.53	48.77	30.56	32.62	35.61	27.59	32.22	6.21	7.90
ARM06400	23.00	28	6	6.91	0.00	6.91	48.77	30.56	32.62	34.73	26.92	31.09	6.21	7.07
ARM06400	23.00	32	1	6.21	0.00	6.21	48.77	30.56	32.62	33.93	25.93	30.20	6.21	6.17
ARM06400	23.00	32	2	7.83	0.00	7.83	48.77	30.56	32.62	35.89	28.19	32.55	6.21	8.32
ARM06400	23.00	32	3	7.84	0.00	7.84	48.77	30.56	32.62	35.95	28.08	32.74	6.21	8.33
ARM06400	23.00	32	4	6.15	0.00	6.15	48.77	30.56	32.62	33.53	25.97	30.77	6.21	6.10
ARM06400	23.00	32	5	7.52	0.00	7.52	48.77	30.56	32.62	35.60	27.59	32.19	6.21	7.89
ARM06400	23.00	32	6	6.90	0.00	6.90	48.77	30.56	32.62	34.73	26.92	31.07	6.21	7.06

ARM06400	23.00	36	1	6.20	0.00	6.20	48.77	30.56	32.62	33.90	25.93	30.20	6.21	6.16
ARM06400	23.00	36	2	7.82	0.00	7.82	48.77	30.56	32.62	35.84	28.19	32.55	6.21	8.30
ARM06400	23.00	36	3	7.83	0.00	7.83	48.77	30.56	32.62	35.91	28.08	32.74	6.21	8.31
ARM06400	23.00	36	4	6.13	0.00	6.13	48.77	30.56	32.62	33.48	25.97	30.77	6.21	6.08
ARM06400	23.00	36	5	7.51	0.00	7.51	48.77	30.56	32.62	35.56	27.59	32.19	6.21	7.87
ARM06400	23.00	36	6	6.89	0.00	6.89	48.77	30.56	32.62	34.68	26.92	31.07	6.21	7.04
ARM06400	23.00	40	1	7.17	0.00	7.17	48.77	30.56	32.62	33.94	25.93		8.17	6.92
ARM06400	23.00	40	2	8.86	0.00	8.86	48.77	30.56	32.62	35.87	28.19		8.17	9.02
ARM06400	23.00	40	3	8.84	0.00	8.84	48.77	30.56	32.62	35.93	28.08		8.17	9.00
ARM06400	23.00	40	4	6.99	0.00	6.99	48.77	30.56	32.62	33.49	25.97		8.17	6.71
ARM06400	23.00	40	5	8.53	0.00	8.53	48.77	30.56	32.62	35.60	27.59		8.17	8.59
ARM06400	23.00	40	6	7.90	0.00	7.90	48.77	30.56	32.62	34.71	26.92		8.17	7.80
AUS0040A	152.00	3	1	5.96	0.00	5.96	51.22	51.50	21.21	53.01	38.71	36.52	-0.82	18.10
AUS0040A	152.00	7	1	5.96	0.00	5.96	51.22	51.50	21.21	52.99	38.71	36.52	-0.82	18.10
AUS0040A	152.00	11	1	5.96	0.00	5.96	51.22	51.59	21.21	52.95	38.73	36.54	-0.82	18.11
AUS0040A	152.00	15	1	5.96	0.00	5.96	51.22	51.59	21.21	53.08	38.75	36.53	-0.82	18.13
AUS0040A	152.00	19	1	5.93	0.00	5.93	51.12	51.62	21.21	51.67	38.05	36.10	-0.83	17.52
AUS0040A	152.00	23	1	5.94	0.00	5.94	51.29	51.66	21.21	52.84	38.06	36.11	-0.82	17.62
AUS0040B	152.00	3	1	5.91	0.00	5.91	51.22	51.50	21.21	53.02	37.45	35.71	-0.82	17.19
AUS0040B	152.00	7	1	5.91	0.00	5.91	51.22	51.50	21.21	53.00	37.45	35.69	-0.82	17.18
AUS0040B	152.00	11	1	5.96	0.00	5.96	51.22	51.59	21.21	52.96	38.66	36.53	-0.82	18.09
AUS0040B	152.00	15	1	5.96	0.00	5.96	51.22	51.59	21.21	52.99	38.76	36.53	-0.82	18.12
AUS0040B	152.00	19	1	5.54	0.00	5.54	51.12	51.62	21.21	41.79	34.65	33.66	-0.83	13.24
AUS0040B	152.00	23	1	5.55	0.00	5.55	51.29	51.66	21.21	41.89	34.66	33.63	-0.82	13.27
AUS0040C	152.00	3	1	5.93	0.00	5.93	51.22	51.50	21.21	56.44	38.79	35.30	-0.82	17.55
AUS0040C	152.00	7	1	5.93	0.00	5.93	51.22	51.50	21.21	56.43	38.79	35.30	-0.82	17.55
AUS0040C	152.00	11	1	5.93	0.00	5.93	51.22	51.59	21.21	56.40	38.80	35.30	-0.82	17.55
AUS0040C	152.00	15	1	5.93	0.00	5.93	51.22	51.59	21.21	56.45	38.80	35.30	-0.82	17.55
AUS0040C	152.00	19	1	5.93	0.00	5.93	51.12	51.62	21.21	56.36	38.80	35.30	-0.83	17.55
AUS0040C	152.00	23	1	5.93	0.00	5.93	51.29	51.66	21.21	58.83	38.80	35.30	-0.82	17.61
AUS0070A	164.00	3	1	6.17	0.00	6.17	51.20	21.54	51.58	58.18	32.58	58.51	-0.50	16.49
AUS0070A	164.00	7	1	6.17	0.00	6.17	51.20	21.54	51.58	58.17	32.58	58.83	-0.50	16.49
AUS0070A	164.00	11	1	6.17	0.00	6.17	51.20	21.54	51.67	58.13	32.58	59.08	-0.50	16.49
AUS0070A	164.00	15	1	6.17	0.00	6.17	51.20	21.54	51.67	58.59	32.58	58.14	-0.50	16.50
AUS0070A	164.00	19	1	6.17	0.00	6.17	51.15	21.54	51.53	61.67	32.58	61.64	-0.50	16.54
AUS0070A	164.00	23	1	6.18	0.00	6.18	51.31	21.54	51.54	63.45	32.58	61.51	-0.50	16.55
AUS0090A	164.00	1	1	12.94	0.00	12.94	81.95	51.72	51.74	43.85		28.75	26.70	11.98
AUS0090A	164.00	5	1	12.92	0.00	12.92	81.95	51.72	51.74	43.74	57.64	28.75	26.70	11.95
AUS0090A	164.00	9	1	12.94	0.00	12.94	81.95		51.74	43.74	58.03	28.75	29.71	11.95
AUS0090A	164.00	13	1	12.73	0.00	12.73	80.67		51.74	42.62	58.93	28.75	29.70	11.75
AUS0090A	164.00	17	1	13.46	0.00	13.46	70.66	51.52	51.74	49.26	58.04	28.75	26.45	12.51
AUS0090A	164.00	21	1	13.46	0.00	13.46	70.62	51.72	51.74	49.19	58.98	28.75	26.54	12.50
AUS0090B	164.00	1	1	10.21	0.00	10.21	81.95	51.72	51.74	34.15		32.42	26.70	9.23
AUS0090B	164.00	5	1	10.13	0.00	10.13	81.95	51.72	51.74	34.05	56.65	32.42	26.70	9.15
AUS0090B	164.00	9	1	10.14	0.00	10.14	81.95		51.74	34.05	56.98	32.42	29.71	9.15
AUS0090B	164.00	13	1	9.75	0.00	9.75	80.67		51.74	33.58	56.93	32.42	29.70	8.76
AUS0090B	164.00	17	1	15.89	0.00	15.89	70.66	51.52	51.74	44.44	56.50	32.43	26.45	14.97
AUS0090B	164.00	21	1	15.87	0.00	15.87	70.62	51.72	51.74	44.36	60.89	32.43	26.54	14.95
AZE06400	23.00	4	1	10.03	0.00	10.03	52.97	41.39	41.94	39.73	27.48	32.86	15.73	9.27
AZE06400	23.00	4	2	10.59	0.00	10.59	52.97	41.39	41.94	40.92	27.73	34.07	15.73	9.87
AZE06400	23.00	4	3	9.82	0.00	9.82	52.97	41.39	41.94	39.10	27.30	33.09	15.73	9.05
AZE06400	23.00	4	4	9.25	0.00	9.25	52.97	41.39	41.94	37.88	27.27	31.60	15.73	8.44
AZE06400	23.00	4	5	8.46	0.00	8.46	52.97	41.39	41.94	37.02	26.61	30.47	15.73	7.63
AZE06400	23.00	4	6	8.95	0.00	8.95	52.97	41.39	41.94	38.04	26.76	31.21	15.73	8.14
AZE06400	23.00	4	7	10.52	0.00	10.52	52.97	41.39	41.94	40.91	27.56	34.31	15.73	9.79
AZE06400	23.00	8	1	9.98	0.00	9.98	52.97	41.39	41.94	39.69	27.41	32.86	15.73	9.21
AZE06400	23.00	8	2	10.54	0.00	10.54	52.97	41.39	41.94	40.88	27.65	34.06	15.73	9.81
AZE06400	23.00	8	3	9.77	0.00	9.77	52.97	41.39	41.94	39.05	27.23	33.09	15.73	8.99
AZE06400	23.00	8	4	9.20	0.00	9.20	52.97	41.39	41.94	37.84	27.21	31.60	15.73	8.40
AZE06400	23.00	8	5	8.42	0.00	8.42	52.97	41.39	41.94	36.98	26.54	30.47	15.73	7.59
AZE06400	23.00	8	6	8.91	0.00	8.91	52.97	41.39	41.94	38.00	26.69	31.21	15.73	8.09
AZE06400	23.00	8	7	10.46	0.00	10.46	52.97	41.39	41.94	40.87	27.48	34.30	15.73	9.73
AZE06400	23.00	12	1	9.98	0.00	9.98	52.97	41.39	41.94	39.71	27.41	32.83	15.74	9.21
AZE06400	23.00	12	2	10.54	0.00	10.54	52.97	41.39	41.94	40.91	27.65	34.04	15.74	9.81
AZE06400	23.00	12	3	9.76	0.00	9.76	52.97	41.39	41.94	39.07	27.22	33.06	15.74	8.99
AZE06400	23.00	12	4	9.20	0.00	9.20	52.97	41.39	41.94	37.85	27.20	31.58	15.74	8.40
AZE06400	23.00	12	5	8.42	0.00	8.42	52.97	41.39	41.94	36.99	26.54	30.45	15.74	7.58
AZE06400	23.00	12	6	8.91	0.00	8.91	52.97	41.39	41.94	38.02	26.69	31.19	15.74	8.09
AZE06400	23.00	12	7	10.46	0.00	10.46	52.97	41.39	41.94	40.89	27.47	34.27	15.74	9.72
AZE06400	23.00	16	1	9.93	0.00	9.93	52.97	41.39	41.94	39.70	27.33	32.85	15.74	9.17
AZE06400	23.00	16	2	10.49	0.00	10.49	52.97	41.39	41.94	40.89	27.57	34.07	15.74	9.76
AZE06400	23.00	16	3	9.72	0.00	9.72	52.97	41.39	41.94	39.05	27.14	33.09	15.74	8.94
AZE06400	23.00	16	4	9.16	0.00	9.16	52.97	41.39	41.94	37.84	27.13	31.60	15.74	8.36
AZE06400	23.00	16	5	8.39	0.00	8.39	52.97	41.39	41.94	36.98	26.47	30.46	15.74	7.55
AZE06400	23.00	16	6	8.87	0.00	8.87	52.97	41.39	41.94	38.01	26.62	31.21	15.74	8.05
AZE06400	23.00	16	7	10.41	0.00	10.41	52.97	41.39	41.94	40.89	27.39	34.31	15.74	9.67
AZE06400	23.00	20	1	9.24	0.00	9.24	52.97	41.39	32.64	39.69	27.26	32.50	9.88	9.06
AZE06400	23.00	20	2	9.68	0.00	9.68	52.97	41.39	32.64	40.88	27.50	33.40	9.88	9.60
AZE06400	23.00	20	3	8.97	0.00	8.97	52.97	41.39	32.64	39.03	27.07	32.14	9.88	8.74
AZE06400	23.00	20	4	8.55	0.00	8.55	52.97	41.39	32.64	37.81	27.07	31.18	9.88	8.24
AZE06400	23.00	20	5	7.89	0.00	7.89	52.97	41.39	32.64	36.96	26.41	30.26	9.88	7.47
AZE06400	23.00	20	6	8.32	0.00	8.32	52.97	41.39	32.64	37.99	26.55	31.03	9.88	7.98
AZE06400	23.00	20	7	9.58	0.00	9.58	52.97	41.39	32.64	40.88	27.32	33.30	9.88	9.47
BIH14800	34.00	2	1	2.67	0.00	2.67	44.30	25.50	41.16	34.12	20.65	25.32	3.04	2.54
BIH14800	34.00	2	2	4.12	0.00	4.12	44.30	25.50	41.16	35.56	22.68	27.08	3.04	4.41
BIH14800	34.00	2	3	2.51	0.00	2.51	44.30	25.50	41.16	32.11	21.18	25.07	3.04	2.35

BIH14800	34.00	2	4	2.86	0.00	2.86	44.30	25.50	41.16	31.70	21.89	26.02	3.04	2.78
BIH14800	34.00	2	5	2.10	0.00	2.10	44.30	25.50	41.16	30.91	20.88	25.10	3.04	1.86
BIH14800	34.00	2	6	3.37	0.00	3.37	44.30	25.50	41.16	34.27	21.73	26.31	3.04	3.42
BIH14800	34.00	2	7	2.80	0.00	2.80	44.30	25.50	41.16	32.74	21.28	25.74	3.04	2.71
BIH14800	34.00	6	1	2.66	0.00	2.66	44.30	25.50	41.16	34.09	20.65	25.32	3.04	2.53
BIH14800	34.00	6	2	4.12	0.00	4.12	44.30	25.50	41.16	35.54	22.68	27.08	3.04	4.40
BIH14800	34.00	6	3	2.50	0.00	2.50	44.30	25.50	41.16	32.10	21.17	25.06	3.04	2.35
BIH14800	34.00	6	4	2.85	0.00	2.85	44.30	25.50	41.16	31.69	21.88	26.02	3.04	2.77
BIH14800	34.00	6	5	2.10	0.00	2.10	44.30	25.50	41.16	30.90	20.88	25.10	3.04	1.86
BIH14800	34.00	6	6	3.37	0.00	3.37	44.30	25.50	41.16	34.26	21.72	26.30	3.04	3.42
BIH14800	34.00	6	7	2.80	0.00	2.80	44.30	25.50	41.16	32.73	21.28	25.74	3.04	2.70
BIH14800	34.00	10	1	2.65	0.00	2.65	44.30	25.50	41.16	34.09	20.64	25.29	3.05	2.53
BIH14800	34.00	10	2	4.11	0.00	4.11	44.30	25.50	41.16	35.54	22.67	27.05	3.05	4.39
BIH14800	34.00	10	3	2.50	0.00	2.50	44.30	25.50	41.16	32.10	21.17	25.04	3.05	2.34
BIH14800	34.00	10	4	2.85	0.00	2.85	44.30	25.50	41.16	31.69	21.88	25.99	3.05	2.77
BIH14800	34.00	10	5	2.09	0.00	2.09	44.30	25.50	41.16	30.90	20.88	25.07	3.05	1.85
BIH14800	34.00	10	6	3.36	0.00	3.36	44.30	25.50	41.16	34.26	21.72	26.28	3.05	3.41
BIH14800	34.00	10	7	2.79	0.00	2.79	44.30	25.50	41.16	32.73	21.28	25.71	3.05	2.69
BIH14800	34.00	14	1	2.66	0.00	2.66	44.30	25.50	41.16	34.23	20.64	25.26	3.05	2.54
BIH14800	34.00	14	2	4.12	0.00	4.12	44.30	25.50	41.16	35.66	22.67	27.02	3.05	4.40
BIH14800	34.00	14	3	2.51	0.00	2.51	44.30	25.50	41.16	32.19	21.17	25.01	3.05	2.35
BIH14800	34.00	14	4	2.86	0.00	2.86	44.30	25.50	41.16	31.75	21.88	25.96	3.05	2.78
BIH14800	34.00	14	5	2.10	0.00	2.10	44.30	25.50	41.16	30.97	20.87	25.04	3.05	1.86
BIH14800	34.00	14	6	3.37	0.00	3.37	44.30	25.50	41.16	34.37	21.71	26.25	3.05	3.42
BIH14800	34.00	14	7	2.80	0.00	2.80	44.30	25.50	41.16	32.81	21.27	25.68	3.05	2.71
BIH14800	34.00	18	1	2.66	0.00	2.66	44.30	25.50	41.16	34.22	20.63	25.27	3.05	2.54
BIH14800	34.00	18	2	4.12	0.00	4.12	44.30	25.50	41.16	35.63	22.66	27.03	3.05	4.40
BIH14800	34.00	18	3	2.50	0.00	2.50	44.30	25.50	41.16	32.17	21.16	25.01	3.05	2.34
BIH14800	34.00	18	4	2.85	0.00	2.85	44.30	25.50	41.16	31.73	21.87	25.96	3.05	2.77
BIH14800	34.00	18	5	2.10	0.00	2.10	44.30	25.50	41.16	30.95	20.87	25.05	3.05	1.86
BIH14800	34.00	18	6	3.37	0.00	3.37	44.30	25.50	41.16	34.35	21.71	26.25	3.05	3.42
BIH14800	34.00	18	7	2.80	0.00	2.80	44.30	25.50	41.16	32.80	21.27	25.69	3.05	2.70
BLR06200	38.00	1	1	11.89	0.00	11.89	54.05		41.23	35.87		35.04	18.00	11.11
BLR06200	38.00	1	2	11.83	0.00	11.83	54.05		41.23	35.99		34.17	18.00	11.05
BLR06200	38.00	1	3	8.62	0.00	8.62	54.05		41.23	32.30		32.72	18.00	7.72
BLR06200	38.00	1	4	12.62	0.00	12.62	54.05		41.23	37.17		33.78	18.00	11.88
BLR06200	38.00	1	5	8.89	0.00	8.89	54.05		41.23	32.62		32.73	18.00	8.00
BLR06200	38.00	1	6	10.81	0.00	10.81	54.05		41.23	35.15		32.26	18.00	9.98
BLR06200	38.00	1	7	8.09	0.00	8.09	54.05		41.23	31.93		31.20	18.00	7.18
BLR06200	38.00	5	1	6.58	0.00	6.58	54.05	27.18	41.23	35.83	25.27	34.96	4.96	7.06
BLR06200	38.00	5	2	6.69	0.00	6.69	54.05	27.18	41.23	35.94	25.60	34.07	4.96	7.23
BLR06200	38.00	5	3	5.54	0.00	5.54	54.05	27.18	41.23	32.27	25.96	32.64	4.96	5.66
BLR06200	38.00	5	4	8.07	0.00	8.07	54.05	27.18	41.23	37.14	28.95	33.70	4.96	9.35
BLR06200	38.00	5	5	5.86	0.00	5.86	54.05	27.18	41.23	32.59	26.63	32.65	4.96	6.09
BLR06200	38.00	5	6	7.31	0.00	7.31	54.05	27.18	41.23	35.14	28.76	32.19	4.96	8.13
BLR06200	38.00	5	7	5.57	0.00	5.57	54.05	27.18	41.23	31.90	27.18	31.14	4.96	5.70
BLR06200	38.00	9	1	6.58	0.00	6.58	54.05	27.18	41.23	35.82	25.27	34.95	4.96	7.06
BLR06200	38.00	9	2	6.69	0.00	6.69	54.05	27.18	41.23	35.93	25.60	34.07	4.96	7.23
BLR06200	38.00	9	3	5.53	0.00	5.53	54.05	27.18	41.23	32.26	25.95	32.64	4.96	5.66
BLR06200	38.00	9	4	8.07	0.00	8.07	54.05	27.18	41.23	37.13	28.95	33.70	4.96	9.34
BLR06200	38.00	9	5	5.86	0.00	5.86	54.05	27.18	41.23	32.59	26.63	32.65	4.96	6.08
BLR06200	38.00	9	6	7.30	0.00	7.30	54.05	27.18	41.23	35.13	28.76	32.19	4.96	8.12
BLR06200	38.00	9	7	5.57	0.00	5.57	54.05	27.18	41.23	31.90	27.18	31.13	4.96	5.70
BLR06200	38.00	13	1	6.74	0.00	6.74	54.05	27.18	41.30	35.77	25.34	40.26	4.96	7.29
BLR06200	38.00	13	2	6.92	0.00	6.92	54.05	27.18	41.30	35.88	25.70	40.27	4.96	7.55
BLR06200	38.00	13	3	5.71	0.00	5.71	54.05	27.18	41.30	32.22	26.08	36.57	4.96	5.89
BLR06200	38.00	13	4	8.40	0.00	8.40	54.05	27.18	41.30	37.10	29.18	39.30	4.96	9.93
BLR06200	38.00	13	5	6.05	0.00	6.05	54.05	27.18	41.30	32.55	26.77	36.30	4.96	6.33
BLR06200	38.00	13	6	7.60	0.00	7.60	54.05	27.18	41.30	35.11	28.98	35.60	4.96	8.58
BLR06200	38.00	13	7	5.77	0.00	5.77	54.05	27.18	41.30	31.87	27.36	33.81	4.96	5.97
BLR06200	38.00	17	1	6.77	0.00	6.77	54.06	27.35	41.15	35.76	25.40	38.39	5.11	7.27
BLR06200	38.00	17	2	6.95	0.00	6.95	54.06	27.35	41.15	35.85	25.79	37.90	5.11	7.52
BLR06200	38.00	17	3	5.74	0.00	5.74	54.06	27.35	41.15	32.22	26.17	35.37	5.11	5.88
BLR06200	38.00	17	4	8.45	0.00	8.45	54.06	27.35	41.15	37.09	29.38	37.26	5.11	9.89
BLR06200	38.00	17	5	6.07	0.00	6.07	54.06	27.35	41.15	32.54	26.87	35.23	5.11	6.32
BLR06200	38.00	17	6	7.64	0.00	7.64	54.06	27.35	41.15	35.11	29.16	34.64	5.11	8.56
BLR06200	38.00	17	7	5.80	0.00	5.80	54.06	27.35	41.15	31.87	27.48	33.16	5.11	5.96
BTN03100	86.00	5	1	10.54	0.00	10.54	64.53	36.07	36.15	38.61	31.38	31.52	11.08	10.38
BTN03100	86.00	5	2	12.19	0.00	12.19	64.53	36.07	36.15	41.11	33.43	33.22	11.08	12.48
BTN03100	86.00	5	3	10.31	0.00	10.31	64.53	36.07	36.15	39.09	31.07	30.50	11.08	10.11
BTN03100	86.00	5	4	10.75	0.00	10.75	64.53	36.07	36.15	39.06	31.76	31.42	11.08	10.63
BTN03100	86.00	5	5	10.31	0.00	10.31	64.53	36.07	36.15	38.94	31.12	30.58	11.08	10.10
BTN03100	86.00	5	6	10.70	0.00	10.70	64.53	36.07	36.15	38.71	31.75	31.66	11.08	10.57
BTN03100	86.00	9	1	10.47	0.00	10.47	64.63	36.13	36.12	38.49	31.31	31.46	11.09	10.30
BTN03100	86.00	9	2	12.13	0.00	12.13	64.63	36.13	36.12	41.00	33.36	33.16	11.09	12.40
BTN03100	86.00	9	3	10.25	0.00	10.25	64.63	36.13	36.12	39.01	30.99	30.43	11.09	10.03
BTN03100	86.00	9	4	10.68	0.00	10.68	64.63	36.13	36.12	38.96	31.69	31.36	11.09	10.55
BTN03100	86.00	9	5	10.25	0.00	10.25	64.63	36.13	36.12	38.86	31.04	30.51	11.09	10.03
BTN03100	86.00	9	6	10.63	0.00	10.63	64.63	36.13	36.12	38.60	31.68	31.59	11.09	10.49
BTN03100	86.00	13	1	14.38	0.00	14.38	60.59	50.90	53.12	38.62	38.11	39.41	25.32	13.45
BTN03100	86.00	13	2	16.75	0.00	16.75	60.59	50.90	53.12	41.15	41.29	40.40	25.32	15.87
BTN03100	86.00	13	3	14.86	0.00	14.86	60.59	50.90	53.12	39.22	41.18	37.38	25.32	13.94
BTN03100	86.00	13	4	14.94	0.00	14.94	60.59	50.90	53.12	39.12	40.50	38.71	25.32	14.02
BTN03100	86.00	13	5	14.75	0.00	14.75	60.59	50.90	53.12	39.06	40.99	37.51	25.32	13.83
BTN03100	86.00	13	6	14.62	0.00	14.62	60.59	50.90	53.12	38.73	39.44	39.44	25.32	13.70
BTN03100	86.00	17	1	6.88	0.00	6.88	64.56	32.78	32.76	36.73	27.22	26.58	7.75	6.65
BTN03100	86.00	17	2	8.60	0.00	8.60	64.56	32.78	32.76	38.87	29.47	28.68	7.75	8.81
BTN03100	86.00	17	3	7.02	0.00	7.02	64.56	32.78	32.76	36.82	27.43	26.77	7.75	6.82
BTN03100	86.00	17	4	7.45	0.00	7.45	64.56	32.78	32.76	37.59	27.79	27.29	7.75	7.34
BTN03100	86.00	17	5	7.05	0.00	7.05	64.56	32.78	32.76	36.90	27.41	26.83	7.75	6.86
BTN03100	86.00	17	6	7.28	0.00	7.28	64.56	32.78	32.76	37.44	27.58	27.06	7.75	7.14

CHN19000	122.00	1	1	11.59	0.00	11.59	60.66		61.70	34.78		40.52	30.15	10.60
CHN19000	122.00	1	2	9.49	0.00	9.49	60.66		61.70	32.67		38.63	30.15	8.50
CHN19000	122.00	1	3	11.02	0.00	11.02	60.66		61.70	34.27		38.83	30.15	10.03
CHN19000	122.00	1	4	11.78	0.00	11.78	60.66		61.70	35.00		40.20	30.15	10.80
CHN19000	122.00	5	1	10.86	0.00	10.86	60.65	61.69	61.71	34.16	41.33	40.43	29.69	9.88
CHN19000	122.00	5	2	8.67	0.00	8.67	60.65	61.69	61.71	31.94	39.23	38.53	29.69	7.67
CHN19000	122.00	5	3	10.25	0.00	10.25	60.65	61.69	61.71	33.64	39.35	38.73	29.69	9.26
CHN19000	122.00	5	4	11.13	0.00	11.13	60.65	61.69	61.71	34.47	41.05	40.10	29.69	10.14
CHN19000	122.00	9	1	10.93	0.00	10.93	60.66	60.89	63.77	34.10	41.91	45.69	29.77	9.94
CHN19000	122.00	9	2	8.73	0.00	8.73	60.66	60.89	63.77	31.87	40.07	44.55	29.77	7.73
CHN19000	122.00	9	3	10.27	0.00	10.27	60.66	60.89	63.77	33.57	38.64	42.24	29.77	9.28
CHN19000	122.00	9	4	11.17	0.00	11.17	60.66	60.89	63.77	34.41	41.35	42.95	29.77	10.18
CHN19000	122.00	13	1	11.58	0.00	11.58	67.39	61.81	64.86	34.87	43.30	40.21	34.70	10.58
CHN19000	122.00	13	2	9.25	0.00	9.25	67.39	61.81	64.86	32.42	43.23	40.07	34.70	8.25
CHN19000	122.00	13	3	10.94	0.00	10.94	67.39	61.81	64.86	34.47	38.55	38.15	34.70	9.94
CHN19000	122.00	13	4	11.90	0.00	11.90	67.39	61.81	64.86	35.52	40.01	37.70	34.70	10.91
CZE14400	17.00	23	1	7.40	0.00	7.40	41.70	32.67	34.34	34.46	30.20	29.22	6.75	7.55
CZE14400	17.00	23	2	8.56	0.00	8.56	41.70	32.67	34.34	36.36	31.47	30.48	6.75	9.13
CZE14400	17.00	23	3	8.82	0.00	8.82	41.70	32.67	34.34	36.50	32.16	31.01	6.75	9.51
CZE14400	17.00	23	4	8.26	0.00	8.26	41.70	32.67	34.34	35.51	31.53	30.41	6.75	8.70
CZE14400	17.00	23	5	9.18	0.00	9.18	41.70	32.67	34.34	36.73	32.98	31.92	6.75	10.05
CZE14400	17.00	23	6	8.76	0.00	8.76	41.70	32.67	34.34	36.12	32.35	31.23	6.75	9.41
CZE14400	17.00	23	7	7.99	0.00	7.99	41.70	32.67	34.34	35.06	31.21	30.13	6.75	8.33
CZE14400	17.00	27	1	8.38	0.00	8.38	42.03	32.68	34.34	37.11	30.30	29.48	6.85	8.83
CZE14400	17.00	27	2	9.42	0.00	9.42	42.03	32.68	34.34	39.10	31.59	30.77	6.85	10.37
CZE14400	17.00	27	3	9.74	0.00	9.74	42.03	32.68	34.34	39.55	32.24	31.20	6.85	10.87
CZE14400	17.00	27	4	9.27	0.00	9.27	42.03	32.68	34.34	38.66	31.59	30.54	6.85	10.13
CZE14400	17.00	27	5	10.18	0.00	10.18	42.03	32.68	34.34	40.18	33.03	32.03	6.85	11.62
CZE14400	17.00	27	6	9.88	0.00	9.88	42.03	32.68	34.34	39.90	32.42	31.37	6.85	11.10
CZE14400	17.00	27	7	9.04	0.00	9.04	42.03	32.68	34.34	38.11	31.30	30.33	6.85	9.78
CZE14400	17.00	31	1	7.60	0.00	7.60	42.03	32.68	34.33	37.09	30.47	26.86	6.84	7.77
CZE14400	17.00	31	2	8.63	0.00	8.63	42.03	32.68	34.33	39.08	31.77	28.00	6.84	9.18
CZE14400	17.00	31	3	9.18	0.00	9.18	42.03	32.68	34.33	39.53	32.35	29.12	6.84	10.00
CZE14400	17.00	31	4	8.86	0.00	8.86	42.03	32.68	34.33	38.65	31.63	29.00	6.84	9.52
CZE14400	17.00	31	5	9.86	0.00	9.86	42.03	32.68	34.33	40.16	33.05	30.68	6.84	11.08
CZE14400	17.00	31	6	9.46	0.00	9.46	42.03	32.68	34.33	39.88	32.48	29.74	6.84	10.43
CZE14400	17.00	31	7	8.44	0.00	8.44	42.03	32.68	34.33	38.10	31.42	28.16	6.84	8.91
CZE14400	17.00	35	1	8.25	0.00	8.25	42.03	32.68	34.34	37.07	30.46	28.88	6.85	8.65
CZE14400	17.00	35	2	9.26	0.00	9.26	42.03	32.68	34.34	39.06	31.59	30.12	6.85	10.11
CZE14400	17.00	35	3	9.67	0.00	9.67	42.03	32.68	34.34	39.52	32.53	30.73	6.85	10.76
CZE14400	17.00	35	4	9.24	0.00	9.24	42.03	32.68	34.34	38.63	31.92	30.19	6.85	10.08
CZE14400	17.00	35	5	10.12	0.00	10.12	42.03	32.68	34.34	40.14	33.12	31.72	6.85	11.52
CZE14400	17.00	35	6	9.78	0.00	9.78	42.03	32.68	34.34	39.86	32.39	31.00	6.85	10.94
CZE14400	17.00	35	7	8.92	0.00	8.92	42.03	32.68	34.34	38.08	31.36	29.84	6.85	9.61
CZE14400	17.00	39	1	7.47	0.00	7.47	42.03	32.68	34.33	37.04	32.41	25.95	6.84	7.61
CZE14400	17.00	39	2	8.51	0.00	8.51	42.03	32.68	34.33	39.04	34.01	27.06	6.84	9.01
CZE14400	17.00	39	3	9.11	0.00	9.11	42.03	32.68	34.33	39.50	33.92	28.34	6.84	9.89
CZE14400	17.00	39	4	8.79	0.00	8.79	42.03	32.68	34.33	38.61	32.60	28.37	6.84	9.42
CZE14400	17.00	39	5	9.81	0.00	9.81	42.03	32.68	34.33	40.12	33.85	30.11	6.84	10.99
CZE14400	17.00	39	6	9.39	0.00	9.39	42.03	32.68	34.33	39.83	33.56	29.08	6.84	10.32
CZE14400	17.00	39	7	8.34	0.00	8.34	42.03	32.68	34.33	38.05	32.98	27.36	6.84	8.78
D 08700	-19.00	2	1	1.76	0.00	1.76	39.15	22.51	24.76	33.91	21.98	26.07	-1.88	3.44
D 08700	-19.00	2	2	1.56	0.00	1.56	39.15	22.51	24.76	33.57	21.75	25.38	-1.88	3.08
D 08700	-19.00	2	3	1.09	0.00	1.09	39.15	22.51	24.76	33.42	20.60	24.81	-1.88	2.27
D 08700	-19.00	2	4	0.85	0.00	0.85	39.15	22.51	24.76	32.82	19.98	25.36	-1.88	1.89
D 08700	-19.00	2	5	1.92	0.00	1.92	39.15	22.51	24.76	34.39	21.65	28.26	-1.88	3.74
D 08700	-19.00	2	6	1.69	0.00	1.69	39.15	22.51	24.76	33.32	22.37	25.28	-1.88	3.32
D 08700	-19.00	6	1	1.80	0.00	1.80	39.15	22.51	24.76	33.95	22.07	26.11	-1.88	3.51
D 08700	-19.00	6	2	1.60	0.00	1.60	39.15	22.51	24.76	33.62	21.85	25.41	-1.88	3.15
D 08700	-19.00	6	3	1.13	0.00	1.13	39.15	22.51	24.76	33.48	20.70	24.83	-1.88	2.34
D 08700	-19.00	6	4	0.90	0.00	0.90	39.15	22.51	24.76	32.89	20.08	25.39	-1.88	1.97
D 08700	-19.00	6	5	1.96	0.00	1.96	39.15	22.51	24.76	34.44	21.75	28.31	-1.88	3.82
D 08700	-19.00	6	6	1.73	0.00	1.73	39.15	22.51	24.76	33.37	22.47	25.31	-1.88	3.38
D 08700	-19.00	10	1	1.76	0.00	1.76	39.15	22.51	24.76	33.94	21.98	26.08	-1.88	3.45
D 08700	-19.00	10	2	1.57	0.00	1.57	39.15	22.51	24.76	33.62	21.75	25.39	-1.88	3.09
D 08700	-19.00	10	3	1.10	0.00	1.10	39.15	22.51	24.76	33.48	20.60	24.81	-1.88	2.28
D 08700	-19.00	10	4	0.86	0.00	0.86	39.15	22.51	24.76	32.89	19.98	25.37	-1.88	1.91
D 08700	-19.00	10	5	1.92	0.00	1.92	39.15	22.51	24.76	34.44	21.66	28.27	-1.88	3.75
D 08700	-19.00	10	6	1.70	0.00	1.70	39.15	22.51	24.76	33.36	22.37	25.29	-1.88	3.33
D 08700	-19.00	14	1	1.78	0.00	1.78	39.15	22.51	24.76	34.02	21.98	26.12	-1.88	3.48
D 08700	-19.00	14	2	1.54	0.00	1.54	39.15	22.51	24.76	33.38	21.75	25.42	-1.88	3.05
D 08700	-19.00	14	3	1.11	0.00	1.11	39.15	22.51	24.76	33.54	20.60	24.83	-1.88	2.30
D 08700	-19.00	14	4	0.89	0.00	0.89	39.15	22.51	24.76	33.07	19.98	25.40	-1.88	1.95
D 08700	-19.00	14	5	1.94	0.00	1.94	39.15	22.51	24.76	34.54	21.66	28.33	-1.88	3.78
D 08700	-19.00	14	6	1.67	0.00	1.67	39.15	22.51	24.76	33.14	22.38	25.31	-1.88	3.29
D 08700	-19.00	18	1	1.77	0.00	1.77	39.15	22.51	24.76	34.01	21.98	26.09	-1.88	3.47
D 08700	-19.00	18	2	1.55	0.00	1.55	39.15	22.51	24.76	33.43	21.75	25.40	-1.88	3.06
D 08700	-19.00	18	3	1.12	0.00	1.12	39.15	22.51	24.76	33.68	20.60	24.82	-1.88	2.32
D 08700	-19.00	18	4	0.91	0.00	0.91	39.15	22.51	24.76	33.24	19.98	25.38	-1.88	1.98
D 08700	-19.00	18	5	1.94	0.00	1.94	39.15	22.51	24.76	34.57	21.66	28.29	-1.88	3.78
D 08700	-19.00	18	6	1.67	0.00	1.67	39.15	22.51	24.76	33.15	22.38	25.29	-1.88	3.28
D2-21600	-1.00	21	1	3.02	0.00	3.02	58.82	34.57	28.78	37.80	22.96	20.96	5.75	2.50
D2-21600	-1.00	21	2	4.61	0.00	4.61	58.82	34.57	28.78	40.78	24.87	22.61	5.75	4.33
D2-21600	-1.00	21	3	4.77	0.00	4.77	58.82	34.57	28.78	42.58	25.06	22.68	5.75	4.53
D2-21600	-1.00	21	4	5.75	0.00	5.75	58.82	34.57	28.78	42.51	25.80	24.26	5.75	5.72
D2-21600	-1.00	21	5	4.86	0.00	4.86	58.82	34.57	28.78	38.88	24.88	23.39	5.75	4.63
D2-21600	-1.00	21	6	3.08	0.00	3.08	58.82	34.57	28.78	37.34	22.93	21.17	5.75	2.57
D2-21600	-1.00	25	1	1.40	0.00	1.40	58.80	25.97	28.78	37.86	19.79	21.23	2.13	1.20
D2-21600	-1.00	25	2	2.72	0.00	2.72	58.80	25.97	28.78	40.76	21.33	22.87	2.13	2.84
D2-21600	-1.00	25	3	2.81	0.00	2.81	58.80	25.97	28.78	42.42	21.42	22.89	2.13	2.96
D2-21600	-1.00	25	4	3.67	0.00	3.67	58.80	25.97	28.78	42.52	22.36	24.47	2.13	4.12

D2-21600	-1.00	25	5	2.79	0.00	2.79	58.80	25.97	28.78	39.02	21.15	23.64	2.13	2.93
D2-21600	-1.00	25	6	1.46	0.00	1.46	58.80	25.97	28.78	37.44	19.83	21.44	2.13	1.28
D2-21600	-1.00	29	1	1.70	0.00	1.70	58.79	25.97	28.78	38.04	20.20	21.55	2.13	1.56
D2-21600	-1.00	29	2	2.97	0.00	2.97	58.79	25.97	28.78	40.88	21.70	23.16	2.13	3.17
D2-21600	-1.00	29	3	2.97	0.00	2.97	58.79	25.97	28.78	42.47	21.67	23.05	2.13	3.17
D2-21600	-1.00	29	4	3.82	0.00	3.82	58.79	25.97	28.78	42.68	22.60	24.65	2.13	4.33
D2-21600	-1.00	29	5	2.99	0.00	2.99	58.79	25.97	28.78	39.43	21.42	23.89	2.13	3.21
D2-21600	-1.00	29	6	1.75	0.00	1.75	58.79	25.97	28.78	37.69	20.22	21.75	2.13	1.63
D2-21600	-1.00	33	1	-0.20	0.00	-0.20	58.79	25.94	28.78	38.01	16.73	21.55	2.11	-0.66
D2-21600	-1.00	33	2	1.26	0.00	1.26	58.79	25.94	28.78	40.87	18.46	23.00	2.11	1.04
D2-21600	-1.00	33	3	1.77	0.00	1.77	58.79	25.94	28.78	42.47	19.29	23.00	2.11	1.66
D2-21600	-1.00	33	4	2.72	0.00	2.72	58.79	25.94	28.78	42.63	20.34	24.64	2.11	2.85
D2-21600	-1.00	33	5	1.75	0.00	1.75	58.79	25.94	28.78	39.25	18.85	24.63	2.11	1.64
D2-21600	-1.00	33	6	-0.01	0.00	-0.01	58.79	25.94	28.78	37.61	16.88	22.11	2.11	-0.44
D2-21600	-1.00	37	1	1.91	0.00	1.91	58.79	25.97	28.78	37.83	19.46	23.84	2.13	1.82
D2-21600	-1.00	37	2	3.32	0.00	3.32	58.79	25.97	28.78	40.72	21.02	26.14	2.13	3.64
D2-21600	-1.00	37	3	3.32	0.00	3.32	58.79	25.97	28.78	42.36	21.24	25.27	2.13	3.64
D2-21600	-1.00	37	4	4.13	0.00	4.13	58.79	25.97	28.78	42.44	22.20	27.04	2.13	4.77
D2-21600	-1.00	37	5	3.25	0.00	3.25	58.79	25.97	28.78	38.89	20.95	26.46	2.13	3.54
D2-21600	-1.00	37	6	1.92	0.00	1.92	58.79	25.97	28.78	37.37	19.51	23.87	2.13	1.84
ETH09200	23.00	22	1	13.47	0.00	13.47	55.89	53.38	53.46	42.04	36.02	31.24	23.96	12.55
ETH09200	23.00	22	2	12.23	0.00	12.23	55.89	53.38	53.46	41.92	34.42	29.58	23.96	11.29
ETH09200	23.00	22	3	11.69	0.00	11.69	55.89	53.38	53.46	39.53	36.32	29.28	23.96	10.74
ETH09200	23.00	22	4	12.42	0.00	12.42	55.89	53.38	53.46	40.16	36.02	30.32	23.96	11.48
ETH09200	23.00	22	5	5.01	0.00	5.01	55.89	53.38	53.46	40.15	23.75	22.90	23.96	4.02
ETH09200	23.00	22	6	5.70	0.00	5.70	55.89	53.38	53.46	38.62	29.99	21.80	23.96	4.72
ETH09200	23.00	26	1	13.54	0.00	13.54	74.96	70.84	82.90	42.08	35.95	31.23	43.39	12.54
ETH09200	23.00	26	2	12.28	0.00	12.28	74.96	70.84	82.90	41.97	34.34	29.58	43.39	11.28
ETH09200	23.00	26	3	11.74	0.00	11.74	74.96	70.84	82.90	39.55	36.26	29.27	43.39	10.74
ETH09200	23.00	26	4	12.47	0.00	12.47	74.96	70.84	82.90	40.17	35.95	30.31	43.39	11.47
ETH09200	23.00	26	5	4.98	0.00	4.98	74.96	70.84	82.90	40.17	23.65	22.90	43.39	3.98
ETH09200	23.00	26	6	5.71	0.00	5.71	74.96	70.84	82.90	38.63	29.90	21.80	43.39	4.71
ETH09200	23.00	30	1	13.41	0.00	13.41	55.88	47.08	53.41	42.05	35.95	31.23	21.93	12.54
ETH09200	23.00	30	2	12.18	0.00	12.18	55.88	47.08	53.41	41.95	34.34	29.58	21.93	11.28
ETH09200	23.00	30	3	11.64	0.00	11.64	55.88	47.08	53.41	39.50	36.26	29.27	21.93	10.72
ETH09200	23.00	30	4	12.35	0.00	12.35	55.88	47.08	53.41	40.12	35.95	30.31	21.93	11.45
ETH09200	23.00	30	5	4.96	0.00	4.96	55.88	47.08	53.41	40.12	23.65	22.90	21.93	3.98
ETH09200	23.00	30	6	5.68	0.00	5.68	55.88	47.08	53.41	38.57	29.90	21.80	21.93	4.70
ETH09200	23.00	34	1	13.44	0.00	13.44	55.88	53.43	53.40	42.05	35.88	31.22	23.95	12.52
ETH09200	23.00	34	2	12.20	0.00	12.20	55.88	53.43	53.40	41.95	34.26	29.58	23.95	11.26
ETH09200	23.00	34	3	11.65	0.00	11.65	55.88	53.43	53.40	39.50	36.20	29.25	23.95	10.70
ETH09200	23.00	34	4	12.37	0.00	12.37	55.88	53.43	53.40	40.11	35.88	30.30	23.95	11.43
ETH09200	23.00	34	5	4.92	0.00	4.92	55.88	53.43	53.40	40.12	23.56	22.90	23.95	3.94
ETH09200	23.00	34	6	5.68	0.00	5.68	55.88	53.43	53.40	38.57	29.82	21.80	23.95	4.69
ETH09200	23.00	38	1	13.44	0.00	13.44	55.93	53.44	70.86	42.02	35.88	31.22	24.83	12.51
ETH09200	23.00	38	2	12.21	0.00	12.21	55.93	53.44	70.86	41.93	34.26	29.58	24.83	11.25
ETH09200	23.00	38	3	11.64	0.00	11.64	55.93	53.44	70.86	39.44	36.20	29.25	24.83	10.69
ETH09200	23.00	38	4	12.36	0.00	12.36	55.93	53.44	70.86	40.05	35.88	30.30	24.83	11.41
ETH09200	23.00	38	5	4.92	0.00	4.92	55.93	53.44	70.86	40.07	23.56	22.90	24.83	3.93
ETH09200	23.00	38	6	5.67	0.00	5.67	55.93	53.44	70.86	38.51	29.82	21.80	24.83	4.68
ERI09200	23.00	23	1	5.75	0.00	5.75	47.73	27.08	26.90	51.37	24.58	31.07	1.87	7.66
ERI09200	23.00	23	2	5.00	0.00	5.00	47.73	27.08	26.90	50.15	22.66	33.73	1.87	6.29
ERI09200	23.00	23	3	5.07	0.00	5.07	47.73	27.08	26.90	50.06	22.75	34.25	1.87	6.41
ERI09200	23.00	23	4	6.37	0.00	6.37	47.73	27.08	26.90	52.97	25.41	35.56	1.87	8.97
ERI09200	23.00	23	5	5.09	0.00	5.09	47.73	27.08	26.90	48.72	22.93	32.94	1.87	6.45
ERI09200	23.00	23	6	6.16	0.00	6.16	47.73	27.08	26.90	52.13	25.26	32.76	1.87	8.50
ERI09200	23.00	27	1	5.81	0.00	5.81	63.50	27.08	26.90	52.09	24.58	31.08	1.98	7.67
ERI09200	23.00	27	2	5.05	0.00	5.05	63.50	27.08	26.90	50.89	22.66	33.74	1.98	6.30
ERI09200	23.00	27	3	5.12	0.00	5.12	63.50	27.08	26.90	50.74	22.75	34.26	1.98	6.41
ERI09200	23.00	27	4	6.44	0.00	6.44	63.50	27.08	26.90	53.61	25.41	35.56	1.98	8.97
ERI09200	23.00	27	5	5.14	0.00	5.14	63.50	27.08	26.90	49.22	22.93	32.95	1.98	6.46
ERI09200	23.00	27	6	6.23	0.00	6.23	63.50	27.08	26.90	52.87	25.26	32.77	1.98	8.51
ERI09200	23.00	31	1	5.81	0.00	5.81	63.50	27.08	26.90	52.05	24.58	31.06	1.98	7.66
ERI09200	23.00	31	2	5.05	0.00	5.05	63.50	27.08	26.90	50.87	22.66	33.73	1.98	6.30
ERI09200	23.00	31	3	5.12	0.00	5.12	63.50	27.08	26.90	50.72	22.75	34.25	1.98	6.41
ERI09200	23.00	31	4	6.44	0.00	6.44	63.50	27.08	26.90	53.59	25.41	35.55	1.98	8.97
ERI09200	23.00	31	5	5.14	0.00	5.14	63.50	27.08	26.90	49.21	22.93	32.93	1.98	6.46
ERI09200	23.00	31	6	6.23	0.00	6.23	63.50	27.08	26.90	52.84	25.26	32.75	1.98	8.51
ERI09200	23.00	35	1	5.81	0.00	5.81	63.50	27.08	26.90	52.00	24.58	31.06	1.98	7.66
ERI09200	23.00	35	2	5.05	0.00	5.05	63.50	27.08	26.90	50.79	22.66	33.73	1.98	6.30
ERI09200	23.00	35	3	5.12	0.00	5.12	63.50	27.08	26.90	50.64	22.75	34.25	1.98	6.41
ERI09200	23.00	35	4	6.44	0.00	6.44	63.50	27.08	26.90	53.52	25.41	35.55	1.98	8.97
ERI09200	23.00	35	5	5.14	0.00	5.14	63.50	27.08	26.90	49.13	22.93	32.93	1.98	6.46
ERI09200	23.00	35	6	6.22	0.00	6.22	63.50	27.08	26.90	52.78	25.26	32.75	1.98	8.51
ERI09200	23.00	39	1	5.80	0.00	5.80	63.50	27.08	26.90	51.93	24.58	31.05	1.98	7.66
ERI09200	23.00	39	2	5.04	0.00	5.04	63.50	27.08	26.90	50.75	22.66	33.72	1.98	6.29
ERI09200	23.00	39	3	5.11	0.00	5.11	63.50	27.08	26.90	50.60	22.75	34.24	1.98	6.41
ERI09200	23.00	39	4	6.44	0.00	6.44	63.50	27.08	26.90	53.47	25.41	35.54	1.98	8.97
ERI09200	23.00	39	5	5.14	0.00	5.14	63.50	27.08	26.90	49.10	22.93	32.91	1.98	6.45
ERI09200	23.00	39	6	6.22	0.00	6.22	63.50	27.08	26.90	52.72	25.26	32.73	1.98	8.50
EST06100	23.00	1	1	7.01	0.00	7.01	48.49		39.28	32.70		25.67	14.84	6.15
EST06100	23.00	1	2	6.33	0.00	6.33	48.49		39.28	31.73		25.36	14.84	5.46
EST06100	23.00	1	3	7.07	0.00	7.07	48.49		39.28	32.25		26.48	14.84	6.21
EST06100	23.00	1	4	6.67	0.00	6.67	48.49		39.28	31.61		26.49	14.84	5.80
EST06100	23.00	1	5	7.04	0.00	7.04	48.49		39.28	31.93		27.01	14.84	6.19
EST06100	23.00	1	6	5.16	0.00	5.16	48.49		39.28	30.61		24.04	14.84	4.25
EST06100	23.00	1	7	4.99	0.00	4.99	48.49		39.28	30.65		23.59	14.84	4.08
EST06100	23.00	5	1	5.51	0.00	5.51	48.49	42.29	39.28	32.70	26.00	25.66	13.75	4.64
EST06100	23.00	5	2	4.97	0.00	4.97	48.49	42.29	39.28	31.72	25.79	25.34	13.75	4.09
EST06100	23.00	5	3	5.80	0.00	5.80	48.49	42.29	39.28	32.24	26.92	26.47	13.75	4.94
EST06100	23.00	5	4	5.50	0.00	5.50	48.49	42.29	39.28	31.60	26.94	26.47	13.75	4.63

EST06100	23.00	5	5	5.91	0.00	5.91	48.49	42.29	39.28	31.92	27.47	27.00	13.75	5.06
EST06100	23.00	5	6	3.72	0.00	3.72	48.49	42.29	39.28	30.59	24.30	24.03	13.75	2.80
EST06100	23.00	5	7	3.46	0.00	3.46	48.49	42.29	39.28	30.64	23.83	23.58	13.75	2.55
EST06100	23.00	9	1	5.51	0.00	5.51	48.49	42.29	39.28	32.69	26.00	25.65	13.75	4.64
EST06100	23.00	9	2	4.97	0.00	4.97	48.49	42.29	39.28	31.72	25.79	25.33	13.75	4.08
EST06100	23.00	9	3	5.79	0.00	5.79	48.49	42.29	39.28	32.24	26.92	26.45	13.75	4.93
EST06100	23.00	9	4	5.50	0.00	5.50	48.49	42.29	39.28	31.60	26.94	26.46	13.75	4.63
EST06100	23.00	9	5	5.91	0.00	5.91	48.49	42.29	39.28	31.92	27.47	26.99	13.75	5.05
EST06100	23.00	9	6	3.71	0.00	3.71	48.49	42.29	39.28	30.59	24.30	24.02	13.75	2.80
EST06100	23.00	9	7	3.46	0.00	3.46	48.49	42.29	39.28	30.64	23.83	23.57	13.75	2.54
EST06100	23.00	13	1	5.69	0.00	5.69	48.49	42.29	39.28	32.69	26.18	26.10	13.75	4.83
EST06100	23.00	13	2	5.12	0.00	5.12	48.49	42.29	39.28	31.71	25.87	25.80	13.75	4.24
EST06100	23.00	13	3	5.93	0.00	5.93	48.49	42.29	39.28	32.23	27.00	26.92	13.75	5.08
EST06100	23.00	13	4	5.62	0.00	5.62	48.49	42.29	39.28	31.59	27.00	26.92	13.75	4.76
EST06100	23.00	13	5	6.03	0.00	6.03	48.49	42.29	39.28	31.90	27.54	27.45	13.75	5.17
EST06100	23.00	13	6	3.88	0.00	3.88	48.49	42.29	39.28	30.58	24.51	24.42	13.75	2.97
EST06100	23.00	13	7	3.64	0.00	3.64	48.49	42.29	39.28	30.63	24.05	23.98	13.75	2.73
EST06100	23.00	17	1	5.69	0.00	5.69	48.49	42.29	39.28	32.69	26.17	26.10	13.75	4.83
EST06100	23.00	17	2	5.12	0.00	5.12	48.49	42.29	39.28	31.71	25.87	25.80	13.75	4.24
EST06100	23.00	17	3	5.93	0.00	5.93	48.49	42.29	39.28	32.23	26.99	26.92	13.75	5.08
EST06100	23.00	17	4	5.62	0.00	5.62	48.49	42.29	39.28	31.59	27.00	26.92	13.75	4.76
EST06100	23.00	17	5	6.03	0.00	6.03	48.49	42.29	39.28	31.91	27.54	27.45	13.75	5.17
EST06100	23.00	17	6	3.88	0.00	3.88	48.49	42.29	39.28	30.58	24.50	24.42	13.75	2.97
EST06100	23.00	17	7	3.64	0.00	3.64	48.49	42.29	39.28	30.63	24.04	23.98	13.75	2.73
FSM00000	146.00	3	1	9.05	0.00	9.05	53.49	28.62	26.78	46.48	36.93	40.54	2.56	17.64
FSM00000	146.00	3	2	7.67	0.00	7.67	53.49	28.62	26.78	41.62	28.50	42.23	2.56	11.19
FSM00000	146.00	3	3	8.24	0.00	8.24	53.49	28.62	26.78	44.97	30.06	42.70	2.56	13.06
FSM00000	146.00	3	4	7.21	0.00	7.21	53.49	28.62	26.78	43.90	38.19	26.77	2.56	10.00
FSM00000	146.00	3	5	8.86	0.00	8.86	53.49	28.62	26.78	48.44	33.35	42.55	2.56	16.16
FSM00000	146.00	3	6	8.02	0.00	8.02	53.49	28.62	26.78	43.90	38.26	29.65	2.56	12.27
FSM00000	146.00	7	1	9.05	0.00	9.05	53.48	28.62	26.78	46.47	36.93	40.54	2.56	17.63
FSM00000	146.00	7	2	7.67	0.00	7.67	53.48	28.62	26.78	41.61	28.50	42.24	2.56	11.19
FSM00000	146.00	7	3	8.24	0.00	8.24	53.48	28.62	26.78	44.96	30.06	42.71	2.56	13.06
FSM00000	146.00	7	4	7.21	0.00	7.21	53.48	28.62	26.78	43.90	38.19	26.77	2.56	10.00
FSM00000	146.00	7	5	8.86	0.00	8.86	53.48	28.62	26.78	48.43	33.35	42.56	2.56	16.16
FSM00000	146.00	7	6	8.02	0.00	8.02	53.48	28.62	26.78	43.90	38.26	29.65	2.56	12.27
FSM00000	146.00	11	1	9.05	0.00	9.05	53.49	28.62	26.78	46.43	36.91	40.54	2.56	17.61
FSM00000	146.00	11	2	7.67	0.00	7.67	53.49	28.62	26.78	41.61	28.50	42.25	2.56	11.19
FSM00000	146.00	11	3	8.24	0.00	8.24	53.49	28.62	26.78	44.94	30.06	42.72	2.56	13.06
FSM00000	146.00	11	4	7.20	0.00	7.20	53.49	28.62	26.78	43.81	38.20	26.77	2.56	9.99
FSM00000	146.00	11	5	8.86	0.00	8.86	53.49	28.62	26.78	48.39	33.35	42.58	2.56	16.15
FSM00000	146.00	11	6	8.01	0.00	8.01	53.49	28.62	26.78	43.80	38.27	29.65	2.56	12.25
FSM00000	146.00	15	1	9.15	0.00	9.15	53.66	28.62	26.78	48.89	36.88	42.20	2.56	18.60
FSM00000	146.00	15	2	8.00	0.00	8.00	53.66	28.62	26.78	51.98	28.50	42.30	2.56	12.20
FSM00000	146.00	15	3	8.39	0.00	8.39	53.66	28.62	26.78	52.15	30.06	42.82	2.56	13.67
FSM00000	146.00	15	4	7.21	0.00	7.21	53.66	28.62	26.78	43.85	38.20	26.77	2.56	9.99
FSM00000	146.00	15	5	8.90	0.00	8.90	53.66	28.62	26.78	50.53	33.35	42.72	2.56	16.43
FSM00000	146.00	15	6	8.02	0.00	8.02	53.66	28.62	26.78	43.87	38.26	29.65	2.56	12.27
FSM00000	146.00	19	1	9.24	0.00	9.24	57.02	28.62	26.78	49.38	38.42	42.14	2.58	19.56
FSM00000	146.00	19	2	8.04	0.00	8.04	57.02	28.62	26.78	57.45	28.52	42.33	2.58	12.31
FSM00000	146.00	19	3	8.43	0.00	8.43	57.02	28.62	26.78	54.60	30.08	42.76	2.58	13.76
FSM00000	146.00	19	4	7.28	0.00	7.28	57.02	28.62	26.78	45.76	38.17	26.76	2.58	10.15
FSM00000	146.00	19	5	8.95	0.00	8.95	57.02	28.62	26.78	53.14	33.39	42.67	2.58	16.65
FSM00000	146.00	19	6	8.18	0.00	8.18	57.02	28.62	26.78	48.38	38.26	29.65	2.58	12.78
GEO06400	23.00	22	1	6.45	0.00	6.45	45.04	32.52	31.29	33.45	31.02	26.94	6.24	6.47
GEO06400	23.00	22	2	6.24	0.00	6.24	45.04	32.52	31.29	33.29	31.07	26.44	6.24	6.21
GEO06400	23.00	22	3	7.98	0.00	7.98	45.04	32.52	31.29	35.31	33.87	28.97	6.24	8.52
GEO06400	23.00	22	4	6.93	0.00	6.93	45.04	32.52	31.29	33.74	32.80	27.64	6.24	7.09
GEO06400	23.00	22	5	7.16	0.00	7.16	45.04	32.52	31.29	34.12	32.63	27.99	6.24	7.39
GEO06400	23.00	22	6	7.02	0.00	7.02	45.04	32.52	31.29	34.07	32.03	27.76	6.24	7.21
GEO06400	23.00	22	7	6.21	0.00	6.21	45.04	32.52	31.29	32.85	31.75	26.74	6.24	6.17
GEO06400	23.00	26	1	6.21	0.00	6.21	44.99	32.52	31.29	32.86	31.00	26.99	6.23	6.17
GEO06400	23.00	26	2	5.84	0.00	5.84	44.99	32.52	31.29	32.33	31.04	26.47	6.23	5.72
GEO06400	23.00	26	3	7.70	0.00	7.70	44.99	32.52	31.29	34.59	33.84	28.99	6.23	8.13
GEO06400	23.00	26	4	6.73	0.00	6.73	44.99	32.52	31.29	33.28	32.77	27.65	6.23	6.83
GEO06400	23.00	26	5	6.98	0.00	6.98	44.99	32.52	31.29	33.67	32.60	28.02	6.23	7.15
GEO06400	23.00	26	6	6.81	0.00	6.81	44.99	32.52	31.29	33.53	32.01	27.80	6.23	6.93
GEO06400	23.00	26	7	6.05	0.00	6.05	44.99	32.52	31.29	32.48	31.72	26.76	6.23	5.97
GEO06400	23.00	30	1	6.21	0.00	6.21	44.99	32.52	31.29	32.86	31.00	26.99	6.23	6.17
GEO06400	23.00	30	2	5.84	0.00	5.84	44.99	32.52	31.29	32.33	31.05	26.47	6.23	5.72
GEO06400	23.00	30	3	7.70	0.00	7.70	44.99	32.52	31.29	34.59	33.85	28.99	6.23	8.13
GEO06400	23.00	30	4	6.73	0.00	6.73	44.99	32.52	31.29	33.28	32.77	27.65	6.23	6.83
GEO06400	23.00	30	5	6.98	0.00	6.98	44.99	32.52	31.29	33.67	32.61	28.02	6.23	7.15
GEO06400	23.00	30	6	6.81	0.00	6.81	44.99	32.52	31.29	33.53	32.01	27.80	6.23	6.93
GEO06400	23.00	30	7	6.05	0.00	6.05	44.99	32.52	31.29	32.48	31.72	26.76	6.23	5.97
GEO06400	23.00	34	1	6.20	0.00	6.20	44.99	32.52	31.29	32.84	30.98	26.99	6.23	6.16
GEO06400	23.00	34	2	5.84	0.00	5.84	44.99	32.52	31.29	32.32	31.03	26.47	6.23	5.71
GEO06400	23.00	34	3	7.69	0.00	7.69	44.99	32.52	31.29	34.58	33.82	28.99	6.23	8.12
GEO06400	23.00	34	4	6.72	0.00	6.72	44.99	32.52	31.29	33.27	32.74	27.65	6.23	6.82
GEO06400	23.00	34	5	6.97	0.00	6.97	44.99	32.52	31.29	33.65	32.58	28.02	6.23	7.14
GEO06400	23.00	34	6	6.80	0.00	6.80	44.99	32.52	31.29	33.51	31.99	27.80	6.23	6.92
GEO06400	23.00	34	7	6.04	0.00	6.04	44.99	32.52	31.29	32.46	31.69	26.76	6.23	5.96
GEO06400	23.00	38	1	5.89	0.00	5.89	44.97	32.52	31.29	32.16	30.98	26.99	6.23	5.78
GEO06400	23.00	38	2	5.64	0.00	5.64	44.97	32.52	31.29	31.88	31.03	26.47	6.23	5.47
GEO06400	23.00	38	3	7.36	0.00	7.36	44.97	32.52	31.29	33.80	33.82	28.99	6.23	7.66
GEO06400	23.00	38	4	6.43	0.00	6.43	44.97	32.52	31.29	32.63	32.74	27.65	6.23	6.44
GEO06400	23.00	38	5	6.68	0.00	6.68	44.97	32.52	31.29	33.00	32.58	28.02	6.23	6.77
GEO06400	23.00	38	6	6.48	0.00	6.48	44.97	32.52	31.29	32.79	31.99	27.80	6.23	6.51
GEO06400	23.00	38	7	5.81	0.00	5.81	44.97	32.52	31.29	31.97	31.69	26.76	6.23	5.68
HRV14800	34.00	1	1	2.90	0.00	2.90	40.97		24.89	29.56		22.61	2.26	3.04
HRV14800	34.00	1	2	2.87	0.00	2.87	40.97		24.89	30.86		21.30	2.26	3.00

HRV14800	34.00	1	3	2.92	0.00	2.92	40.97		24.89	31.90		20.80	2.26	3.07
HRV14800	34.00	1	4	2.66	0.00	2.66	40.97		24.89	30.01		21.49	2.26	2.73
HRV14800	34.00	1	5	3.16	0.00	3.16	40.97		24.89	30.82		22.01	2.26	3.38
HRV14800	34.00	1	6	2.89	0.00	2.89	40.97		24.89	30.69		21.47	2.26	3.03
HRV14800	34.00	5	1	0.63	0.00	0.63	40.97	25.03	24.89	29.53	20.98	22.61	-0.38	0.88
HRV14800	34.00	5	2	0.88	0.00	0.88	40.97	25.03	24.89	30.83	21.99	21.30	-0.38	1.22
HRV14800	34.00	5	3	1.09	0.00	1.09	40.97	25.03	24.89	31.88	22.74	20.80	-0.38	1.51
HRV14800	34.00	5	4	0.93	0.00	0.93	40.97	25.03	24.89	29.97	22.85	21.49	-0.38	1.29
HRV14800	34.00	5	5	1.01	0.00	1.01	40.97	25.03	24.89	30.78	21.81	22.00	-0.38	1.41
HRV14800	34.00	5	6	1.20	0.00	1.20	40.97	25.03	24.89	30.65	23.44	21.47	-0.38	1.67
HRV14800	34.00	9	1	0.62	0.00	0.62	40.97	25.03	24.89	29.50	20.98	22.61	-0.38	0.87
HRV14800	34.00	9	2	0.87	0.00	0.87	40.97	25.03	24.89	30.81	21.98	21.30	-0.38	1.22
HRV14800	34.00	9	3	1.08	0.00	1.08	40.97	25.03	24.89	31.86	22.74	20.80	-0.38	1.51
HRV14800	34.00	9	4	0.92	0.00	0.92	40.97	25.03	24.89	29.95	22.85	21.49	-0.38	1.29
HRV14800	34.00	9	5	1.00	0.00	1.00	40.97	25.03	24.89	30.75	21.81	22.00	-0.38	1.40
HRV14800	34.00	9	6	1.20	0.00	1.20	40.97	25.03	24.89	30.63	23.44	21.47	-0.38	1.67
HRV14800	34.00	13	1	0.60	0.00	0.60	40.97	25.03	24.89	29.44	20.99	22.61	-0.38	0.86
HRV14800	34.00	13	2	0.86	0.00	0.86	40.97	25.03	24.89	30.76	21.99	21.30	-0.38	1.20
HRV14800	34.00	13	3	1.08	0.00	1.08	40.97	25.03	24.89	31.82	22.74	20.80	-0.38	1.50
HRV14800	34.00	13	4	0.91	0.00	0.91	40.97	25.03	24.89	29.90	22.85	21.49	-0.38	1.27
HRV14800	34.00	13	5	0.99	0.00	0.99	40.97	25.03	24.89	30.69	21.81	22.01	-0.38	1.38
HRV14800	34.00	13	6	1.19	0.00	1.19	40.97	25.03	24.89	30.57	23.44	21.48	-0.38	1.65
HRV14800	34.00	17	1	0.60	0.00	0.60	40.97	25.03	24.89	29.41	20.99	22.61	-0.38	0.84
HRV14800	34.00	17	2	0.86	0.00	0.86	40.97	25.03	24.89	30.74	21.99	21.30	-0.38	1.20
HRV14800	34.00	17	3	1.08	0.00	1.08	40.97	25.03	24.89	31.80	22.74	20.80	-0.38	1.50
HRV14800	34.00	17	4	0.90	0.00	0.90	40.97	25.03	24.89	29.87	22.85	21.49	-0.38	1.26
HRV14800	34.00	17	5	0.99	0.00	0.99	40.97	25.03	24.89	30.66	21.81	22.01	-0.38	1.37
HRV14800	34.00	17	6	1.18	0.00	1.18	40.97	25.03	24.89	30.54	23.44	21.48	-0.38	1.64
KAZ06600	44.00	24	1	5.59	0.00	5.59	50.61	25.08	55.71	46.99	22.64	53.23	3.00	6.54
KAZ06600	44.00	24	2	9.02	0.00	9.02	50.61	25.08	55.71	52.51	31.23	50.63	3.00	14.98
KAZ06600	44.00	24	3	7.02	0.00	7.02	50.61	25.08	55.71	50.21	25.16	57.43	3.00	9.07
KAZ06600	44.00	24	4	8.24	0.00	8.24	50.61	25.08	55.71	40.77	29.83	48.30	3.00	12.01
KAZ06600	44.00	24	5	8.56	0.00	8.56	50.61	25.08	55.71	47.70	29.91	39.27	3.00	13.05
KAZ06600	44.00	24	6	7.75	0.00	7.75	50.61	25.08	55.71	39.83	28.30	52.12	3.00	10.70
KAZ06600	44.00	24	7	5.67	0.00	5.67	50.61	25.08	55.71	42.53	22.96	50.92	3.00	6.66
KAZ06600	44.00	24	8	8.50	0.00	8.50	50.61	25.08	55.71	50.63	29.11	45.78	3.00	12.83
KAZ06600	44.00	28	1	5.49	0.00	5.49	44.45	25.08	56.17	45.75	22.65	53.73	2.77	6.51
KAZ06600	44.00	28	2	8.81	0.00	8.81	44.45	25.08	56.17	49.79	31.25	50.72	2.77	14.84
KAZ06600	44.00	28	3	6.94	0.00	6.94	44.45	25.08	56.17	54.16	25.17	58.84	2.77	9.13
KAZ06600	44.00	28	4	7.35	0.00	7.35	44.45	25.08	56.17	36.44	29.85	48.53	2.77	10.05
KAZ06600	44.00	28	5	8.11	0.00	8.11	44.45	25.08	56.17	41.72	29.94	39.32	2.77	12.08
KAZ06600	44.00	28	6	6.95	0.00	6.95	44.45	25.08	56.17	36.05	28.31	52.52	2.77	9.16
KAZ06600	44.00	28	7	5.52	0.00	5.52	44.45	25.08	56.17	41.21	22.97	51.22	2.77	6.57
KAZ06600	44.00	28	8	8.35	0.00	8.35	44.45	25.08	56.17	49.27	29.26	45.80	2.77	12.91
KAZ06600	44.00	32	1	5.48	0.00	5.48	44.44	25.08	56.17	45.64	22.65	53.72	2.77	6.51
KAZ06600	44.00	32	2	8.81	0.00	8.81	44.44	25.08	56.17	49.62	31.25	50.72	2.77	14.82
KAZ06600	44.00	32	3	6.93	0.00	6.93	44.44	25.08	56.17	53.69	25.17	58.82	2.77	9.13
KAZ06600	44.00	32	4	7.35	0.00	7.35	44.44	25.08	56.17	36.43	29.85	48.52	2.77	10.04
KAZ06600	44.00	32	5	8.11	0.00	8.11	44.44	25.08	56.17	41.72	29.94	39.32	2.77	12.08
KAZ06600	44.00	32	6	6.95	0.00	6.95	44.44	25.08	56.17	36.03	28.31	52.50	2.77	9.15
KAZ06600	44.00	32	7	5.52	0.00	5.52	44.44	25.08	56.17	41.16	22.97	51.22	2.77	6.56
KAZ06600	44.00	32	8	8.35	0.00	8.35	44.44	25.08	56.17	49.09	29.26	45.80	2.77	12.90
KAZ06600	44.00	36	1	5.48	0.00	5.48	44.45	25.08	56.17	45.70	22.65	53.67	2.77	6.51
KAZ06600	44.00	36	2	8.81	0.00	8.81	44.45	25.08	56.17	49.76	31.25	50.63	2.77	14.83
KAZ06600	44.00	36	3	6.94	0.00	6.94	44.45	25.08	56.17	54.04	25.17	58.75	2.77	9.13
KAZ06600	44.00	36	4	7.35	0.00	7.35	44.45	25.08	56.17	36.44	29.85	48.43	2.77	10.05
KAZ06600	44.00	36	5	8.10	0.00	8.10	44.45	25.08	56.17	41.72	29.94	39.22	2.77	12.07
KAZ06600	44.00	36	6	6.95	0.00	6.95	44.45	25.08	56.17	36.04	28.31	52.42	2.77	9.16
KAZ06600	44.00	36	7	5.52	0.00	5.52	44.45	25.08	56.17	41.17	22.97	51.18	2.77	6.57
KAZ06600	44.00	36	8	8.35	0.00	8.35	44.45	25.08	56.17	49.23	29.26	45.70	2.77	12.90
KAZ06600	44.00	40	1	5.52	0.00	5.52	45.25	25.08	56.17	46.42	22.65		2.82	6.53
KAZ06600	44.00	40	2	8.87	0.00	8.87	45.25	25.08	56.17	50.91	31.20		2.82	14.92
KAZ06600	44.00	40	3	6.96	0.00	6.96	45.25	25.08	56.17	53.87	25.17		2.82	9.13
KAZ06600	44.00	40	4	7.77	0.00	7.77	45.25	25.08	56.17	38.28	29.79		2.82	11.02
KAZ06600	44.00	40	5	8.21	0.00	8.21	45.25	25.08	56.17	42.60	29.45		2.82	12.29
KAZ06600	44.00	40	6	7.40	0.00	7.40	45.25	25.08	56.17	38.06	28.31		2.82	10.09
KAZ06600	44.00	40	7	5.58	0.00	5.58	45.25	25.08	56.17	41.94	22.97		2.82	6.63
KAZ06600	44.00	40	8	8.40	0.00	8.40	45.25	25.08	56.17	49.79	29.17		2.82	12.94
KGZ07000	44.00	22	1	9.73	0.00	9.73	64.76	60.16	27.08	45.93	43.27	29.22	5.07	12.52
KGZ07000	44.00	22	2	9.35	0.00	9.35	64.76	60.16	27.08	47.96	48.99	27.97	5.07	11.67
KGZ07000	44.00	22	3	9.75	0.00	9.75	64.76	60.16	27.08	47.25	43.59	29.14	5.07	12.59
KGZ07000	44.00	22	4	8.37	0.00	8.37	64.76	60.16	27.08	42.03	43.28	26.58	5.07	9.78
KGZ07000	44.00	22	5	7.40	0.00	7.40	64.76	60.16	27.08	43.06	48.71	24.61	5.07	8.22
KGZ07000	44.00	22	6	8.65	0.00	8.65	64.76	60.16	27.08	46.96	50.93	26.55	5.07	10.29
KGZ07000	44.00	22	7	8.66	0.00	8.66	64.76	60.16	27.08	47.44	50.45	26.53	5.07	10.30
KGZ07000	44.00	26	1	10.00	0.00	10.00	63.00	70.12	27.08	52.12	49.55	29.39	5.07	13.21
KGZ07000	44.00	26	2	9.44	0.00	9.44	63.00	70.12	27.08	52.50	49.28	28.00	5.07	11.87
KGZ07000	44.00	26	3	9.89	0.00	9.89	63.00	70.12	27.08	49.29	45.79	29.29	5.07	12.94
KGZ07000	44.00	26	4	8.83	0.00	8.83	63.00	70.12	27.08	54.25	54.89	26.67	5.07	10.62
KGZ07000	44.00	26	5	7.65	0.00	7.65	63.00	70.12	27.08	54.80	57.30	24.62	5.07	8.59
KGZ07000	44.00	26	6	8.77	0.00	8.77	63.00	70.12	27.08	55.17	55.70	26.56	5.07	10.52
KGZ07000	44.00	26	7	8.76	0.00	8.76	63.00	70.12	27.08	54.02	53.26	26.55	5.07	10.49
KGZ07000	44.00	30	1	10.00	0.00	10.00	63.00	70.75	27.08	52.13	49.69	29.39	5.07	13.21
KGZ07000	44.00	30	2	9.44	0.00	9.44	63.00	70.75	27.08	52.51	49.44	28.00	5.07	11.87
KGZ07000	44.00	30	3	9.89	0.00	9.89	63.00	70.75	27.08	49.30	45.81	29.29	5.07	12.94
KGZ07000	44.00	30	4	8.83	0.00	8.83	63.00	70.75	27.08	54.26	55.81	26.67	5.07	10.62
KGZ07000	44.00	30	5	7.65	0.00	7.65	63.00	70.75	27.08	54.81	58.98	24.62	5.07	8.59
KGZ07000	44.00	30	6	8.77	0.00	8.77	63.00	70.75	27.08	55.18	56.54	26.56	5.07	10.52
KGZ07000	44.00	30	7	8.76	0.00	8.76	63.00	70.75	27.08	54.03	53.79	26.55	5.07	10.49
KGZ07000	44.00	34	1	10.00	0.00	10.00	63.00	70.75	27.08	52.21	49.69	29.39	5.07	13.21
KGZ07000	44.00	34	2	9.44	0.00	9.44	63.00	70.75	27.08	52.63	49.43	28.00	5.07	11.88
KGZ07000	44.00	34	3	9.89	0.00	9.89	63.00	70.75	27.08	49.35	45.81	29.29	5.07	12.94

KGZ07000	44.00	34	4	8.83	0.00	8.83	63.00	70.75	27.08	54.39	55.80	26.67	5.07	10.62
KGZ07000	44.00	34	5	7.65	0.00	7.65	63.00	70.75	27.08	54.96	58.96	24.62	5.07	8.59
KGZ07000	44.00	34	6	8.77	0.00	8.77	63.00	70.75	27.08	55.34	56.53	26.56	5.07	10.52
KGZ07000	44.00	34	7	8.76	0.00	8.76	63.00	70.75	27.08	54.19	53.78	26.55	5.07	10.49
KGZ07000	44.00	38	1	9.98	0.00	9.98	63.00	70.75	27.08	52.18	49.59	29.35	5.07	13.17
KGZ07000	44.00	38	2	9.43	0.00	9.43	63.00	70.75	27.08	52.58	49.34	27.97	5.07	11.85
KGZ07000	44.00	38	3	9.86	0.00	9.86	63.00	70.75	27.08	49.33	45.71	29.20	5.07	12.85
KGZ07000	44.00	38	4	8.83	0.00	8.83	63.00	70.75	27.08	54.33	55.71	26.67	5.07	10.62
KGZ07000	44.00	38	5	7.65	0.00	7.65	63.00	70.75	27.08	54.89	58.89	24.62	5.07	8.59
KGZ07000	44.00	38	6	8.77	0.00	8.77	63.00	70.75	27.08	55.27	56.44	26.56	5.07	10.52
KGZ07000	44.00	38	7	8.76	0.00	8.76	63.00	70.75	27.08	54.12	53.69	26.54	5.07	10.49
KIR00001	176.00	3	1	9.94	0.00	9.94	53.37	27.34	73.37	38.75	33.09	55.86	5.27	12.74
KIR00001	176.00	3	2	11.40	0.00	11.40	53.37	27.34	73.37	43.23	39.42	58.22	5.27	17.81
KIR00001	176.00	3	3	9.96	0.00	9.96	53.37	27.34	73.37	46.32	29.32	59.62	5.27	12.80
KIR00001	176.00	3	4	11.31	0.00	11.31	53.37	27.34	73.37	44.60	36.08	59.91	5.27	17.32
KIR00001	176.00	3	5	11.99	0.00	11.99	53.37	27.34	73.37	50.54	41.91	52.71	5.27	23.01
KIR00001	176.00	3	6	11.99	0.00	11.99	53.37	27.34	73.37	50.54	41.91	52.71	5.27	23.02
KIR00001	176.00	3	7	11.29	0.00	11.29	53.37	27.34	73.37	44.64	35.87	59.93	5.27	17.22
KIR00001	176.00	3	8	11.98	0.00	11.98	53.37	27.34	73.37	50.51	41.62	52.25	5.27	22.83
KIR00001	176.00	3	9	11.98	0.00	11.98	53.37	27.34	73.37	50.51	41.63	52.28	5.27	22.83
KIR00001	176.00	7	1	9.92	0.00	9.92	53.37	27.34	73.39	38.69	33.09	56.64	5.27	12.71
KIR00001	176.00	7	2	11.40	0.00	11.40	53.37	27.34	73.39	43.23	39.42	59.61	5.27	17.81
KIR00001	176.00	7	3	9.96	0.00	9.96	53.37	27.34	73.39	46.32	29.32	59.60	5.27	12.80
KIR00001	176.00	7	4	11.31	0.00	11.31	53.37	27.34	73.39	44.60	36.08	61.22	5.27	17.32
KIR00001	176.00	7	5	11.99	0.00	11.99	53.37	27.34	73.39	50.54	41.91	52.66	5.27	23.01
KIR00001	176.00	7	6	11.99	0.00	11.99	53.37	27.34	73.39	50.54	41.91	52.66	5.27	23.01
KIR00001	176.00	7	7	11.29	0.00	11.29	53.37	27.34	73.39	44.64	35.87	61.24	5.27	17.22
KIR00001	176.00	7	8	11.98	0.00	11.98	53.37	27.34	73.39	50.51	41.62	52.19	5.27	22.82
KIR00001	176.00	7	9	11.98	0.00	11.98	53.37	27.34	73.39	50.50	41.63	52.22	5.27	22.83
KIR00001	176.00	11	1	9.92	0.00	9.92	53.37	27.34	73.93	38.69	33.08	56.56	5.27	12.70
KIR00001	176.00	11	2	11.40	0.00	11.40	53.37	27.34	73.93	43.22	39.42	59.47	5.27	17.81
KIR00001	176.00	11	3	9.96	0.00	9.96	53.37	27.34	73.93	46.31	29.32	59.53	5.27	12.80
KIR00001	176.00	11	4	11.31	0.00	11.31	53.37	27.34	73.93	44.59	36.08	61.11	5.27	17.31
KIR00001	176.00	11	5	11.99	0.00	11.99	53.37	27.34	73.93	50.51	41.88	52.61	5.27	22.98
KIR00001	176.00	11	6	11.99	0.00	11.99	53.37	27.34	73.93	50.51	41.88	52.61	5.27	22.98
KIR00001	176.00	11	7	11.29	0.00	11.29	53.37	27.34	73.93	44.63	35.87	61.13	5.27	17.22
KIR00001	176.00	11	8	11.98	0.00	11.98	53.37	27.34	73.93	50.48	41.59	52.15	5.27	22.79
KIR00001	176.00	11	9	11.98	0.00	11.98	53.37	27.34	73.93	50.48	41.60	52.18	5.27	22.80
KIR00002	176.00	15	1	19.84	0.00	19.84	46.65	38.45	78.50	61.09	44.01	53.56	13.54	27.09
KIR00002	176.00	15	2	19.96	0.00	19.96	46.65	38.45	78.50	61.70	45.09	53.17	13.54	27.97
KIR00002	176.00	15	3	19.75	0.00	19.75	46.65	38.45	78.50	59.77	44.27	49.34	13.54	26.54
KIR00002	176.00	15	4	19.21	0.00	19.21	46.65	38.45	78.50	58.63	44.30	42.68	13.54	24.01
KIR00002	176.00	15	5	18.71	0.00	18.71	46.65	38.45	78.50	58.25	43.99	40.16	13.54	22.36
KIR00002	176.00	15	6	18.74	0.00	18.74	46.65	38.45	78.50	58.31	44.04	40.23	13.54	22.43
KIR00002	176.00	15	7	19.19	0.00	19.19	46.65	38.45	78.50	58.59	44.26	42.59	13.54	23.94
KIR00002	176.00	19	1	23.49	0.00	23.49	46.65	87.61	86.98	61.53	64.03	67.84	16.65	37.02
KIR00002	176.00	19	2	23.51	0.00	23.51	46.65	87.61	86.98	62.08	65.14	68.79	16.65	37.61
KIR00002	176.00	19	3	23.44	0.00	23.44	46.65	87.61	86.98	60.05	64.34	67.67	16.65	35.69
KIR00002	176.00	19	4	23.38	0.00	23.38	46.65	87.61	86.98	58.82	64.25	66.82	16.65	34.52
KIR00002	176.00	19	5	23.35	0.00	23.35	46.65	87.61	86.98	58.44	63.80	66.50	16.65	34.15
KIR00002	176.00	19	6	23.36	0.00	23.36	46.65	87.61	86.98	58.51	63.85	66.55	16.65	34.21
KIR00002	176.00	19	7	23.37	0.00	23.37	46.65	87.61	86.98	58.79	64.20	66.77	16.65	34.49
KIR00002	176.00	23	1	43.69	0.00	43.69	83.81	87.64	87.02	68.25	66.61	68.00	53.24	42.79
KIR00002	176.00	23	2	44.70	0.00	44.70	83.81	87.64	87.02	69.28	67.68	68.94	53.24	43.82
KIR00002	176.00	23	3	43.75	0.00	43.75	83.81	87.64	87.02	68.32	66.80	67.80	53.24	42.85
KIR00002	176.00	23	4	43.16	0.00	43.16	83.81	87.64	87.02	67.73	66.39	66.90	53.24	42.24
KIR00002	176.00	23	5	42.56	0.00	42.56	83.81	87.64	87.02	67.05	65.84	66.59	53.24	41.63
KIR00002	176.00	23	6	42.62	0.00	42.62	83.81	87.64	87.02	67.11	65.90	66.64	53.24	41.69
KIR00002	176.00	23	7	43.11	0.00	43.11	83.81	87.64	87.02	67.68	66.34	66.86	53.24	42.20
LTU06100	23.00	3	1	4.21	0.00	4.21	50.32	36.06	42.75	30.24	25.29	25.68	12.45	3.34
LTU06100	23.00	3	2	7.07	0.00	7.07	50.32	36.06	42.75	32.82	28.66	29.23	12.45	6.33
LTU06100	23.00	3	3	6.04	0.00	6.04	50.32	36.06	42.75	31.14	28.44	29.11	12.45	5.25
LTU06100	23.00	3	4	6.91	0.00	6.91	50.32	36.06	42.75	31.67	30.02	31.02	12.45	6.16
LTU06100	23.00	3	5	6.62	0.00	6.62	50.32	36.06	42.75	31.63	29.09	30.19	12.45	5.86
LTU06100	23.00	3	6	4.83	0.00	4.83	50.32	36.06	42.75	30.42	26.39	26.95	12.45	3.98
LTU06100	23.00	7	1	4.19	0.00	4.19	50.32	36.06	42.75	30.21	25.28	25.68	12.45	3.32
LTU06100	23.00	7	2	7.05	0.00	7.05	50.32	36.06	42.75	32.78	28.65	29.23	12.45	6.30
LTU06100	23.00	7	3	6.02	0.00	6.02	50.32	36.06	42.75	31.11	28.43	29.11	12.45	5.22
LTU06100	23.00	7	4	6.88	0.00	6.88	50.32	36.06	42.75	31.63	30.01	31.01	12.45	6.13
LTU06100	23.00	7	5	6.60	0.00	6.60	50.32	36.06	42.75	31.60	29.08	30.18	12.45	5.83
LTU06100	23.00	7	6	4.81	0.00	4.81	50.32	36.06	42.75	30.39	26.37	26.95	12.45	3.96
LTU06100	23.00	11	1	4.23	0.00	4.23	50.32	36.06	42.75	30.21	25.27	25.89	12.45	3.37
LTU06100	23.00	11	2	7.06	0.00	7.06	50.32	36.06	42.75	32.78	28.64	29.33	12.45	6.32
LTU06100	23.00	11	3	6.02	0.00	6.02	50.32	36.06	42.75	31.10	28.42	29.16	12.45	5.22
LTU06100	23.00	11	4	6.89	0.00	6.89	50.32	36.06	42.75	31.63	30.00	31.08	12.45	6.13
LTU06100	23.00	11	5	6.62	0.00	6.62	50.32	36.06	42.75	31.60	29.07	30.32	12.45	5.85
LTU06100	23.00	11	6	4.84	0.00	4.84	50.32	36.06	42.75	30.39	26.36	27.15	12.45	4.00
LTU06100	23.00	15	1	4.31	0.00	4.31	50.32	36.06	42.75	30.18	25.64	25.88	12.45	3.44
LTU06100	23.00	15	2	7.14	0.00	7.14	50.32	36.06	42.75	32.75	29.08	29.33	12.45	6.40
LTU06100	23.00	15	3	6.07	0.00	6.07	50.32	36.06	42.75	31.06	28.85	29.16	12.45	5.28
LTU06100	23.00	15	4	6.92	0.00	6.92	50.32	36.06	42.75	31.59	30.38	31.07	12.45	6.17
LTU06100	23.00	15	5	6.65	0.00	6.65	50.32	36.06	42.75	31.57	29.42	30.32	12.45	5.89
LTU06100	23.00	15	6	4.90	0.00	4.90	50.32	36.06	42.75	30.36	26.73	27.14	12.45	4.06
LTU06100	23.00	19	1	4.30	0.00	4.30	50.32	36.06	42.75	30.15	25.64	25.88	12.45	3.43
LTU06100	23.00	19	2	7.12	0.00	7.12	50.32	36.06	42.75	32.71	29.08	29.33	12.45	6.38
LTU06100	23.00	19	3	6.05	0.00	6.05	50.32	36.06	42.75	31.03	28.85	29.16	12.45	5.25
LTU06100	23.00	19	4	6.89	0.00	6.89	50.32	36.06	42.75	31.56	30.38	31.07	12.45	6.14
LTU06100	23.00	19	5	6.64	0.00	6.64	50.32	36.06	42.75	31.54	29.42	30.31	12.45	5.87
LTU06100	23.00	19	6	4.89	0.00	4.89	50.32	36.06	42.75	30.33	26.73	27.14	12.45	4.04
LVA06100	23.00	21	1	5.75	0.00	5.75	42.29	42.00	41.79	34.71	26.85	24.30	10.99	5.02

LVA06100	23.00	21	2	6.17	0.00	6.17	42.29	42.00	41.79	35.50	27.66	24.38	10.99	5.46
LVA06100	23.00	21	3	7.01	0.00	7.01	42.29	42.00	41.79	36.97	29.21	24.78	10.99	6.37
LVA06100	23.00	21	4	8.20	0.00	8.20	42.29	42.00	41.79	38.26	30.48	26.12	10.99	7.69
LVA06100	23.00	21	5	8.12	0.00	8.12	42.29	42.00	41.79	37.58	29.79	26.53	10.99	7.59
LVA06100	23.00	21	6	4.69	0.00	4.69	42.29	42.00	41.79	33.48	25.87	23.18	10.99	3.90
LVA06100	23.00	21	7	4.24	0.00	4.24	42.29	42.00	41.79	32.92	25.15	22.88	10.99	3.42
LVA06100	23.00	25	1	5.44	0.00	5.44	42.26	41.95	41.79	33.99	26.37	24.32	10.97	4.69
LVA06100	23.00	25	2	5.73	0.00	5.73	42.26	41.95	41.79	34.23	27.13	24.39	10.97	4.99
LVA06100	23.00	25	3	6.45	0.00	6.45	42.26	41.95	41.79	35.02	28.68	24.79	10.97	5.76
LVA06100	23.00	25	4	7.72	0.00	7.72	42.26	41.95	41.79	36.53	29.96	26.14	10.97	7.15
LVA06100	23.00	25	5	7.78	0.00	7.78	42.26	41.95	41.79	36.63	29.28	26.54	10.97	7.22
LVA06100	23.00	25	6	4.45	0.00	4.45	42.26	41.95	41.79	33.00	25.41	23.19	10.97	3.65
LVA06100	23.00	25	7	4.00	0.00	4.00	42.26	41.95	41.79	32.47	24.71	22.90	10.97	3.18
LVA06100	23.00	29	1	5.46	0.00	5.46	42.26	41.95	41.79	33.94	26.44	24.35	10.96	4.71
LVA06100	23.00	29	2	5.73	0.00	5.73	42.26	41.95	41.79	34.15	27.21	24.42	10.96	5.00
LVA06100	23.00	29	3	6.44	0.00	6.44	42.26	41.95	41.79	34.90	28.76	24.81	10.96	5.75
LVA06100	23.00	29	4	7.71	0.00	7.71	42.26	41.95	41.79	36.43	30.05	26.16	10.96	7.14
LVA06100	23.00	29	5	7.79	0.00	7.79	42.26	41.95	41.79	36.57	29.37	26.57	10.96	7.23
LVA06100	23.00	29	6	4.48	0.00	4.48	42.26	41.95	41.79	32.96	25.50	23.22	10.96	3.68
LVA06100	23.00	29	7	4.03	0.00	4.03	42.26	41.95	41.79	32.44	24.79	22.93	10.96	3.20
LVA06100	23.00	33	1	5.26	0.00	5.26	42.26	41.85	41.79	33.94	25.51	24.50	10.95	4.50
LVA06100	23.00	33	2	5.58	0.00	5.58	42.26	41.85	41.79	34.14	26.28	24.61	10.95	4.84
LVA06100	23.00	33	3	6.31	0.00	6.31	42.26	41.85	41.79	34.89	27.79	24.98	10.95	5.62
LVA06100	23.00	33	4	7.57	0.00	7.57	42.26	41.85	41.79	36.42	29.03	26.33	10.95	6.99
LVA06100	23.00	33	5	7.61	0.00	7.61	42.26	41.85	41.79	36.56	28.36	26.73	10.95	7.03
LVA06100	23.00	33	6	4.23	0.00	4.23	42.26	41.85	41.79	32.95	24.48	23.31	10.95	3.42
LVA06100	23.00	33	7	3.79	0.00	3.79	42.26	41.85	41.79	32.43	23.85	23.02	10.95	2.96
LVA06100	23.00	37	1	5.50	0.00	5.50	42.26	41.95	41.79	33.93	26.27	24.55	10.96	4.75
LVA06100	23.00	37	2	5.77	0.00	5.77	42.26	41.95	41.79	34.14	27.04	24.61	10.96	5.04
LVA06100	23.00	37	3	6.48	0.00	6.48	42.26	41.95	41.79	34.89	28.59	24.97	10.96	5.80
LVA06100	23.00	37	4	7.75	0.00	7.75	42.26	41.95	41.79	36.42	29.86	26.33	10.96	7.19
LVA06100	23.00	37	5	7.84	0.00	7.84	42.26	41.95	41.79	36.56	29.18	26.78	10.96	7.28
LVA06100	23.00	37	6	4.52	0.00	4.52	42.26	41.95	41.79	32.94	25.31	23.45	10.96	3.72
LVA06100	23.00	37	7	4.06	0.00	4.06	42.26	41.95	41.79	32.43	24.62	23.13	10.96	3.24
MDA06300	38.00	4	1	1.67	0.00	1.67	37.56	27.71	28.24	30.12	21.75	23.57	1.67	1.64
MDA06300	38.00	4	2	2.57	0.00	2.57	37.56	27.71	28.24	31.09	22.86	25.07	1.67	2.80
MDA06300	38.00	4	3	2.11	0.00	2.11	37.56	27.71	28.24	29.73	21.93	26.94	1.67	2.19
MDA06300	38.00	4	4	3.39	0.00	3.39	37.56	27.71	28.24	31.58	23.70	28.18	1.67	3.92
MDA06300	38.00	4	5	2.64	0.00	2.64	37.56	27.71	28.24	30.26	22.68	28.02	1.67	2.89
MDA06300	38.00	4	6	3.39	0.00	3.39	37.56	27.71	28.24	31.92	23.81	27.07	1.67	3.92
MDA06300	38.00	8	1	1.67	0.00	1.67	37.56	27.71	28.24	30.12	21.75	23.57	1.67	1.64
MDA06300	38.00	8	2	2.57	0.00	2.57	37.56	27.71	28.24	31.08	22.86	25.07	1.67	2.79
MDA06300	38.00	8	3	2.11	0.00	2.11	37.56	27.71	28.24	29.72	21.92	26.93	1.67	2.19
MDA06300	38.00	8	4	3.39	0.00	3.39	37.56	27.71	28.24	31.57	23.69	28.18	1.67	3.92
MDA06300	38.00	8	5	2.64	0.00	2.64	37.56	27.71	28.24	30.25	22.67	28.02	1.67	2.88
MDA06300	38.00	8	6	3.39	0.00	3.39	37.56	27.71	28.24	31.91	23.80	27.07	1.67	3.92
MDA06300	38.00	12	1	2.71	0.00	2.71	38.10	27.71	28.24	35.74	21.75	23.57	1.80	2.94
MDA06300	38.00	12	2	3.62	0.00	3.62	38.10	27.71	28.24	36.90	22.86	25.07	1.80	4.19
MDA06300	38.00	12	3	3.38	0.00	3.38	38.10	27.71	28.24	35.24	21.92	26.93	1.80	3.85
MDA06300	38.00	12	4	4.49	0.00	4.49	38.10	27.71	28.24	36.93	23.69	28.17	1.80	5.50
MDA06300	38.00	12	5	3.84	0.00	3.84	38.10	27.71	28.24	35.20	22.67	28.01	1.80	4.51
MDA06300	38.00	12	6	4.41	0.00	4.41	38.10	27.71	28.24	37.33	23.80	27.07	1.80	5.37
MDA06300	38.00	16	1	3.26	0.00	3.26	61.94	27.71	28.24	40.10	21.74	23.56	2.95	3.31
MDA06300	38.00	16	2	4.24	0.00	4.24	61.94	27.71	28.24	41.82	22.85	25.06	2.95	4.60
MDA06300	38.00	16	3	4.07	0.00	4.07	61.94	27.71	28.24	39.37	21.91	26.93	2.95	4.36
MDA06300	38.00	16	4	5.21	0.00	5.21	61.94	27.71	28.24	40.72	23.69	28.17	2.95	5.98
MDA06300	38.00	16	5	4.53	0.00	4.53	61.94	27.71	28.24	38.23	22.67	28.01	2.95	5.00
MDA06300	38.00	16	6	5.08	0.00	5.08	61.94	27.71	28.24	41.24	23.80	27.06	2.95	5.80
MDA06300	38.00	20	1	3.94	0.00	3.94	38.07	27.71	67.88	32.81	21.74	40.97	3.72	3.97
MDA06300	38.00	20	2	4.77	0.00	4.77	38.07	27.71	67.88	33.77	22.85	44.12	3.72	5.04
MDA06300	38.00	20	3	3.92	0.00	3.92	38.07	27.71	67.88	32.38	21.92	41.26	3.72	3.93
MDA06300	38.00	20	4	5.27	0.00	5.27	38.07	27.71	67.88	34.21	23.69	43.31	3.72	5.73
MDA06300	38.00	20	5	4.41	0.00	4.41	38.07	27.71	67.88	32.83	22.67	40.64	3.72	4.56
MDA06300	38.00	20	6	5.41	0.00	5.41	38.07	27.71	67.88	34.57	23.80	44.30	3.72	5.93
MHL00000	146.00	2	1	10.84	0.00	10.84	73.91	36.26	29.53	56.29	40.65	29.38	6.69	13.02
MHL00000	146.00	2	2	9.78	0.00	9.78	73.91	36.26	29.53	53.76	38.79	27.41	6.69	11.05
MHL00000	146.00	2	3	10.08	0.00	10.08	73.91	36.26	29.53	55.11	38.64	27.96	6.69	11.56
MHL00000	146.00	2	4	10.79	0.00	10.79	73.91	36.26	29.53	55.86	38.71	29.45	6.69	12.91
MHL00000	146.00	6	1	10.84	0.00	10.84	73.92	36.26	29.53	56.27	40.64	29.38	6.69	13.02
MHL00000	146.00	6	2	9.78	0.00	9.78	73.92	36.26	29.53	53.74	38.79	27.41	6.69	11.05
MHL00000	146.00	6	3	10.08	0.00	10.08	73.92	36.26	29.53	55.08	38.63	27.96	6.69	11.55
MHL00000	146.00	6	4	10.79	0.00	10.79	73.92	36.26	29.53	55.84	38.71	29.45	6.69	12.91
MHL00000	146.00	10	1	10.84	0.00	10.84	73.91	36.26	29.53	56.38	40.64	29.38	6.69	13.02
MHL00000	146.00	10	2	9.78	0.00	9.78	73.91	36.26	29.53	53.82	38.78	27.41	6.69	11.05
MHL00000	146.00	10	3	10.08	0.00	10.08	73.91	36.26	29.53	55.23	38.63	27.96	6.69	11.56
MHL00000	146.00	10	4	10.79	0.00	10.79	73.91	36.26	29.53	56.03	38.70	29.45	6.69	12.91
MHL00000	146.00	14	1	10.86	0.00	10.86	74.00	36.26	29.53	56.41	40.63	29.42	6.69	13.05
MHL00000	146.00	14	2	9.82	0.00	9.82	74.00	36.26	29.53	53.82	38.77	27.48	6.69	11.11
MHL00000	146.00	14	3	10.09	0.00	10.09	74.00	36.26	29.53	55.55	38.62	27.97	6.69	11.57
MHL00000	146.00	14	4	10.79	0.00	10.79	74.00	36.26	29.53	56.12	38.70	29.46	6.69	12.92
MHL00000	146.00	18	1	11.37	0.00	11.37	84.06	43.56	29.53	61.98	55.89	29.42	7.36	13.40
MHL00000	146.00	18	2	10.30	0.00	10.30	84.06	43.56	29.53	60.19	55.02	27.49	7.36	11.46
MHL00000	146.00	18	3	10.59	0.00	10.59	84.06	43.56	29.53	59.62	53.95	27.98	7.36	11.95
MHL00000	146.00	18	4	11.38	0.00	11.38	84.06	43.56	29.53	60.20	53.91	29.47	7.36	13.43
MKD14800	23.00	2	1	6.17	0.00	6.17	38.89	43.99	37.21	32.51	29.68	27.04	7.81	5.81
MKD14800	23.00	2	2	6.81	0.00	6.81	38.89	43.99	37.21	33.45	30.46	27.45	7.81	6.56
MKD14800	23.00	2	3	7.32	0.00	7.32	38.89	43.99	37.21	35.04	30.51	27.10	7.81	7.17
MKD14800	23.00	2	4	7.12	0.00	7.12	38.89	43.99	37.21	35.38	29.84	26.52	7.81	6.93
MKD14800	23.00	2	5	7.25	0.00	7.25	38.89	43.99	37.21	35.51	29.88	26.75	7.81	7.08
MKD14800	23.00	2	6	7.58	0.00	7.58	38.89	43.99	37.21	35.64	30.33	27.38	7.81	7.49
MKD14800	23.00	2	7	6.94	0.00	6.94	38.89	43.99	37.21	33.90	29.99	27.50	7.81	6.72

MKD14800	23.00	2	8	6.37	0.00	6.37	38.89	43.99	37.21	32.97	29.54	27.10	7.81	6.05
MKD14800	23.00	2	9	6.15	0.00	6.15	38.89	43.99	37.21	32.53	29.55	27.01	7.81	5.79
MKD14800	23.00	6	1	6.15	0.00	6.15	38.89	43.99	37.21	32.50	29.68	26.99	7.81	5.79
MKD14800	23.00	6	2	6.79	0.00	6.79	38.89	43.99	37.21	33.45	30.46	27.40	7.81	6.54
MKD14800	23.00	6	3	7.30	0.00	7.30	38.89	43.99	37.21	35.04	30.51	27.05	7.81	7.15
MKD14800	23.00	6	4	7.10	0.00	7.10	38.89	43.99	37.21	35.37	29.83	26.47	7.81	6.90
MKD14800	23.00	6	5	7.23	0.00	7.23	38.89	43.99	37.21	35.51	29.87	26.70	7.81	7.06
MKD14800	23.00	6	6	7.56	0.00	7.56	38.89	43.99	37.21	35.64	30.32	27.32	7.81	7.46
MKD14800	23.00	6	7	6.93	0.00	6.93	38.89	43.99	37.21	33.90	29.98	27.45	7.81	6.70
MKD14800	23.00	6	8	6.36	0.00	6.36	38.89	43.99	37.21	32.97	29.53	27.05	7.81	6.03
MKD14800	23.00	6	9	6.14	0.00	6.14	38.89	43.99	37.21	32.53	29.55	26.97	7.81	5.77
MKD14800	23.00	10	1	6.15	0.00	6.15	38.89	43.99	37.21	32.50	29.67	26.99	7.81	5.79
MKD14800	23.00	10	2	6.79	0.00	6.79	38.89	43.99	37.21	33.44	30.45	27.40	7.81	6.54
MKD14800	23.00	10	3	7.30	0.00	7.30	38.89	43.99	37.21	35.03	30.50	27.05	7.81	7.15
MKD14800	23.00	10	4	7.09	0.00	7.09	38.89	43.99	37.21	35.37	29.82	26.47	7.81	6.90
MKD14800	23.00	10	5	7.22	0.00	7.22	38.89	43.99	37.21	35.50	29.86	26.70	7.81	7.05
MKD14800	23.00	10	6	7.55	0.00	7.55	38.89	43.99	37.21	35.63	30.31	27.32	7.81	7.46
MKD14800	23.00	10	7	6.92	0.00	6.92	38.89	43.99	37.21	33.90	29.97	27.45	7.81	6.70
MKD14800	23.00	10	8	6.36	0.00	6.36	38.89	43.99	37.21	32.97	29.52	27.05	7.81	6.03
MKD14800	23.00	10	9	6.14	0.00	6.14	38.89	43.99	37.21	32.52	29.54	26.97	7.81	5.77
MKD14800	23.00	14	1	6.14	0.00	6.14	38.89	43.99	37.21	32.50	29.66	26.95	7.81	5.77
MKD14800	23.00	14	2	6.78	0.00	6.78	38.89	43.99	37.21	33.44	30.44	27.36	7.81	6.52
MKD14800	23.00	14	3	7.28	0.00	7.28	38.89	43.99	37.21	35.04	30.48	27.00	7.81	7.13
MKD14800	23.00	14	4	7.07	0.00	7.07	38.89	43.99	37.21	35.37	29.80	26.42	7.81	6.87
MKD14800	23.00	14	5	7.20	0.00	7.20	38.89	43.99	37.21	35.50	29.85	26.65	7.81	7.03
MKD14800	23.00	14	6	7.53	0.00	7.53	38.89	43.99	37.21	35.63	30.30	27.27	7.81	7.44
MKD14800	23.00	14	7	6.91	0.00	6.91	38.89	43.99	37.21	33.90	29.96	27.41	7.81	6.68
MKD14800	23.00	14	8	6.34	0.00	6.34	38.89	43.99	37.21	32.97	29.51	27.01	7.81	6.01
MKD14800	23.00	14	9	6.13	0.00	6.13	38.89	43.99	37.21	32.53	29.53	26.92	7.81	5.76
MKD14800	23.00	18	1	6.13	0.00	6.13	38.89	43.99	37.21	32.50	29.66	26.92	7.81	5.76
MKD14800	23.00	18	2	6.77	0.00	6.77	38.89	43.99	37.21	33.44	30.43	27.32	7.81	6.51
MKD14800	23.00	18	3	7.27	0.00	7.27	38.89	43.99	37.21	35.03	30.48	26.96	7.81	7.11
MKD14800	23.00	18	4	7.05	0.00	7.05	38.89	43.99	37.21	35.36	29.80	26.37	7.81	6.85
MKD14800	23.00	18	5	7.18	0.00	7.18	38.89	43.99	37.21	35.49	29.84	26.60	7.81	7.01
MKD14800	23.00	18	6	7.52	0.00	7.52	38.89	43.99	37.21	35.63	30.30	27.23	7.81	7.42
MKD14800	23.00	18	7	6.90	0.00	6.90	38.89	43.99	37.21	33.90	29.96	27.37	7.81	6.66
MKD14800	23.00	18	8	6.33	0.00	6.33	38.89	43.99	37.21	32.97	29.51	26.97	7.81	6.00
MKD14800	23.00	18	9	6.12	0.00	6.12	38.89	43.99	37.21	32.53	29.53	26.89	7.81	5.75
PLW00000	146.00	4	1	9.73	0.00	9.73	68.09	28.51	39.05	47.63	28.15	37.16	6.14	11.37
PLW00000	146.00	4	2	9.71	0.00	9.71	68.09	28.51	39.05	47.77	28.14	36.83	6.14	11.33
PLW00000	146.00	4	3	10.34	0.00	10.34	68.09	28.51	39.05	50.75	29.14	39.29	6.14	12.57
PLW00000	146.00	4	4	9.97	0.00	9.97	68.09	28.51	39.05	51.41	28.31	39.06	6.14	11.83
PLW00000	146.00	4	5	8.20	0.00	8.20	68.09	28.51	39.05	51.16	25.15	38.19	6.14	8.87
PLW00000	146.00	4	6	7.56	0.00	7.56	68.09	28.51	39.05	50.63	24.23	37.39	6.14	7.96
PLW00000	146.00	8	1	9.73	0.00	9.73	68.10	28.51	39.05	47.65	28.15	37.13	6.14	11.37
PLW00000	146.00	8	2	9.70	0.00	9.70	68.10	28.51	39.05	47.79	28.14	36.80	6.14	11.33
PLW00000	146.00	8	3	10.34	0.00	10.34	68.10	28.51	39.05	50.78	29.14	39.26	6.14	12.57
PLW00000	146.00	8	4	9.97	0.00	9.97	68.10	28.51	39.05	51.44	28.31	39.03	6.14	11.83
PLW00000	146.00	8	5	8.19	0.00	8.19	68.10	28.51	39.05	51.20	25.15	38.17	6.14	8.87
PLW00000	146.00	8	6	7.56	0.00	7.56	68.10	28.51	39.05	50.66	24.23	37.36	6.14	7.96
PLW00000	146.00	12	1	9.72	0.00	9.72	70.73	28.51	39.05	47.78	28.14	37.08	6.14	11.36
PLW00000	146.00	12	2	9.70	0.00	9.70	70.73	28.51	39.05	47.96	28.13	36.75	6.14	11.33
PLW00000	146.00	12	3	10.34	0.00	10.34	70.73	28.51	39.05	50.99	29.14	39.22	6.14	12.57
PLW00000	146.00	12	4	9.98	0.00	9.98	70.73	28.51	39.05	51.85	28.30	38.99	6.14	11.84
PLW00000	146.00	12	5	8.20	0.00	8.20	70.73	28.51	39.05	51.64	25.15	38.15	6.14	8.88
PLW00000	146.00	12	6	7.56	0.00	7.56	70.73	28.51	39.05	51.21	24.23	37.35	6.14	7.97
PLW00000	146.00	16	1	9.89	0.00	9.89	70.63	28.51	43.10	45.03	28.14	43.10	6.36	11.49
PLW00000	146.00	16	2	9.83	0.00	9.83	70.63	28.51	43.10	44.29	28.13	42.43	6.36	11.37
PLW00000	146.00	16	3	10.51	0.00	10.51	70.63	28.51	43.10	47.66	29.14	45.97	6.36	12.69
PLW00000	146.00	16	4	10.12	0.00	10.12	70.63	28.51	43.10	47.37	28.30	46.15	6.36	11.91
PLW00000	146.00	16	5	8.36	0.00	8.36	70.63	28.51	43.10	48.87	25.15	47.85	6.36	9.01
PLW00000	146.00	16	6	7.71	0.00	7.71	70.63	28.51	43.10	48.19	24.23	47.52	6.36	8.10
PLW00000	146.00	20	1	9.89	0.00	9.89	68.23	28.51	58.24	44.83	28.02	43.01	6.50	11.36
PLW00000	146.00	20	2	9.81	0.00	9.81	68.23	28.51	58.24	44.11	27.99	42.35	6.50	11.23
PLW00000	146.00	20	3	10.54	0.00	10.54	68.23	28.51	58.24	47.43	29.07	45.89	6.50	12.61
PLW00000	146.00	20	4	10.16	0.00	10.16	68.23	28.51	58.24	47.15	28.26	46.07	6.50	11.85
PLW00000	146.00	20	5	8.40	0.00	8.40	68.23	28.51	58.24	48.48	25.15	47.81	6.50	9.00
PLW00000	146.00	20	6	7.76	0.00	7.76	68.23	28.51	58.24	47.79	24.24	47.48	6.50	8.10
RUS00400	110.00	25	1	17.26	0.00	17.26	53.60	57.22	75.46	40.50	56.48		23.31	16.48
RUS00400	110.00	25	2	16.81	0.00	16.81	53.60	57.22	75.46	40.36	43.12	67.73	23.31	16.01
RUS00400	110.00	25	3	17.73	0.00	17.73	53.60	57.22	75.46	41.47	42.63		23.31	16.97
RUS00400	110.00	25	4	21.14	0.00	21.14	53.60	57.22	75.46	44.73	58.91		23.31	20.70
RUS00400	110.00	25	5	18.39	0.00	18.39	53.60	57.22	75.46	41.69	58.65		23.31	17.68
RUS00400	110.00	25	6	18.88	0.00	18.88	53.60	57.22	75.46	42.22	58.44		23.31	18.20
RUS00400	110.00	27	1	16.69	0.00	16.69	54.08	75.44	65.35	39.85			24.02	15.85
RUS00400	110.00	27	2	16.85	0.00	16.85	54.08	75.44	65.35	40.35	67.71	43.38	24.02	16.02
RUS00400	110.00	27	3	28.78	0.00	28.78	54.08	75.44	65.35	55.72			24.02	31.72
RUS00400	110.00	27	4	20.44	0.00	20.44	54.08	75.44	65.35	43.84			24.02	19.84
RUS00400	110.00	27	5	17.60	0.00	17.60	54.08	75.44	65.35	40.81			24.02	16.81
RUS00400	110.00	27	6	18.38	0.00	18.38	54.08	75.44	65.35	41.62			24.02	17.62
RUS00400	110.00	31	1	16.69	0.00	16.69	54.08	75.44	65.35	39.85			24.02	15.85
RUS00400	110.00	31	2	16.85	0.00	16.85	54.08	75.44	65.35	40.35	67.71	43.38	24.02	16.02
RUS00400	110.00	31	3	28.78	0.00	28.78	54.08	75.44	65.35	55.72			24.02	31.72
RUS00400	110.00	31	4	20.44	0.00	20.44	54.08	75.44	65.35	43.84			24.02	19.84
RUS00400	110.00	31	5	17.60	0.00	17.60	54.08	75.44	65.35	40.81			24.02	16.81
RUS00400	110.00	31	6	18.38	0.00	18.38	54.08	75.44	65.35	41.62			24.02	17.62
RUS00400	110.00	35	1	16.69	0.00	16.69	54.08	75.54	65.35	39.85			24.02	15.85
RUS00400	110.00	35	2	16.85	0.00	16.85	54.08	75.54	65.35	40.35	67.71	43.38	24.02	16.02
RUS00400	110.00	35	3	28.78	0.00	28.78	54.08	75.54	65.35	55.72			24.02	31.72
RUS00400	110.00	35	4	20.44	0.00	20.44	54.08	75.54	65.35	43.84			24.02	19.84
RUS00400	110.00	35	5	17.60	0.00	17.60	54.08	75.54	65.35	40.81			24.02	16.81
RUS00400	110.00	35	6	18.38	0.00	18.38	54.08	75.54	65.35	41.62			24.02	17.62

RUS00400	110.00	39	1	16.45	0.00	16.45	52.96	75.54	65.35	39.65			22.92	15.65
RUS00400	110.00	39	2	16.12	0.00	16.12	52.96	75.54	65.35	39.59	67.71	43.38	22.92	15.31
RUS00400	110.00	39	3	17.96	0.00	17.96	52.96	75.54	65.35	41.25			22.92	17.25
RUS00400	110.00	39	4	20.34	0.00	20.34	52.96	75.54	65.35	43.84			22.92	19.84
RUS00400	110.00	39	5	17.55	0.00	17.55	52.96	75.54	65.35	40.81			22.92	16.81
RUS00400	110.00	39	6	18.08	0.00	18.08	52.96	75.54	65.35	41.38			22.92	17.38
SLM00000	146.00	1	1	18.18	0.00	18.18	64.29		37.30	56.80		35.55	15.25	19.35
SLM00000	146.00	1	2	18.57	0.00	18.57	64.29		37.30	56.56		36.25	15.25	20.00
SLM00000	146.00	1	3	18.78	0.00	18.78	64.29		37.30	56.45		36.66	15.25	20.38
SLM00000	146.00	1	4	18.89	0.00	18.89	64.29		37.30	56.54		36.85	15.25	20.57
SLM00000	146.00	1	5	18.74	0.00	18.74	64.29		37.30	56.33		36.58	15.25	20.30
SLM00000	146.00	1	6	19.60	0.00	19.60	64.29		37.30	58.83		38.23	15.25	22.00
SLM00000	146.00	5	1	15.86	0.00	15.86	64.29	37.38	37.30	56.46	38.05	35.55	12.30	17.47
SLM00000	146.00	5	2	16.37	0.00	16.37	64.29	37.38	37.30	56.24	39.76	36.25	12.30	18.46
SLM00000	146.00	5	3	16.58	0.00	16.58	64.29	37.38	37.30	56.09	40.35	36.66	12.30	18.90
SLM00000	146.00	5	4	16.63	0.00	16.63	64.29	37.38	37.30	56.19	40.29	36.85	12.30	19.01
SLM00000	146.00	5	5	16.45	0.00	16.45	64.29	37.38	37.30	56.02	39.60	36.58	12.30	18.62
SLM00000	146.00	5	6	17.15	0.00	17.15	64.29	37.38	37.30	58.50	41.02	38.23	12.30	20.23
SLM00000	146.00	9	1	15.84	0.00	15.84	64.29	37.38	37.30	56.35	38.06	35.51	12.30	17.44
SLM00000	146.00	9	2	16.36	0.00	16.36	64.29	37.38	37.30	56.14	39.76	36.22	12.30	18.44
SLM00000	146.00	9	3	16.57	0.00	16.57	64.29	37.38	37.30	56.02	40.36	36.63	12.30	18.88
SLM00000	146.00	9	4	16.63	0.00	16.63	64.29	37.38	37.30	56.12	40.29	36.82	12.30	18.99
SLM00000	146.00	9	5	16.44	0.00	16.44	64.29	37.38	37.30	55.92	39.60	36.55	12.30	18.60
SLM00000	146.00	9	6	17.14	0.00	17.14	64.29	37.38	37.30	58.40	41.02	38.20	12.30	20.21
SLM00000	146.00	13	1	15.81	0.00	15.81	64.25	37.38	37.30	56.08	38.01	35.46	12.30	17.39
SLM00000	146.00	13	2	16.34	0.00	16.34	64.25	37.38	37.30	55.89	39.74	36.18	12.30	18.40
SLM00000	146.00	13	3	16.55	0.00	16.55	64.25	37.38	37.30	55.64	40.33	36.59	12.30	18.83
SLM00000	146.00	13	4	16.60	0.00	16.60	64.25	37.38	37.30	55.73	40.26	36.79	12.30	18.94
SLM00000	146.00	13	5	16.42	0.00	16.42	64.25	37.38	37.30	55.66	39.58	36.52	12.30	18.55
SLM00000	146.00	13	6	17.12	0.00	17.12	64.25	37.38	37.30	58.13	40.98	38.16	12.30	20.16
SVK14400	17.00	3	1	7.87	0.00	7.87	49.51	42.35	42.34	33.85	29.34	29.15	15.28	7.03
SVK14400	17.00	3	2	8.11	0.00	8.11	49.51	42.35	42.34	34.13	29.50	29.44	15.28	7.28
SVK14400	17.00	3	3	8.75	0.00	8.75	49.51	42.35	42.34	34.78	30.01	30.28	15.28	7.95
SVK14400	17.00	3	4	9.46	0.00	9.46	49.51	42.35	42.34	35.45	30.66	31.32	15.28	8.69
SVK14400	17.00	3	5	8.08	0.00	8.08	49.51	42.35	42.34	33.43	30.02	30.55	15.28	7.24
SVK14400	17.00	3	6	7.51	0.00	7.51	49.51	42.35	42.34	32.62	30.01	30.09	15.28	6.65
SVK14400	17.00	3	7	8.60	0.00	8.60	49.51	42.35	42.34	33.76	31.18	31.22	15.28	7.79
SVK14400	17.00	3	8	9.66	0.00	9.66	49.51	42.35	42.34	35.22	31.78	31.75	15.28	8.91
SVK14400	17.00	3	9	9.65	0.00	9.65	49.51	42.35	42.34	35.36	31.56	31.50	15.28	8.89
SVK14400	17.00	3	10	8.41	0.00	8.41	49.51	42.35	42.34	34.34	29.98	29.80	15.28	7.59
SVK14400	17.00	7	1	7.81	0.00	7.81	49.51	42.35	42.34	33.81	29.26	29.07	15.28	6.97
SVK14400	17.00	7	2	8.06	0.00	8.06	49.51	42.35	42.34	34.09	29.42	29.37	15.28	7.22
SVK14400	17.00	7	3	8.69	0.00	8.69	49.51	42.35	42.34	34.74	29.94	30.20	15.28	7.89
SVK14400	17.00	7	4	9.40	0.00	9.40	49.51	42.35	42.34	35.40	30.60	31.23	15.28	8.63
SVK14400	17.00	7	5	8.02	0.00	8.02	49.51	42.35	42.34	33.39	29.94	30.45	15.28	7.18
SVK14400	17.00	7	6	7.45	0.00	7.45	49.51	42.35	42.34	32.58	29.93	30.00	15.28	6.60
SVK14400	17.00	7	7	8.55	0.00	8.55	49.51	42.35	42.34	33.72	31.09	31.13	15.28	7.74
SVK14400	17.00	7	8	9.61	0.00	9.61	49.51	42.35	42.34	35.18	31.70	31.66	15.28	8.85
SVK14400	17.00	7	9	9.59	0.00	9.59	49.51	42.35	42.34	35.32	31.48	31.42	15.28	8.83
SVK14400	17.00	7	10	8.35	0.00	8.35	49.51	42.35	42.34	34.30	29.90	29.73	15.28	7.53
SVK14400	17.00	11	1	7.81	0.00	7.81	49.51	42.35	42.34	33.81	29.20	29.13	15.28	6.97
SVK14400	17.00	11	2	8.05	0.00	8.05	49.51	42.35	42.34	34.09	29.36	29.41	15.28	7.22
SVK14400	17.00	11	3	8.69	0.00	8.69	49.51	42.35	42.34	34.74	29.88	30.24	15.28	7.88
SVK14400	17.00	11	4	9.39	0.00	9.39	49.51	42.35	42.34	35.40	30.54	31.27	15.28	8.62
SVK14400	17.00	11	5	8.01	0.00	8.01	49.51	42.35	42.34	33.39	29.87	30.48	15.28	7.17
SVK14400	17.00	11	6	7.44	0.00	7.44	49.51	42.35	42.34	32.58	29.85	30.03	15.28	6.59
SVK14400	17.00	11	7	8.55	0.00	8.55	49.51	42.35	42.34	33.72	31.01	31.18	15.28	7.73
SVK14400	17.00	11	8	9.61	0.00	9.61	49.51	42.35	42.34	35.18	31.62	31.75	15.28	8.85
SVK14400	17.00	11	9	9.59	0.00	9.59	49.51	42.35	42.34	35.32	31.40	31.51	15.28	8.83
SVK14400	17.00	11	10	8.35	0.00	8.35	49.51	42.35	42.34	34.30	29.84	29.80	15.28	7.53
SVK14400	17.00	15	1	7.78	0.00	7.78	49.51	42.35	42.34	33.78	29.13	29.11	15.28	6.94
SVK14400	17.00	15	2	8.02	0.00	8.02	49.51	42.35	42.34	34.06	29.30	29.40	15.28	7.19
SVK14400	17.00	15	3	8.66	0.00	8.66	49.51	42.35	42.34	34.72	29.82	30.23	15.28	7.85
SVK14400	17.00	15	4	9.36	0.00	9.36	49.51	42.35	42.34	35.37	30.48	31.26	15.28	8.59
SVK14400	17.00	15	5	7.97	0.00	7.97	49.51	42.35	42.34	33.35	29.81	30.47	15.28	7.13
SVK14400	17.00	15	6	7.41	0.00	7.41	49.51	42.35	42.34	32.55	29.78	30.02	15.28	6.55
SVK14400	17.00	15	7	8.52	0.00	8.52	49.51	42.35	42.34	33.69	30.95	31.17	15.28	7.70
SVK14400	17.00	15	8	9.58	0.00	9.58	49.51	42.35	42.34	35.15	31.57	31.73	15.28	8.82
SVK14400	17.00	15	9	9.56	0.00	9.56	49.51	42.35	42.34	35.29	31.35	31.49	15.28	8.80
SVK14400	17.00	15	10	8.32	0.00	8.32	49.51	42.35	42.34	34.27	29.77	29.78	15.28	7.50
SVK14400	17.00	19	1	7.78	0.00	7.78	49.51	42.35	42.34	33.81	29.14	29.05	15.28	6.93
SVK14400	17.00	19	2	8.02	0.00	8.02	49.51	42.35	42.34	34.09	29.30	29.33	15.28	7.19
SVK14400	17.00	19	3	8.65	0.00	8.65	49.51	42.35	42.34	34.74	29.82	30.16	15.28	7.85
SVK14400	17.00	19	4	9.36	0.00	9.36	49.51	42.35	42.34	35.39	30.48	31.18	15.28	8.58
SVK14400	17.00	19	5	7.96	0.00	7.96	49.51	42.35	42.34	33.36	29.81	30.38	15.28	7.12
SVK14400	17.00	19	6	7.40	0.00	7.40	49.51	42.35	42.34	32.56	29.78	29.93	15.28	6.54
SVK14400	17.00	19	7	8.50	0.00	8.50	49.51	42.35	42.34	33.70	30.95	31.08	15.28	7.69
SVK14400	17.00	19	8	9.57	0.00	9.57	49.51	42.35	42.34	35.16	31.57	31.65	15.28	8.81
SVK14400	17.00	19	9	9.56	0.00	9.56	49.51	42.35	42.34	35.30	31.35	31.42	15.28	8.80
SVK14400	17.00	19	10	8.32	0.00	8.32	49.51	42.35	42.34	34.30	29.78	29.71	15.28	7.50
SVN14800	34.00	4	1	3.11	0.00	3.11	39.74	38.46	25.33	33.55	26.10	21.88	2.27	3.31
SVN14800	34.00	4	2	4.14	0.00	4.14	39.74	38.46	25.33	35.62	27.27	23.15	2.27	4.74
SVN14800	34.00	4	3	2.84	0.00	2.84	39.74	38.46	25.33	34.25	25.21	21.35	2.27	2.96
SVN14800	34.00	4	4	2.82	0.00	2.82	39.74	38.46	25.33	34.41	25.27	21.23	2.27	2.93
SVN14800	34.00	4	5	3.98	0.00	3.98	39.74	38.46	25.33	35.84	27.26	22.69	2.27	4.50
SVN14800	34.00	4	6	2.48	0.00	2.48	39.74	38.46	25.33	33.04	25.38	20.91	2.27	2.50
SVN14800	34.00	8	1	3.10	0.00	3.10	39.74	38.46	25.33	33.51	26.09	21.88	2.27	3.30
SVN14800	34.00	8	2	4.13	0.00	4.13	39.74	38.46	25.33	35.58	27.27	23.15	2.27	4.72
SVN14800	34.00	8	3	2.83	0.00	2.83	39.74	38.46	25.33	34.21	25.20	21.35	2.27	2.95
SVN14800	34.00	8	4	2.81	0.00	2.81	39.74	38.46	25.33	34.37	25.26	21.23	2.27	2.92
SVN14800	34.00	8	5	3.98	0.00	3.98	39.74	38.46	25.33	35.81	27.25	22.69	2.27	4.50

SVN14800	34.00	8	6	2.47	0.00	2.47	39.74	38.46	25.33	33.00	25.37	20.91	2.27	2.49
SVN14800	34.00	12	1	3.11	0.00	3.11	39.74	38.46	25.33	33.64	26.06	21.87	2.27	3.32
SVN14800	34.00	12	2	4.15	0.00	4.15	39.74	38.46	25.33	35.71	27.24	23.14	2.27	4.74
SVN14800	34.00	12	3	2.84	0.00	2.84	39.74	38.46	25.33	34.33	25.18	21.34	2.27	2.96
SVN14800	34.00	12	4	2.82	0.00	2.82	39.74	38.46	25.33	34.47	25.24	21.22	2.27	2.93
SVN14800	34.00	12	5	3.98	0.00	3.98	39.74	38.46	25.33	35.89	27.23	22.68	2.27	4.50
SVN14800	34.00	12	6	2.48	0.00	2.48	39.74	38.46	25.33	33.09	25.35	20.90	2.27	2.49
SVN14800	34.00	16	1	3.10	0.00	3.10	39.74	38.46	25.33	33.61	26.02	21.87	2.27	3.30
SVN14800	34.00	16	2	4.14	0.00	4.14	39.74	38.46	25.33	35.68	27.21	23.14	2.27	4.73
SVN14800	34.00	16	3	2.83	0.00	2.83	39.74	38.46	25.33	34.30	25.15	21.34	2.27	2.95
SVN14800	34.00	16	4	2.81	0.00	2.81	39.74	38.46	25.33	34.44	25.21	21.22	2.27	2.92
SVN14800	34.00	16	5	3.97	0.00	3.97	39.74	38.46	25.33	35.86	27.20	22.68	2.27	4.49
SVN14800	34.00	16	6	2.46	0.00	2.46	39.74	38.46	25.33	33.06	25.31	20.90	2.27	2.48
SVN14800	34.00	20	1	6.20	0.00	6.20	39.74	38.46	39.94	33.60	26.02	28.50	8.39	5.76
SVN14800	34.00	20	2	7.64	0.00	7.64	39.74	38.46	39.94	35.67	27.22	30.37	8.39	7.44
SVN14800	34.00	20	3	6.21	0.00	6.21	39.74	38.46	39.94	34.29	25.16	28.99	8.39	5.76
SVN14800	34.00	20	4	6.28	0.00	6.28	39.74	38.46	39.94	34.43	25.21	29.05	8.39	5.85
SVN14800	34.00	20	5	7.68	0.00	7.68	39.74	38.46	39.94	35.85	27.21	30.26	8.39	7.48
SVN14800	34.00	20	6	5.62	0.00	5.62	39.74	38.46	39.94	33.05	25.31	27.74	8.39	5.11
TJK06900	44.00	1	1	9.46	0.00	9.46	44.40		47.24	33.30		34.21	14.06	8.78
TJK06900	44.00	1	2	11.95	0.00	11.95	44.40		47.24	36.54		34.27	14.06	11.52
TJK06900	44.00	1	3	12.03	0.00	12.03	44.40		47.24	37.25		32.62	14.06	11.61
TJK06900	44.00	1	4	12.86	0.00	12.86	44.40		47.24	38.12		33.83	14.06	12.58
TJK06900	44.00	1	5	12.38	0.00	12.38	44.40		47.24	36.76		35.99	14.06	12.01
TJK06900	44.00	1	6	10.88	0.00	10.88	44.40		47.24	34.79		36.18	14.06	10.32
TJK06900	44.00	1	7	13.29	0.00	13.29	44.40		47.24	38.36		35.03	14.06	13.08
TJK06900	44.00	5	1	8.52	0.00	8.52	44.40	32.28	47.23	33.29	35.86	34.11	8.76	8.43
TJK06900	44.00	5	2	10.15	0.00	10.15	44.40	32.28	47.23	36.53	33.67	34.17	8.76	10.55
TJK06900	44.00	5	3	9.81	0.00	9.81	44.40	32.28	47.23	37.23	31.48	32.52	8.76	10.08
TJK06900	44.00	5	4	10.68	0.00	10.68	44.40	32.28	47.23	38.09	33.38	33.73	8.76	11.30
TJK06900	44.00	5	5	10.91	0.00	10.91	44.40	32.28	47.23	36.74	38.82	35.89	8.76	11.63
TJK06900	44.00	5	6	9.81	0.00	9.81	44.40	32.28	47.23	34.78	39.28	36.08	8.76	10.08
TJK06900	44.00	5	7	11.27	0.00	11.27	44.40	32.28	47.23	38.33	35.60	34.93	8.76	12.17
TJK06900	44.00	9	1	8.52	0.00	8.52	44.40	32.28	47.24	33.28	35.85	34.12	8.76	8.43
TJK06900	44.00	9	2	10.14	0.00	10.14	44.40	32.28	47.24	36.51	33.66	34.17	8.76	10.53
TJK06900	44.00	9	3	9.79	0.00	9.79	44.40	32.28	47.24	37.18	31.47	32.52	8.76	10.05
TJK06900	44.00	9	4	10.67	0.00	10.67	44.40	32.28	47.24	38.05	33.37	33.73	8.76	11.28
TJK06900	44.00	9	5	10.90	0.00	10.90	44.40	32.28	47.24	36.72	38.82	35.90	8.76	11.62
TJK06900	44.00	9	6	9.80	0.00	9.80	44.40	32.28	47.24	34.77	39.28	36.08	8.76	10.07
TJK06900	44.00	9	7	11.25	0.00	11.25	44.40	32.28	47.24	38.30	35.60	34.94	8.76	12.15
TJK06900	44.00	13	1	9.08	0.00	9.08	44.40	32.44	49.24	33.28	41.38	42.34	8.91	9.10
TJK06900	44.00	13	2	10.93	0.00	10.93	44.40	32.44	49.24	36.51	37.69	37.90	8.91	11.59
TJK06900	44.00	13	3	10.71	0.00	10.71	44.40	32.44	49.24	37.18	34.86	34.71	8.91	11.27
TJK06900	44.00	13	4	11.61	0.00	11.61	44.40	32.44	49.24	38.05	37.54	36.84	8.91	12.63
TJK06900	44.00	13	5	11.41	0.00	11.41	44.40	32.44	49.24	36.72	42.51	41.37	8.91	12.32
TJK06900	44.00	13	6	10.20	0.00	10.20	44.40	32.44	49.24	34.77	42.70	43.29	8.91	10.56
TJK06900	44.00	13	7	12.09	0.00	12.09	44.40	32.44	49.24	38.30	40.55	39.19	8.91	13.42
TJK06900	44.00	17	1	15.29	0.00	15.29	66.21	32.52	54.68	45.19	42.13	39.28	10.48	18.32
TJK06900	44.00	17	2	14.34	0.00	14.34	66.21	32.52	54.68	41.79	41.59	39.48	10.48	16.22
TJK06900	44.00	17	3	12.78	0.00	12.78	66.21	32.52	54.68	38.59	39.66	39.22	10.48	13.58
TJK06900	44.00	17	4	14.12	0.00	14.12	66.21	32.52	54.68	40.87	41.55	41.35	10.48	15.81
TJK06900	44.00	17	5	15.90	0.00	15.90	66.21	32.52	54.68	45.83	42.85	45.19	10.48	20.08
TJK06900	44.00	17	6	15.88	0.00	15.88	66.21	32.52	54.68	46.03	42.89	43.73	10.48	20.00
TJK06900	44.00	17	7	15.27	0.00	15.27	66.21	32.52	54.68	43.56	43.12	43.16	10.48	18.26
TKM06800	44.00	23	1	5.30	0.00	5.30	63.06	27.03	25.52	51.29	27.55	25.63	1.19	7.43
TKM06800	44.00	23	2	4.18	0.00	4.18	63.06	27.03	25.52	46.37	24.80	24.17	1.19	5.38
TKM06800	44.00	23	3	6.10	0.00	6.10	63.06	27.03	25.52	54.31	32.10	26.33	1.19	9.27
TKM06800	44.00	23	4	4.32	0.00	4.32	63.06	27.03	25.52	52.84	29.82	22.34	1.19	5.60
TKM06800	44.00	23	5	5.48	0.00	5.48	63.06	27.03	25.52	49.53	30.05	25.08	1.19	7.80
TKM06800	44.00	23	6	4.89	0.00	4.89	63.06	27.03	25.52	48.62	33.41	23.09	1.19	6.63
TKM06800	44.00	23	7	3.83	0.00	3.83	63.06	27.03	25.52	46.89	24.08	23.69	1.19	4.80
TKM06800	44.00	27	1	5.62	0.00	5.62	57.73	27.04	25.52	54.22	29.38	25.70	1.19	8.12
TKM06800	44.00	27	2	4.41	0.00	4.41	57.73	27.04	25.52	54.51	25.47	24.20	1.19	5.76
TKM06800	44.00	27	3	6.10	0.00	6.10	57.73	27.04	25.52	52.79	32.19	26.33	1.19	9.28
TKM06800	44.00	27	4	4.28	0.00	4.28	57.73	27.04	25.52	47.09	29.84	22.34	1.19	5.55
TKM06800	44.00	27	5	5.46	0.00	5.46	57.73	27.04	25.52	47.57	30.08	25.08	1.19	7.77
TKM06800	44.00	27	6	4.81	0.00	4.81	57.73	27.04	25.52	43.32	33.46	23.09	1.19	6.48
TKM06800	44.00	27	7	4.00	0.00	4.00	57.73	27.04	25.52	54.34	24.54	23.71	1.19	5.08
TKM06800	44.00	31	1	5.62	0.00	5.62	57.73	27.04	25.52	54.21	29.38	25.70	1.19	8.12
TKM06800	44.00	31	2	4.41	0.00	4.41	57.73	27.04	25.52	54.50	25.47	24.20	1.19	5.76
TKM06800	44.00	31	3	6.10	0.00	6.10	57.73	27.04	25.52	52.79	32.19	26.33	1.19	9.28
TKM06800	44.00	31	4	4.28	0.00	4.28	57.73	27.04	25.52	47.09	29.84	22.34	1.19	5.55
TKM06800	44.00	31	5	5.46	0.00	5.46	57.73	27.04	25.52	47.57	30.08	25.08	1.19	7.77
TKM06800	44.00	31	6	4.81	0.00	4.81	57.73	27.04	25.52	43.31	33.46	23.09	1.19	6.48
TKM06800	44.00	31	7	4.00	0.00	4.00	57.73	27.04	25.52	54.33	24.54	23.71	1.19	5.08
TKM06800	44.00	35	1	5.62	0.00	5.62	57.73	27.04	25.52	54.20	29.38	25.70	1.19	8.12
TKM06800	44.00	35	2	4.41	0.00	4.41	57.73	27.04	25.52	54.49	25.47	24.20	1.19	5.76
TKM06800	44.00	35	3	6.10	0.00	6.10	57.73	27.04	25.52	52.78	32.20	26.33	1.19	9.28
TKM06800	44.00	35	4	4.28	0.00	4.28	57.73	27.04	25.52	47.09	29.84	22.34	1.19	5.55
TKM06800	44.00	35	5	5.46	0.00	5.46	57.73	27.04	25.52	47.56	30.08	25.08	1.19	7.77
TKM06800	44.00	35	6	4.81	0.00	4.81	57.73	27.04	25.52	43.31	33.46	23.09	1.19	6.48
TKM06800	44.00	35	7	4.00	0.00	4.00	57.73	27.04	25.52	54.32	24.54	23.71	1.19	5.08
TKM06800	44.00	39	1	5.62	0.00	5.62	57.70	27.04	25.52	53.95	29.38	25.70	1.19	8.12
TKM06800	44.00	39	2	4.41	0.00	4.41	57.70	27.04	25.52	54.19	25.47	24.20	1.19	5.76
TKM06800	44.00	39	3	6.10	0.00	6.10	57.70	27.04	25.52	52.67	32.20	26.33	1.19	9.28
TKM06800	44.00	39	4	4.28	0.00	4.28	57.70	27.04	25.52	47.02	29.85	22.34	1.19	5.55
TKM06800	44.00	39	5	5.44	0.00	5.44	57.70	27.04	25.52	47.51	29.92	25.08	1.19	7.73
TKM06800	44.00	39	6	4.79	0.00	4.79	57.70	27.04	25.52	43.29	33.08	23.09	1.19	6.44
TKM06800	44.00	39	7	4.00	0.00	4.00	57.70	27.04	25.52	53.99	24.54	23.71	1.19	5.08
TUV00000	176.00	2	1	10.70	0.00	10.70	80.38	67.81	29.30	45.23	56.01	28.77	7.30	12.18
TUV00000	176.00	2	2	10.27	0.00	10.27	80.38	67.81	29.30	45.02	55.24	27.97	7.30	11.45

TUV00000	176.00	2	3	8.29	0.00	8.29	80.38	67.81	29.30	43.08	54.01	24.95	7.30	8.54
TUV00000	176.00	2	4	10.27	0.00	10.27	80.38	67.81	29.30	45.05	55.27	27.96	7.30	11.45
TUV00000	176.00	2	5	9.48	0.00	9.48	80.38	67.81	29.30	43.99	54.98	26.71	7.30	10.22
TUV00000	176.00	2	6	9.42	0.00	9.42	80.38	67.81	29.30	44.86	55.40	26.52	7.30	10.13
TUV00000	176.00	2	7	9.97	0.00	9.97	80.38	67.81	29.30	43.54	53.34	27.63	7.30	10.96
TUV00000	176.00	6	1	10.69	0.00	10.69	80.39	67.81	29.30	45.23	55.55	28.77	7.30	12.18
TUV00000	176.00	6	2	10.27	0.00	10.27	80.39	67.81	29.30	45.02	54.80	27.97	7.30	11.45
TUV00000	176.00	6	3	8.29	0.00	8.29	80.39	67.81	29.30	43.08	53.54	24.95	7.30	8.54
TUV00000	176.00	6	4	10.27	0.00	10.27	80.39	67.81	29.30	45.05	54.82	27.96	7.30	11.45
TUV00000	176.00	6	5	9.48	0.00	9.48	80.39	67.81	29.30	43.99	54.51	26.71	7.30	10.22
TUV00000	176.00	6	6	9.42	0.00	9.42	80.39	67.81	29.30	44.86	54.94	26.52	7.30	10.13
TUV00000	176.00	6	7	9.97	0.00	9.97	80.39	67.81	29.30	43.54	52.94	27.63	7.30	10.96
TUV00000	176.00	10	1	10.69	0.00	10.69	80.39	67.81	29.30	45.14	55.48	28.77	7.30	12.17
TUV00000	176.00	10	2	10.26	0.00	10.26	80.39	67.81	29.30	44.92	54.72	27.97	7.30	11.44
TUV00000	176.00	10	3	8.28	0.00	8.28	80.39	67.81	29.30	42.98	53.47	24.95	7.30	8.53
TUV00000	176.00	10	4	10.26	0.00	10.26	80.39	67.81	29.30	44.95	54.75	27.96	7.30	11.44
TUV00000	176.00	10	5	9.48	0.00	9.48	80.39	67.81	29.30	43.89	54.44	26.71	7.30	10.21
TUV00000	176.00	10	6	9.42	0.00	9.42	80.39	67.81	29.30	44.76	54.87	26.52	7.30	10.12
TUV00000	176.00	10	7	9.96	0.00	9.96	80.39	67.81	29.30	43.44	52.86	27.63	7.30	10.95
TUV00000	176.00	14	1	19.83	0.00	19.83	80.52	67.81	42.66	45.04	55.26	41.33	20.64	19.62
TUV00000	176.00	14	2	19.54	0.00	19.54	80.52	67.81	42.66	44.82	54.50	40.68	20.64	19.28
TUV00000	176.00	14	3	17.92	0.00	17.92	80.52	67.81	42.66	42.88	53.24	38.98	20.64	17.41
TUV00000	176.00	14	4	19.56	0.00	19.56	80.52	67.81	42.66	44.85	54.53	40.70	20.64	19.30
TUV00000	176.00	14	5	18.77	0.00	18.77	80.52	67.81	42.66	43.80	54.21	40.08	20.64	18.38
TUV00000	176.00	14	6	19.41	0.00	19.41	80.52	67.81	42.66	44.66	54.64	40.51	20.64	19.12
TUV00000	176.00	14	7	18.28	0.00	18.28	80.52	67.81	42.66	43.34	52.65	39.30	20.64	17.82
UKR06300	38.00	3	1	3.43	0.00	3.43	49.67	35.78	24.74	31.43	33.86	22.42	2.33	3.71
UKR06300	38.00	3	2	2.91	0.00	2.91	49.67	35.78	24.74	27.27	34.25	35.33	2.33	3.03
UKR06300	38.00	3	3	4.53	0.00	4.53	49.67	35.78	24.74	31.19	31.57	27.08	2.33	5.28
UKR06300	38.00	3	4	3.84	0.00	3.84	49.67	35.78	24.74	29.99	32.80	25.98	2.33	4.28
UKR06300	38.00	3	5	4.55	0.00	4.55	49.67	35.78	24.74	30.87	34.32	27.28	2.33	5.30
UKR06300	38.00	3	6	2.91	0.00	2.91	49.67	35.78	24.74	27.99	32.47	27.20	2.33	3.03
UKR06300	38.00	7	1	3.42	0.00	3.42	49.67	35.78	24.74	31.40	33.78	22.42	2.33	3.70
UKR06300	38.00	7	2	2.90	0.00	2.90	49.67	35.78	24.74	27.27	34.15	35.32	2.33	3.03
UKR06300	38.00	7	3	4.52	0.00	4.52	49.67	35.78	24.74	31.16	31.51	27.08	2.33	5.26
UKR06300	38.00	7	4	3.83	0.00	3.83	49.67	35.78	24.74	29.97	32.73	25.98	2.33	4.26
UKR06300	38.00	7	5	4.54	0.00	4.54	49.67	35.78	24.74	30.85	34.23	27.28	2.33	5.29
UKR06300	38.00	7	6	2.91	0.00	2.91	49.67	35.78	24.74	27.99	32.40	27.20	2.33	3.03
UKR06300	38.00	11	1	3.41	0.00	3.41	49.67	35.78	24.75	31.33	33.78	22.46	2.34	3.69
UKR06300	38.00	11	2	2.86	0.00	2.86	49.67	35.78	24.75	27.18	34.15	36.47	2.34	2.96
UKR06300	38.00	11	3	4.53	0.00	4.53	49.67	35.78	24.75	31.14	31.51	27.23	2.34	5.28
UKR06300	38.00	11	4	3.84	0.00	3.84	49.67	35.78	24.75	29.94	32.72	26.10	2.34	4.28
UKR06300	38.00	11	5	4.53	0.00	4.53	49.67	35.78	24.75	30.78	34.22	27.42	2.34	5.27
UKR06300	38.00	11	6	2.87	0.00	2.87	49.67	35.78	24.75	27.90	32.40	27.35	2.34	2.98
UKR06300	38.00	15	1	3.55	0.00	3.55	49.67	35.85	25.06	31.24	38.18	22.50	2.63	3.78
UKR06300	38.00	15	2	2.95	0.00	2.95	49.67	35.85	25.06	27.09	41.14	37.67	2.63	3.00
UKR06300	38.00	15	3	4.75	0.00	4.75	49.67	35.85	25.06	31.09	34.08	27.36	2.63	5.46
UKR06300	38.00	15	4	4.02	0.00	4.02	49.67	35.85	25.06	29.89	36.68	26.19	2.63	4.42
UKR06300	38.00	15	5	4.72	0.00	4.72	49.67	35.85	25.06	30.70	40.33	27.54	2.63	5.41
UKR06300	38.00	15	6	2.97	0.00	2.97	49.67	35.85	25.06	27.80	35.73	27.48	2.63	3.02
UKR06300	38.00	19	1	3.44	0.00	3.44	49.68	35.71	24.75	31.24	36.69	22.46	2.33	3.73
UKR06300	38.00	19	2	2.86	0.00	2.86	49.68	35.71	24.75	27.09	38.25	36.50	2.33	2.96
UKR06300	38.00	19	3	4.61	0.00	4.61	49.68	35.71	24.75	31.09	33.35	27.23	2.33	5.39
UKR06300	38.00	19	4	3.90	0.00	3.90	49.68	35.71	24.75	29.89	35.46	26.10	2.33	4.36
UKR06300	38.00	19	5	4.57	0.00	4.57	49.68	35.71	24.75	30.70	38.02	27.42	2.33	5.34
UKR06300	38.00	19	6	2.87	0.00	2.87	49.68	35.71	24.75	27.80	34.69	27.35	2.33	2.98
UZB07100	44.00	3	1	7.30	0.00	7.30	45.72	49.31	30.26	31.77	34.60	36.54	7.50	7.22
UZB07100	44.00	3	2	8.59	0.00	8.59	45.72	49.31	30.26	33.64	34.97	36.91	7.50	8.88
UZB07100	44.00	3	3	9.83	0.00	9.83	45.72	49.31	30.26	35.27	36.92	40.47	7.50	10.64
UZB07100	44.00	3	4	11.11	0.00	11.11	45.72	49.31	30.26	37.01	43.71	45.22	7.50	12.76
UZB07100	44.00	3	5	8.63	0.00	8.63	45.72	49.31	30.26	33.08	45.65	41.35	7.50	8.94
UZB07100	44.00	3	6	9.38	0.00	9.38	45.72	49.31	30.26	34.12	48.27	42.11	7.50	9.98
UZB07100	44.00	3	7	10.31	0.00	10.31	45.72	49.31	30.26	35.56	47.56	43.03	7.50	11.40
UZB07100	44.00	7	1	7.25	0.00	7.25	45.72	49.30	30.26	31.71	34.50	36.53	7.50	7.16
UZB07100	44.00	7	2	8.54	0.00	8.54	45.72	49.30	30.26	33.56	34.87	36.91	7.50	8.80
UZB07100	44.00	7	3	9.79	0.00	9.79	45.72	49.30	30.26	35.21	36.82	40.47	7.50	10.58
UZB07100	44.00	7	4	11.10	0.00	11.10	45.72	49.30	30.26	37.00	43.61	45.22	7.50	12.76
UZB07100	44.00	7	5	8.63	0.00	8.63	45.72	49.30	30.26	33.07	45.57	41.34	7.50	8.94
UZB07100	44.00	7	6	9.38	0.00	9.38	45.72	49.30	30.26	34.12	48.19	42.11	7.50	9.98
UZB07100	44.00	7	7	10.31	0.00	10.31	45.72	49.30	30.26	35.56	47.47	43.02	7.50	11.40
UZB07100	44.00	11	1	7.35	0.00	7.35	45.72	49.31	30.31	31.67	34.51	41.92	7.54	7.27
UZB07100	44.00	11	2	8.67	0.00	8.67	45.72	49.31	30.31	33.54	34.87	41.77	7.54	8.97
UZB07100	44.00	11	3	9.84	0.00	9.84	45.72	49.31	30.31	35.17	36.82	43.50	7.54	10.63
UZB07100	44.00	11	4	11.08	0.00	11.08	45.72	49.31	30.31	36.91	43.62	45.52	7.54	12.67
UZB07100	44.00	11	5	8.58	0.00	8.58	45.72	49.31	30.31	32.98	45.59	41.39	7.54	8.85
UZB07100	44.00	11	6	9.34	0.00	9.34	45.72	49.31	30.31	34.04	48.24	42.16	7.54	9.91
UZB07100	44.00	11	7	10.28	0.00	10.28	45.72	49.31	30.31	35.48	47.52	43.09	7.54	11.32
UZB07100	44.00	15	1	7.52	0.00	7.52	45.73	50.99	30.34	31.57	42.82	42.50	7.58	7.47
UZB07100	44.00	15	2	8.85	0.00	8.85	45.73	50.99	30.34	33.44	39.57	42.98	7.58	9.21
UZB07100	44.00	15	3	9.99	0.00	9.99	45.73	50.99	30.34	35.08	41.52	43.85	7.58	10.84
UZB07100	44.00	15	4	11.11	0.00	11.11	45.73	50.99	30.34	36.82	50.31	45.55	7.58	12.69
UZB07100	44.00	15	5	8.54	0.00	8.54	45.73	50.99	30.34	32.89	49.32	41.41	7.58	8.78
UZB07100	44.00	15	6	9.31	0.00	9.31	45.73	50.99	30.34	33.96	50.65	42.18	7.58	9.85
UZB07100	44.00	15	7	10.26	0.00	10.26	45.73	50.99	30.34	35.40	50.51	43.12	7.58	11.26
UZB07100	44.00	19	1	11.70	0.00	11.70	50.99	54.92	59.28	35.08	39.90	46.17	20.63	10.81
UZB07100	44.00	19	2	15.13	0.00	15.13	50.99	54.92	59.28	38.61	44.33	49.59	20.63	14.38
UZB07100	44.00	19	3	15.67	0.00	15.67	50.99	54.92	59.28	39.09	47.40	51.59	20.63	14.96
UZB07100	44.00	19	4	13.72	0.00	13.72	50.99	54.92	59.28	36.95	52.71	51.68	20.63	12.91
UZB07100	44.00	19	5	9.75	0.00	9.75	50.99	54.92	59.28	32.88	49.61	44.64	20.63	8.82
UZB07100	44.00	19	6	10.81	0.00	10.81	50.99	54.92	59.28	33.95	51.80	46.73	20.63	9.90
UZB07100	44.00	19	7	12.22	0.00	12.22	50.99	54.92	59.28	35.38	53.08	49.63	20.63	11.35

YEM26600	11.00	2	1	4.99	0.00	4.99	45.84	29.41	43.04	45.83	21.86	27.02	6.67	4.62
YEM26600	11.00	2	2	4.94	0.00	4.94	45.84	29.41	43.04	42.78	21.84	27.21	6.67	4.57
YEM26600	11.00	2	3	5.74	0.00	5.74	45.84	29.41	43.04	46.14	22.84	27.61	6.67	5.50
YEM26600	11.00	2	4	5.52	0.00	5.52	45.84	29.41	43.04	41.66	22.80	27.39	6.67	5.25
YEM26600	11.00	2	5	5.26	0.00	5.26	45.84	29.41	43.04	40.12	22.51	27.35	6.67	4.93
YEM26600	11.00	6	1	4.97	0.00	4.97	45.84	29.41	43.04	45.74	21.86	26.92	6.67	4.60
YEM26600	11.00	6	2	4.92	0.00	4.92	45.84	29.41	43.04	42.68	21.84	27.11	6.67	4.54
YEM26600	11.00	6	3	5.71	0.00	5.71	45.84	29.41	43.04	46.05	22.84	27.51	6.67	5.47
YEM26600	11.00	6	4	5.50	0.00	5.50	45.84	29.41	43.04	41.57	22.80	27.29	6.67	5.22
YEM26600	11.00	6	5	5.23	0.00	5.23	45.84	29.41	43.04	40.02	22.51	27.25	6.67	4.90
YEM26600	11.00	10	1	4.97	0.00	4.97	45.84	29.41	43.04	45.70	21.86	26.92	6.67	4.59
YEM26600	11.00	10	2	4.92	0.00	4.92	45.84	29.41	43.04	42.61	21.84	27.11	6.67	4.54
YEM26600	11.00	10	3	5.71	0.00	5.71	45.84	29.41	43.04	46.01	22.84	27.51	6.67	5.47
YEM26600	11.00	10	4	5.49	0.00	5.49	45.84	29.41	43.04	41.49	22.80	27.29	6.67	5.21
YEM26600	11.00	10	5	5.22	0.00	5.22	45.84	29.41	43.04	39.94	22.51	27.25	6.67	4.89
YEM26600	11.00	14	1	4.95	0.00	4.95	45.84	29.41	43.04	45.71	21.86	26.82	6.67	4.57
YEM26600	11.00	14	2	4.90	0.00	4.90	45.84	29.41	43.04	42.56	21.84	27.01	6.67	4.51
YEM26600	11.00	14	3	5.69	0.00	5.69	45.84	29.41	43.04	46.03	22.84	27.41	6.67	5.45
YEM26600	11.00	14	4	5.47	0.00	5.47	45.84	29.41	43.04	41.43	22.80	27.19	6.67	5.18
YEM26600	11.00	14	5	5.20	0.00	5.20	45.84	29.41	43.04	39.87	22.51	27.15	6.67	4.87
YEM26600	11.00	18	1	4.94	0.00	4.94	45.84	29.41	43.04	45.59	21.86	26.81	6.67	4.57
YEM26600	11.00	18	2	4.89	0.00	4.89	45.84	29.41	43.04	42.51	21.84	27.00	6.67	4.51
YEM26600	11.00	18	3	5.69	0.00	5.69	45.84	29.41	43.04	45.90	22.85	27.41	6.67	5.44
YEM26600	11.00	18	4	5.47	0.00	5.47	45.84	29.41	43.04	41.39	22.80	27.19	6.67	5.18
YEM26600	11.00	18	5	5.20	0.00	5.20	45.84	29.41	43.04	39.84	22.51	27.15	6.67	4.86
YEM26700	11.00	1	1	7.74	0.00	7.74	45.02		30.06	44.66		24.07	7.27	7.83
YEM26700	11.00	1	2	7.62	0.00	7.62	45.02		30.06	46.43		23.83	7.27	7.68
YEM26700	11.00	1	3	8.17	0.00	8.17	45.02		30.06	44.32		24.69	7.27	8.40
YEM26700	11.00	1	4	9.41	0.00	9.41	45.02		30.06	45.59		26.45	7.27	10.13
YEM26700	11.00	1	5	11.14	0.00	11.14	45.02		30.06	44.80		29.83	7.27	13.04
YEM26700	11.00	1	6	9.46	0.00	9.46	45.02		30.06	46.96		26.44	7.27	10.20
YEM26700	11.00	5	1	5.92	0.00	5.92	73.57	29.91	30.06	44.59	27.10	24.06	4.98	6.15
YEM26700	11.00	5	2	6.05	0.00	6.05	73.57	29.91	30.06	46.37	28.10	23.82	4.98	6.34
YEM26700	11.00	5	3	5.96	0.00	5.96	73.57	29.91	30.06	44.25	26.34	24.63	4.98	6.21
YEM26700	11.00	5	4	7.38	0.00	7.38	73.57	29.91	30.06	45.51	28.85	26.38	4.98	8.23
YEM26700	11.00	5	5	8.49	0.00	8.49	73.57	29.91	30.06	44.71	29.19	29.77	4.98	10.07
YEM26700	11.00	5	6	7.50	0.00	7.50	73.57	29.91	30.06	46.89	29.15	26.44	4.98	8.42
YEM26700	11.00	9	1	5.91	0.00	5.91	73.76	30.04	30.06	44.57	27.00	24.06	5.04	6.12
YEM26700	11.00	9	2	6.05	0.00	6.05	73.76	30.04	30.06	46.34	28.00	23.82	5.04	6.30
YEM26700	11.00	9	3	5.92	0.00	5.92	73.76	30.04	30.06	44.22	26.24	24.57	5.04	6.14
YEM26700	11.00	9	4	7.35	0.00	7.35	73.76	30.04	30.06	45.48	28.76	26.32	5.04	8.15
YEM26700	11.00	9	5	8.48	0.00	8.48	73.76	30.04	30.06	44.69	29.10	29.71	5.04	10.00
YEM26700	11.00	9	6	7.50	0.00	7.50	73.76	30.04	30.06	46.86	29.05	26.43	5.04	8.38
YEM26700	11.00	13	1	5.89	0.00	5.89	74.38	30.04	29.94	44.59	27.00	24.06	4.98	6.12
YEM26700	11.00	13	2	6.03	0.00	6.03	74.38	30.04	29.94	46.37	28.00	23.81	4.98	6.30
YEM26700	11.00	13	3	5.88	0.00	5.88	74.38	30.04	29.94	44.23	26.24	24.51	4.98	6.11
YEM26700	11.00	13	4	7.31	0.00	7.31	74.38	30.04	29.94	45.50	28.76	26.26	4.98	8.12
YEM26700	11.00	13	5	8.44	0.00	8.44	74.38	30.04	29.94	44.70	29.10	29.66	4.98	9.98
YEM26700	11.00	13	6	7.48	0.00	7.48	74.38	30.04	29.94	46.89	29.05	26.43	4.98	8.38
YEM26700	11.00	17	1	5.90	0.00	5.90	71.86	30.04	30.06	44.89	26.95	24.06	5.04	6.11
YEM26700	11.00	17	2	6.04	0.00	6.04	71.86	30.04	30.06	46.67	27.97	23.81	5.04	6.30
YEM26700	11.00	17	3	5.90	0.00	5.90	71.86	30.04	30.06	44.53	26.22	24.51	5.04	6.11
YEM26700	11.00	17	4	7.33	0.00	7.33	71.86	30.04	30.06	45.84	28.73	26.26	5.04	8.12
YEM26700	11.00	17	5	8.47	0.00	8.47	71.86	30.04	30.06	45.06	29.06	29.65	5.04	9.98
YEM26700	11.00	17	6	7.50	0.00	7.50	71.86	30.04	30.06	47.21	29.02	26.42	5.04	8.37
YUG14800	-7.00	23	1	1.52	0.00	1.52	47.79		40.35	27.38	20.63	27.17	15.05	0.56
YUG14800	-7.00	23	2	3.36	0.00	3.36	47.79		40.35	31.01	21.10	27.86	15.05	2.42
YUG14800	-7.00	23	3	4.12	0.00	4.12	47.79		40.35	32.61	21.49	28.29	15.05	3.19
YUG14800	-7.00	23	4	3.32	0.00	3.32	47.79		40.35	31.71	20.74	27.31	15.05	2.37
YUG14800	-7.00	23	5	3.39	0.00	3.39	47.79		40.35	31.46	20.93	27.66	15.05	2.45
YUG14800	-7.00	23	6	2.81	0.00	2.81	47.79		40.35	30.58	20.46	27.30	15.05	1.86
YUG14800	-7.00	23	7	1.82	0.00	1.82	47.79		40.35	28.30	20.30	27.16	15.05	0.86
YUG14800	-7.00	23	8	3.10	0.00	3.10	47.79		40.35	29.49	21.67	28.60	15.05	2.16
YUG14800	-7.00	27	1	1.44	0.00	1.44	47.79	34.42	40.35	27.38	20.63	27.17	10.53	0.55
YUG14800	-7.00	27	2	3.19	0.00	3.19	47.79	34.42	40.35	30.83	21.10	27.86	10.53	2.35
YUG14800	-7.00	27	3	3.91	0.00	3.91	47.79	34.42	40.35	32.29	21.49	28.29	10.53	3.10
YUG14800	-7.00	27	4	3.23	0.00	3.23	47.79	34.42	40.35	31.78	20.74	27.31	10.53	2.39
YUG14800	-7.00	27	5	3.31	0.00	3.31	47.79	34.42	40.35	31.56	20.93	27.66	10.53	2.48
YUG14800	-7.00	27	6	2.72	0.00	2.72	47.79	34.42	40.35	30.59	20.46	27.30	10.53	1.86
YUG14800	-7.00	27	7	1.72	0.00	1.72	47.79	34.42	40.35	28.25	20.30	27.15	10.53	0.84
YUG14800	-7.00	27	8	2.94	0.00	2.94	47.79	34.42	40.35	29.36	21.67	28.60	10.53	2.10
YUG14800	-7.00	31	1	1.42	0.00	1.42	47.79	34.42	40.35	27.41	20.53	27.05	10.53	0.52
YUG14800	-7.00	31	2	3.13	0.00	3.13	47.79	34.42	40.35	30.85	21.00	27.74	10.53	2.29
YUG14800	-7.00	31	3	3.85	0.00	3.85	47.79	34.42	40.35	32.30	21.39	28.19	10.53	3.04
YUG14800	-7.00	31	4	3.17	0.00	3.17	47.79	34.42	40.35	31.80	20.64	27.22	10.53	2.33
YUG14800	-7.00	31	5	3.25	0.00	3.25	47.79	34.42	40.35	31.59	20.83	27.56	10.53	2.42
YUG14800	-7.00	31	6	2.66	0.00	2.66	47.79	34.42	40.35	30.61	20.37	27.20	10.53	1.80
YUG14800	-7.00	31	7	1.69	0.00	1.69	47.79	34.42	40.35	28.28	20.20	27.06	10.53	0.80
YUG14800	-7.00	31	8	2.91	0.00	2.91	47.79	34.42	40.35	29.39	21.57	28.49	10.53	2.06
YUG14800	-7.00	35	1	1.37	0.00	1.37	47.79	34.42	40.35	27.33	20.53	27.07	10.53	0.48
YUG14800	-7.00	35	2	3.11	0.00	3.11	47.79	34.42	40.35	30.77	21.00	27.76	10.53	2.27
YUG14800	-7.00	35	3	3.82	0.00	3.82	47.79	34.42	40.35	32.22	21.39	28.20	10.53	3.01
YUG14800	-7.00	35	4	3.14	0.00	3.14	47.79	34.42	40.35	31.71	20.64	27.22	10.53	2.31
YUG14800	-7.00	35	5	3.23	0.00	3.23	47.79	34.42	40.35	31.50	20.83	27.56	10.53	2.39
YUG14800	-7.00	35	6	2.63	0.00	2.63	47.79	34.42	40.35	30.53	20.37	27.20	10.53	1.78
YUG14800	-7.00	35	7	1.65	0.00	1.65	47.79	34.42	40.35	28.19	20.20	27.06	10.53	0.76
YUG14800	-7.00	35	8	2.87	0.00	2.87	47.79	34.42	40.35	29.31	21.57	28.50	10.53	2.02
YUG14800	-7.00	39	1	0.88	0.00	0.88	47.79	34.42	40.35	26.48	20.42	26.94	10.53	-0.03
YUG14800	-7.00	39	2	2.82	0.00	2.82	47.79	34.42	40.35	30.14	20.90	27.63	10.53	1.97
YUG14800	-7.00	39	3	3.58	0.00	3.58	47.79	34.42	40.35	31.66	21.28	28.09	10.53	2.76
YUG14800	-7.00	39	4	2.90	0.00	2.90	47.79	34.42	40.35	31.12	20.53	27.12	10.53	2.05
YUG14800	-7.00	39	5	2.96	0.00	2.96	47.79	34.42	40.35	30.87	20.71	27.46	10.53	2.11

YUG14800	-7.00	39	6	2.34	0.00	2.34	47.79	34.42	40.35	29.87	20.25	27.10	10.53	1.47
YUG14800	-7.00	39	7	1.22	0.00	1.22	47.79	34.42	40.35	27.39	20.09	26.96	10.53	0.32
YUG14800	-7.00	39	8	2.44	0.00	2.44	47.79	34.42	40.35	28.51	21.46	28.39	10.53	1.57
YYY00001	11.00	1	1	6.38	0.00	6.38	45.28		44.78	30.12		30.36	14.57	5.51
YYY00001	11.00	1	2	7.04	0.00	7.04	45.28		44.78	30.87		30.64	14.57	6.20
YYY00001	11.00	1	3	7.68	0.00	7.68	45.28		44.78	31.63		30.77	14.57	6.86
YYY00001	11.00	1	4	7.97	0.00	7.97	45.28		44.78	32.10		30.32	14.57	7.17
YYY00001	11.00	1	5	7.72	0.00	7.72	45.28		44.78	31.83		30.04	14.57	6.90
YYY00001	11.00	5	1	6.06	0.00	6.06	45.28	38.28	44.78	30.03	35.37	30.35	12.33	5.27
YYY00001	11.00	5	2	6.69	0.00	6.69	45.28	38.28	44.78	30.78	35.66	30.63	12.33	5.93
YYY00001	11.00	5	3	7.30	0.00	7.30	45.28	38.28	44.78	31.54	35.82	30.76	12.33	6.58
YYY00001	11.00	5	4	7.55	0.00	7.55	45.28	38.28	44.78	32.02	35.37	30.31	12.33	6.85
YYY00001	11.00	5	5	7.30	0.00	7.30	45.28	38.28	44.78	31.76	34.93	30.03	12.33	6.58
YYY00001	11.00	9	1	6.05	0.00	6.05	45.28	38.28	44.78	30.03	35.28	30.34	12.33	5.26
YYY00001	11.00	9	2	6.68	0.00	6.68	45.28	38.28	44.78	30.78	35.57	30.62	12.33	5.93
YYY00001	11.00	9	3	7.29	0.00	7.29	45.28	38.28	44.78	31.54	35.72	30.75	12.33	6.57
YYY00001	11.00	9	4	7.54	0.00	7.54	45.28	38.28	44.78	32.01	35.28	30.30	12.33	6.84
YYY00001	11.00	9	5	7.29	0.00	7.29	45.28	38.28	44.78	31.75	34.84	30.02	12.33	6.57
YYY00001	11.00	13	1	5.98	0.00	5.98	45.28	38.28	44.78	29.95	35.30	30.33	12.33	5.19
YYY00001	11.00	13	2	6.62	0.00	6.62	45.28	38.28	44.78	30.70	35.58	30.61	12.33	5.86
YYY00001	11.00	13	3	7.23	0.00	7.23	45.28	38.28	44.78	31.46	35.74	30.74	12.33	6.50
YYY00001	11.00	13	4	7.49	0.00	7.49	45.28	38.28	44.78	31.94	35.29	30.29	12.33	6.78
YYY00001	11.00	13	5	7.23	0.00	7.23	45.28	38.28	44.78	31.68	34.85	30.02	12.33	6.51
YYY00001	11.00	17	1	5.98	0.00	5.98	45.28	38.28	44.78	29.95	35.26	30.33	12.33	5.19
YYY00001	11.00	17	2	6.62	0.00	6.62	45.28	38.28	44.78	30.70	35.55	30.60	12.33	5.86
YYY00001	11.00	17	3	7.23	0.00	7.23	45.28	38.28	44.78	31.47	35.70	30.74	12.33	6.51
YYY00001	11.00	17	4	7.49	0.00	7.49	45.28	38.28	44.78	31.94	35.26	30.29	12.33	6.78
YYY00001	11.00	17	5	7.23	0.00	7.23	45.28	38.28	44.78	31.68	34.82	30.01	12.33	6.51
BHR2550A	17.00	23	1	6.56	0.00	6.56	47.33	30.89	31.22	42.34	27.61	24.96	5.73	6.76
BRU3300A	74.00	12	1	13.88	0.00	13.88	67.25	44.21	44.23	54.57	39.88	29.62	19.14	13.15
BRU3300A	74.00	12	2	13.62	0.00	13.62	67.25	44.21	44.23	54.51	38.65	29.44	19.14	12.87
BRU3300A	74.00	12	3	13.64	0.00	13.64	67.25	44.21	44.23	54.20	39.45	29.38	19.14	12.89
BRU3300A	74.00	16	1	10.05	0.00	10.05	67.07	44.21	44.23	43.41	28.32	28.89	19.14	9.16
BRU3300A	74.00	16	2	9.93	0.00	9.93	67.07	44.21	44.23	43.60	28.00	28.93	19.14	9.03
BRU3300A	74.00	16	3	9.71	0.00	9.71	67.07	44.21	44.23	42.24	27.95	28.79	19.14	8.81
BRU3300A	74.00	14	1	10.82	0.00	10.82	67.25	45.32	46.02	54.08	29.69	28.35	20.55	9.92
BRU3300A	74.00	14	2	10.57	0.00	10.57	67.25	45.32	46.02	54.09	29.51	28.03	20.55	9.66
BRU3300A	74.00	14	3	10.51	0.00	10.51	67.25	45.32	46.02	53.82	29.45	27.98	20.55	9.60
BRU3300A	74.00	18	1	4.33	0.00	4.33	67.02	46.00	71.15	28.43	28.86	28.84	23.78	3.34
BRU3300A	74.00	18	2	4.18	0.00	4.18	67.02	46.00	71.15	28.23	28.90	28.88	23.78	3.18
BRU3300A	74.00	18	3	4.02	0.00	4.02	67.02	46.00	71.15	28.07	28.76	28.74	23.78	3.03
COM2070A	29.00	19	1	10.98	0.00	10.98	44.70	38.77	41.74	36.43	33.89	35.70	11.83	10.75
COM2070A	29.00	19	2	10.85	0.00	10.85	44.70	38.77	41.74	36.26	33.78	35.56	11.83	10.60
COM2070A	29.00	19	3	11.73	0.00	11.73	44.70	38.77	41.74	37.53	34.20	36.71	11.83	11.68
COM2070A	29.00	19	4	11.95	0.00	11.95	44.70	38.77	41.74	38.00	33.80	37.23	11.83	11.94
COM2070A	29.00	19	5	11.90	0.00	11.90	44.70	38.77	41.74	38.07	33.40	37.29	11.83	11.89
COM2070A	29.00	19	6	11.78	0.00	11.78	44.70	38.77	41.74	37.85	33.45	37.02	11.83	11.73
FJI1930A	152.00	13	1	14.17	0.00	14.17	68.34	36.88	58.13	41.82	34.39	36.51	14.82	13.99
FJI1930A	152.00	13	2	13.24	0.00	13.24	68.34	36.88	58.13	40.26	33.49	36.02	14.82	12.89
FJI1930A	152.00	13	3	14.92	0.00	14.92	68.34	36.88	58.13	45.54	34.16	35.99	14.82	14.91
FJI1930A	152.00	13	4	13.95	0.00	13.95	68.34	36.88	58.13	47.89	34.03	32.45	14.82	13.72
FJI1930A	152.00	13	5	13.66	0.00	13.66	68.34	36.88	58.13	47.06	33.74	32.17	14.82	13.38
FJI1930A	152.00	13	6	14.17	0.00	14.17	68.34	36.88	58.13	42.41	33.91	36.29	14.82	13.98
ISR1100A	-13.00	21	1	8.23	0.00	8.23	74.41	42.97	43.00	50.53	25.27	27.89	17.96	7.32
ISR1100A	-13.00	21	2	9.61	0.00	9.61	74.41	42.97	43.00	46.68	26.96	29.17	17.96	8.73
ISR1100A	-13.00	21	3	8.62	0.00	8.62	74.41	42.97	43.00	40.75	26.77	27.94	17.96	7.73
ISR1100A	-13.00	21	4	9.64	0.00	9.64	74.41	42.97	43.00	44.38	27.41	28.91	17.96	8.77
ISR1100A	-13.00	21	5	9.95	0.00	9.95	74.41	42.97	43.00	48.04	27.36	29.36	17.96	9.09
LBR2440A	-31.00	19	1	8.72	0.00	8.72	58.27	43.87	51.92	35.23	30.43	28.58	20.45	7.78
LBR2440A	-31.00	19	2	9.41	0.00	9.41	58.27	43.87	51.92	35.27	31.77	29.89	20.45	8.48
LBR2440A	-31.00	19	3	11.24	0.00	11.24	58.27	43.87	51.92	35.38	38.51	34.52	20.45	10.34
LBR2440A	-31.00	19	4	10.97	0.00	10.97	58.27	43.87	51.92	34.59	40.68	37.07	20.45	10.07
LBR2440A	-31.00	19	5	10.74	0.00	10.74	58.27	43.87	51.92	34.63	37.35	35.98	20.45	9.84
LBR2440A	-31.00	19	6	9.10	0.00	9.10	58.27	43.87	51.92	34.32	30.85	31.72	20.45	8.17
MLD3060A	44.00	4	1	13.81	0.00	13.81	77.25	35.60	34.53	48.78	33.84	37.18	10.02	15.62
MLD3060A	44.00	4	2	12.02	0.00	12.02	77.25	35.60	34.53	47.02	31.66	32.59	10.02	12.67
MLD3060A	44.00	4	3	13.36	0.00	13.36	77.25	35.60	34.53	49.49	32.98	35.88	10.02	14.80
MLD3060A	44.00	4	4	12.52	0.00	12.52	77.25	35.60	34.53	49.64	31.69	34.03	10.02	13.43
MLD3060A	44.00	4	5	14.26	0.00	14.26	77.25	35.60	34.53	49.78	34.67	38.22	10.02	16.53
MLD3060A	44.00	4	6	13.23	0.00	13.23	77.25	35.60	34.53	51.11	34.06	33.63	10.02	14.58
MLD3060A	44.00	8	1	13.79	0.00	13.79	76.26	35.60	34.51	48.80	33.82	37.15	10.01	15.61
MLD3060A	44.00	8	2	11.99	0.00	11.99	76.26	35.60	34.51	47.03	31.63	32.53	10.01	12.63
MLD3060A	44.00	8	3	13.33	0.00	13.33	76.26	35.60	34.51	49.52	32.95	35.83	10.01	14.76
MLD3060A	44.00	8	4	12.48	0.00	12.48	76.26	35.60	34.51	49.67	31.64	33.95	10.01	13.37
MLD3060A	44.00	8	5	14.25	0.00	14.25	76.26	35.60	34.51	49.80	34.66	38.20	10.01	16.52
MLD3060A	44.00	8	6	13.19	0.00	13.19	76.26	35.60	34.51	51.13	34.01	33.54	10.01	14.51
MLT1470A	-13.00	20	1	10.06	0.00	10.06	62.78	39.49	57.73	35.90	28.88	40.85	17.30	9.23
NMB0250A	-19.00	21	1	11.45	0.00	11.45	56.39	32.47	61.40	44.44	29.47	34.82	10.36	11.73
NMB0250A	-19.00	21	2	12.32	0.00	12.32	56.39	32.47	61.40	44.03	31.10	36.06	10.36	12.95
NMB0250A	-19.00	21	3	10.72	0.00	10.72	56.39	32.47	61.40	41.79	29.21	33.20	10.36	10.79
NMB0250A	-19.00	21	4	12.71	0.00	12.71	56.39	32.47	61.40	41.76	33.05	37.03	10.36	13.53
NMB0250A	-19.00	21	5	11.28	0.00	11.28	56.39	32.47	61.40	37.57	34.34	35.18	10.36	11.51
NPL1220A	50.00	23	1	15.58	0.00	15.58	64.60	51.37	61.27	41.29	37.39	36.70	27.90	14.63

NPL1220A	50.00	23	2	14.84	0.00	14.84	64.60	51.37	61.27	40.23	37.47	36.04	27.90	13.88
NPL1220A	50.00	23	3	17.98	0.00	17.98	64.60	51.37	61.27	46.90	37.77	37.04	27.90	17.06
NPL1220A	50.00	23	4	16.52	0.00	16.52	64.60	51.37	61.27	45.66	36.09	35.59	27.90	15.59
NPL1220A	50.00	23	5	13.58	0.00	13.58	64.60	51.37	61.27	42.62	33.02	32.75	27.90	12.61
NPL1220A	50.00	23	6	16.78	0.00	16.78	64.60	51.37	61.27	48.25	35.67	35.41	27.90	15.85

Reference Situation OEPMs resulting from proposed changed to Step 1 assignments

	Beam	Beams affected	orbital position	channel	test point	Reference situation after the change to Step 1 assignment(s)	Reference situation before the change to Step 1 assignment(s)[1]
"Alternative Step 1"	BFA10700	HISPASA4	-30.00	35	1	-0.26	0.00
	CPV30100	HISPASA4		39	1	-0.31	-0.03
	CTI23700	HISPASA6	-30.00	39	1	-0.30	-0.02
	E 12900	MCO11600	-37.00	21	3	-6.05	-3.30
	HISPASA2	MCO11600		25	3	-3.62	-1.42
	CNR13000	MCO11600		29	3	-3.61	-1.40
	G 02700	MCO11600		33	3	-3.57	-1.41
	G UKDBS	MCO11600		37	3	-3.59	-1.44
	GNB30400	MRC20900	-25.00	33	5	-0.48	0.00
	IRL21100	RSTRSA12	36.00	26	13	-1.61	-1.22
	ISL04900	RSTRSA12		30	13	-1.53	-1.13
	LBR24400	RSTRSA12		34	13	-1.32	-0.91
	POR13300	RSTRSA12		38	13	-1.36	-0.96
	AZR13400	RSTRSD12	36.00	26	13	-1.61	-1.22
	SRL25900	RSTRSD12		30	13	-1.53	-1.13
		RSTRSD12		34	13	-1.32	-0.91
		RSTRSD12		38	13	-1.36	-0.96
Request of Malaysia	MLA22800	none					
Request of Romania	ROU13600	E2WA7DB1	29.00	15	3	-13.23	-12.98
		E2WA7DD1	29.00	3	7	-8.36	-7.99
				3	9	-9.17	-8.51
				7	7	-8.41	-8.03
				7	9	-9.21	-8.54
				11	7	-8.41	-8.03
				11	9	-9.22	-8.55
				15	7	-8.46	-8.07
				15	9	-9.25	-8.57
				19	7	-8.38	-7.99
				19	9	-9.19	-8.50
		E2WA7DF1	29.00	3	8	-8.25	-7.74
				7	8	-8.29	-7.77
				11	8	-8.29	-7.77
				15	8	-8.33	-7.80
				19	8	-8.25	-7.72
		E2WA7DG1	29.00	3	7	-16.09	-15.77
				7	7	-16.10	-15.77
				11	7	-16.10	-15.77
				15	7	-16.12	-15.78
				19	7	-16.10	-15.76
Request of Viet Nam	VTN33500	none					
Request of Republic of Korea	KOR11200 KOR11201 KO11201D	none					

Note: Where the value of the Reference situation before the change to the Step 1 assignment is shown as 0.00dB indicate that the Reference situation is greater than zero.

Request of Peoples Democratic Republic of Korea	KRE28600	none					

Comparison of Reference Situation OEPMs before and after proposed changes to Step 1 assignments

Adm	Beam_Id	Channel (after any change)	test point (after any change)	Reference situation after the change to Step 1 assignment(s)	Reference situation before the change to Step 1 assignment(s)
BFA	BFA10700	21	1	4.23	2.94
BFA	BFA10700	21	2	6.72	4.94
BFA	BFA10700	21	3	6.28	4.45
BFA	BFA10700	21	4	4.93	3.56
BFA	BFA10700	21	5	4.05	2.61
BFA	BFA10700	25	1	4.15	3.56
BFA	BFA10700	25	2	6.18	5.34
BFA	BFA10700	25	3	5.76	4.95
BFA	BFA10700	25	4	4.55	3.94
BFA	BFA10700	25	5	4.30	3.60
BFA	BFA10700	29	1	4.16	3.58
BFA	BFA10700	29	2	6.20	5.35
BFA	BFA10700	29	3	5.78	4.98
BFA	BFA10700	29	4	4.56	3.95
BFA	BFA10700	29	5	4.32	3.62
BFA	BFA10700	33	1	4.10	3.53
BFA	BFA10700	33	2	6.16	5.33
BFA	BFA10700	33	3	5.74	4.95
BFA	BFA10700	33	4	4.51	3.90
BFA	BFA10700	33	5	4.26	3.57
BFA	BFA10700	37	1	4.16	3.58
BFA	BFA10700	37	2	6.19	5.36
BFA	BFA10700	37	3	5.77	4.98
BFA	BFA10700	37	4	4.56	3.95
BFA	BFA10700	37	5	4.32	3.62
CPV	CPV30100	24	1	8.00	-8.86
CPV	CPV30100	24	2	9.00	-5.26
CPV	CPV30100	24	3	9.52	-7.18
CPV	CPV30100	24	4	8.74	-8.14
CPV	CPV30100	24	5	9.15	-8.14
CPV	CPV30100	24	6	9.88	-7.57
CPV	CPV30100	28	1	7.94	-8.86
CPV	CPV30100	28	2	8.93	-5.26
CPV	CPV30100	28	3	9.45	-7.18
CPV	CPV30100	28	4	8.67	-8.15
CPV	CPV30100	28	5	9.08	-7.57
CPV	CPV30100	28	6	9.81	-5.24
CPV	CPV30100	32	1	8.00	-8.76
CPV	CPV30100	32	2	8.99	-5.16
CPV	CPV30100	32	3	9.51	-7.09
CPV	CPV30100	32	4	8.73	-8.05
CPV	CPV30100	32	5	9.14	-7.47
CPV	CPV30100	32	6	9.87	-5.14
CPV	CPV30100	36	1	8.04	-8.76
CPV	CPV30100	36	2	9.03	-5.07
CPV	CPV30100	36	3	9.55	-6.99
CPV	CPV30100	36	4	8.77	-7.95
CPV	CPV30100	36	5	9.18	-7.38
CPV	CPV30100	36	6	9.91	-5.04
CPV	CPV30100	40	1	10.98	-5.77
CPV	CPV30100	40	2	11.49	-2.27
CPV	CPV30100	40	3	12.19	-4.10
CPV	CPV30100	40	4	11.42	-5.05
CPV	CPV30100	40	5	11.81	-4.49
CPV	CPV30100	40	6	12.62	-2.21
CTI	CTI23700	22	1	4.54	3.08
CTI	CTI23700	22	2	3.82	2.63
CTI	CTI23700	22	3	3.07	2.04

CTI	CTI23700	22	4	3.12	2.12
CTI	CTI23700	22	5	2.77	1.95
CTI	CTI23700	22	6	3.15	2.36
CTI	CTI23700	26	1	4.52	3.06
CTI	CTI23700	26	2	3.79	2.61
CTI	CTI23700	26	3	3.04	2.01
CTI	CTI23700	26	4	3.10	2.10
CTI	CTI23700	26	5	2.75	1.93
CTI	CTI23700	26	6	3.13	2.35
CTI	CTI23700	30	1	4.54	3.08
CTI	CTI23700	30	2	3.81	2.62
CTI	CTI23700	30	3	3.06	2.03
CTI	CTI23700	30	4	3.12	2.12
CTI	CTI23700	30	5	2.77	1.95
CTI	CTI23700	30	6	3.15	2.37
CTI	CTI23700	34	1	4.56	3.10
CTI	CTI23700	34	2	3.84	2.65
CTI	CTI23700	34	3	3.09	2.06
CTI	CTI23700	34	4	3.15	2.15
CTI	CTI23700	34	5	2.80	1.98
CTI	CTI23700	34	6	3.18	2.39
CTI	CTI23700	38	1	4.53	3.08
CTI	CTI23700	38	2	3.80	2.62
CTI	CTI23700	38	3	3.05	2.03
CTI	CTI23700	38	4	3.11	2.11
CTI	CTI23700	38	5	2.76	1.94
CTI	CTI23700	38	6	3.14	2.36
E	CNR13000	23	1	8.23	8.59
E	CNR13000	23	2	8.37	8.63
E	CNR13000	23	3	8.42	8.56
E	CNR13000	23	4	8.79	9.01
E	CNR13000	23	5	9.06	9.24
E	CNR13000	23	6	8.36	8.72
E	CNR13000	27	1	8.22	8.58
E	CNR13000	27	2	8.37	8.62
E	CNR13000	27	3	8.42	8.55
E	CNR13000	27	4	8.78	9.01
E	CNR13000	27	5	9.05	9.23
E	CNR13000	27	6	8.36	8.71
E	CNR13000	31	1	8.23	8.60
E	CNR13000	31	2	8.37	8.64
E	CNR13000	31	3	8.43	8.56
E	CNR13000	31	4	8.79	9.02
E	CNR13000	31	5	9.06	9.24
E	CNR13000	31	6	8.37	8.72
E	CNR13000	35	1	8.24	8.61
E	CNR13000	35	2	8.39	8.66
E	CNR13000	35	3	8.44	8.58
E	CNR13000	35	4	8.80	9.03
E	CNR13000	35	5	9.07	9.26
E	CNR13000	35	6	8.38	8.74
E	CNR13000	39	1	8.14	8.54
E	CNR13000	39	2	8.22	8.54
E	CNR13000	39	3	8.24	8.45
E	CNR13000	39	4	8.66	8.94
E	CNR13000	39	5	8.95	9.17
E	CNR13000	39	6	8.29	8.67
E	E 12900	23	1	5.72	4.63
E	E 12900	23	2	6.12	4.79
E	E 12900	23	3	7.67	6.11
E	E 12900	23	4	7.56	6.10
E	E 12900	23	5	8.45	6.86
E	E 12900	23	6	6.79	5.93
E	E 12900	27	1	6.37	4.68
E	E 12900	27	2	6.32	4.36

E	E 12900	27	3	7.64	5.27
E	E 12900	27	4	7.53	5.27
E	E 12900	27	5	8.44	5.91
E	E 12900	27	6	6.78	5.13
E	E 12900	31	1	6.34	4.65
E	E 12900	31	2	6.28	4.33
E	E 12900	31	3	7.60	5.25
E	E 12900	31	4	7.49	5.25
E	E 12900	31	5	8.41	5.89
E	E 12900	31	6	6.76	5.11
E	E 12900	35	1	6.36	4.68
E	E 12900	35	2	6.30	4.36
E	E 12900	35	3	7.61	5.27
E	E 12900	35	4	7.51	5.27
E	E 12900	35	5	8.42	5.91
E	E 12900	35	6	6.80	5.14
E	E 12900	39	1	6.39	4.71
E	E 12900	39	2	6.37	4.40
E	E 12900	39	3	7.30	5.18
E	E 12900	39	4	7.34	5.23
E	E 12900	39	5	8.26	5.86
E	E 12900	39	6	6.81	5.16
E	HISPASA2	1	1	2.77	-3.50
E	HISPASA2	1	2	2.91	-3.47
E	HISPASA2	1	3	2.67	-3.59
E	HISPASA2	1	4	1.86	-3.81
E	HISPASA2	1	5	2.18	-3.64
E	HISPASA2	1	6	2.10	-3.67
E	HISPASA2	1	7	2.79	-3.48
E	HISPASA2	1	8	2.86	-3.48
E	HISPASA2	1	9	2.82	-3.49
E	HISPASA2	3	1	3.14	-11.56
E	HISPASA2	3	2	3.32	-23.37
E	HISPASA2	3	3	2.92	-23.70
E	HISPASA2	3	4	0.69	-15.55
E	HISPASA2	3	5	2.05	-1.85
E	HISPASA2	3	6	2.08	-2.17
E	HISPASA2	3	7	3.06	-9.58
E	HISPASA2	3	8	3.19	-15.53
E	HISPASA2	3	9	3.19	-13.06
E	HISPASA2	5	1	2.01	-3.66
E	HISPASA2	5	2	2.12	-3.60
E	HISPASA2	5	3	1.68	-3.81
E	HISPASA2	5	4	-0.38	-4.34
E	HISPASA2	5	5	1.03	-3.95
E	HISPASA2	5	6	1.25	-3.89
E	HISPASA2	5	7	1.98	-3.64
E	HISPASA2	5	8	2.04	-3.59
E	HISPASA2	5	9	2.05	-3.64
E	HISPASA2	7	1	3.13	-11.65
E	HISPASA2	7	2	3.32	-23.38
E	HISPASA2	7	3	2.91	-23.70
E	HISPASA2	7	4	0.65	-15.55
E	HISPASA2	7	5	2.04	-1.88
E	HISPASA2	7	6	2.06	-2.19
E	HISPASA2	7	7	3.06	-9.59
E	HISPASA2	7	8	3.19	-15.60
E	HISPASA2	7	9	3.19	-13.16
E	HISPASA2	9	1	2.01	-3.66
E	HISPASA2	9	2	2.12	-3.61
E	HISPASA2	9	3	1.67	-3.82
E	HISPASA2	9	4	-0.42	-4.36
E	HISPASA2	9	5	1.01	-3.96
E	HISPASA2	9	6	1.24	-3.90
E	HISPASA2	9	7	1.97	-3.64

E	HISPASA2	9	8	2.04	-3.59
E	HISPASA2	9	9	2.05	-3.64
E	HISPASA2	11	1	3.13	-11.65
E	HISPASA2	11	2	3.32	-23.47
E	HISPASA2	11	3	2.91	-23.80
E	HISPASA2	11	4	0.65	-15.65
E	HISPASA2	11	5	2.03	-1.90
E	HISPASA2	11	6	2.06	-2.22
E	HISPASA2	11	7	3.05	-9.67
E	HISPASA2	11	8	3.18	-15.63
E	HISPASA2	11	9	3.18	-13.16
E	HISPASA2	13	1	2.00	-3.67
E	HISPASA2	13	2	2.11	-3.61
E	HISPASA2	13	3	1.66	-3.82
E	HISPASA2	13	4	-0.43	-4.36
E	HISPASA2	13	5	0.99	-3.97
E	HISPASA2	13	6	1.22	-3.90
E	HISPASA2	13	7	1.97	-3.64
E	HISPASA2	13	8	2.03	-3.59
E	HISPASA2	13	9	2.04	-3.64
E	HISPASA2	15	1	3.12	-11.75
E	HISPASA2	15	2	3.31	-23.57
E	HISPASA2	15	3	2.90	-23.90
E	HISPASA2	15	4	0.62	-15.74
E	HISPASA2	15	5	2.02	-1.95
E	HISPASA2	15	6	2.04	-2.27
E	HISPASA2	15	7	3.04	-9.76
E	HISPASA2	15	8	3.18	-15.73
E	HISPASA2	15	9	3.18	-13.26
E	HISPASA2	17	1	1.99	-3.67
E	HISPASA2	17	2	2.10	-3.61
E	HISPASA2	17	3	1.65	-3.82
E	HISPASA2	17	4	-0.47	-4.38
E	HISPASA2	17	5	0.98	-3.97
E	HISPASA2	17	6	1.20	-3.91
E	HISPASA2	17	7	1.95	-3.65
E	HISPASA2	17	8	2.02	-3.59
E	HISPASA2	17	9	2.03	-3.65
E	HISPASA2	19	1	3.03	-11.75
E	HISPASA2	19	2	3.25	-23.57
E	HISPASA2	19	3	2.82	-23.90
E	HISPASA2	19	4	0.58	-15.74
E	HISPASA2	19	5	1.97	-1.94
E	HISPASA2	19	6	1.97	-2.27
E	HISPASA2	19	7	2.97	-9.77
E	HISPASA2	19	8	3.11	-15.73
E	HISPASA2	19	9	3.09	-13.26
G	G 02700	4	1	5.84	4.53
G	G 02700	4	2	6.16	4.78
G	G 02700	4	3	6.52	4.87
G	G 02700	4	4	7.46	5.02
G	G 02700	4	5	10.67	6.58
G	G 02700	4	6	10.21	6.55
G	G 02700	8	1	5.92	4.59
G	G 02700	8	2	6.23	4.83
G	G 02700	8	3	6.59	4.93
G	G 02700	8	4	7.53	5.08
G	G 02700	8	5	10.72	6.62
G	G 02700	8	6	10.28	6.60
G	G 02700	12	1	5.90	4.56
G	G 02700	12	2	6.22	4.81
G	G 02700	12	3	6.55	4.89
G	G 02700	12	4	7.52	5.05
G	G 02700	12	5	10.71	6.60
G	G 02700	12	6	10.18	6.55

G	G 02700	16	1	5.98	4.62
G	G 02700	16	2	6.31	4.87
G	G 02700	16	3	6.63	4.94
G	G 02700	16	4	7.60	5.10
G	G 02700	16	5	10.77	6.65
G	G 02700	16	6	10.25	6.60
G	G 02700	20	1	7.95	4.72
G	G 02700	20	2	8.28	5.03
G	G 02700	20	3	8.46	4.88
G	G 02700	20	4	9.45	5.14
G	G 02700	20	5	10.30	5.52
G	G 02700	20	6	9.25	5.27
G	G UKDBS	22	1	7.03	4.45
G	G UKDBS	22	2	7.87	4.93
G	G UKDBS	22	3	7.52	4.51
G	G UKDBS	22	4	8.98	5.00
G	G UKDBS	22	5	9.43	5.00
G	G UKDBS	22	6	8.13	4.38
G	G UKDBS	26	1	8.35	4.54
G	G UKDBS	26	2	8.41	4.95
G	G UKDBS	26	3	8.65	4.59
G	G UKDBS	26	4	8.99	4.98
G	G UKDBS	26	5	9.41	4.98
G	G UKDBS	26	6	8.13	4.37
G	G UKDBS	30	1	8.40	4.56
G	G UKDBS	30	2	8.42	4.95
G	G UKDBS	30	3	8.71	4.61
G	G UKDBS	30	4	8.98	4.97
G	G UKDBS	30	5	9.41	4.97
G	G UKDBS	30	6	8.17	4.38
G	G UKDBS	34	1	8.62	4.64
G	G UKDBS	34	2	8.43	4.96
G	G UKDBS	34	3	9.06	4.73
G	G UKDBS	34	4	8.97	4.97
G	G UKDBS	34	5	9.45	4.98
G	G UKDBS	34	6	8.59	4.54
G	G UKDBS	38	1	8.30	4.44
G	G UKDBS	38	2	8.20	4.77
G	G UKDBS	38	3	8.66	4.53
G	G UKDBS	38	4	8.79	4.82
G	G UKDBS	38	5	9.31	4.91
G	G UKDBS	38	6	7.90	4.25
GNB	GNB30400	2	1	3.24	2.30
GNB	GNB30400	2	2	4.79	3.53
GNB	GNB30400	2	3	3.83	2.74
GNB	GNB30400	2	4	4.31	3.04
GNB	GNB30400	6	1	3.32	2.36
GNB	GNB30400	6	2	4.86	3.59
GNB	GNB30400	6	3	3.90	2.79
GNB	GNB30400	6	4	4.38	3.09
GNB	GNB30400	10	1	3.32	2.36
GNB	GNB30400	10	2	4.86	3.58
GNB	GNB30400	10	3	3.90	2.79
GNB	GNB30400	10	4	4.38	3.09
GNB	GNB30400	14	1	3.40	2.42
GNB	GNB30400	14	2	4.93	3.63
GNB	GNB30400	14	3	3.97	2.84
GNB	GNB30400	14	4	4.45	3.14
GNB	GNB30400	18	1	3.20	2.41
GNB	GNB30400	18	2	4.61	3.62
GNB	GNB30400	18	3	3.71	2.83
GNB	GNB30400	18	4	4.12	3.12
IRL	IRL21100	2	1	10.65	6.89
IRL	IRL21100	2	2	9.95	6.73
IRL	IRL21100	2	3	11.56	7.26

IRL	IRL21100	2	4	10.24	6.63
IRL	IRL21100	2	5	8.84	6.14
IRL	IRL21100	2	6	9.80	6.48
IRL	IRL21100	6	1	10.74	6.95
IRL	IRL21100	6	2	10.03	6.79
IRL	IRL21100	6	3	11.64	7.31
IRL	IRL21100	6	4	10.33	6.69
IRL	IRL21100	6	5	8.93	6.20
IRL	IRL21100	6	6	9.88	6.54
IRL	IRL21100	10	1	10.82	7.00
IRL	IRL21100	10	2	10.11	6.84
IRL	IRL21100	10	3	11.71	7.36
IRL	IRL21100	10	4	10.41	6.74
IRL	IRL21100	10	5	9.01	6.25
IRL	IRL21100	10	6	9.97	6.59
IRL	IRL21100	14	1	10.67	6.92
IRL	IRL21100	14	2	10.03	6.78
IRL	IRL21100	14	3	11.64	7.33
IRL	IRL21100	14	4	10.39	6.71
IRL	IRL21100	14	5	8.96	6.21
IRL	IRL21100	14	6	9.83	6.51
IRL	IRL21100	18	1	11.38	7.00
IRL	IRL21100	18	2	10.62	6.86
IRL	IRL21100	18	3	12.56	7.40
IRL	IRL21100	18	4	11.11	6.79
IRL	IRL21100	18	5	9.49	6.30
IRL	IRL21100	18	6	10.42	6.60
ISL	ISL04900	21	1	8.00	0.61
ISL	ISL04900	21	2	8.53	0.72
ISL	ISL04900	21	3	8.27	0.67
ISL	ISL04900	21	4	8.12	0.65
ISL	ISL04900	21	5	7.10	0.39
ISL	ISL04900	21	6	8.46	0.72
ISL	ISL04900	25	1	10.48	0.97
ISL	ISL04900	25	2	11.09	1.05
ISL	ISL04900	25	3	10.80	1.03
ISL	ISL04900	25	4	10.61	1.00
ISL	ISL04900	25	5	9.58	0.84
ISL	ISL04900	25	6	11.02	1.06
ISL	ISL04900	29	1	10.48	0.97
ISL	ISL04900	29	2	11.09	1.05
ISL	ISL04900	29	3	10.80	1.03
ISL	ISL04900	29	4	10.61	1.00
ISL	ISL04900	29	5	9.58	0.84
ISL	ISL04900	29	6	11.02	1.06
ISL	ISL04900	33	1	10.52	0.98
ISL	ISL04900	33	2	11.13	1.06
ISL	ISL04900	33	3	10.84	1.03
ISL	ISL04900	33	4	10.65	1.00
ISL	ISL04900	33	5	9.62	0.84
ISL	ISL04900	33	6	11.06	1.06
ISL	ISL04900	37	1	10.52	0.97
ISL	ISL04900	37	2	11.12	1.06
ISL	ISL04900	37	3	10.83	1.03
ISL	ISL04900	37	4	10.65	1.00
ISL	ISL04900	37	5	9.62	0.84
ISL	ISL04900	37	6	11.06	1.06
LBR	LBR24400	3	1	6.44	5.57
LBR	LBR24400	3	2	7.51	5.84
LBR	LBR24400	3	3	10.56	6.72
LBR	LBR24400	3	4	11.61	6.43
LBR	LBR24400	3	5	11.29	6.34
LBR	LBR24400	3	6	8.95	5.47
LBR	LBR24400	7	1	6.44	5.60
LBR	LBR24400	7	2	7.51	5.87

LBR	LBR24400	7	3	10.57	6.77
LBR	LBR24400	7	4	11.61	6.47
LBR	LBR24400	7	5	11.29	6.38
LBR	LBR24400	7	6	8.95	5.51
LBR	LBR24400	11	1	6.44	5.60
LBR	LBR24400	11	2	7.51	5.87
LBR	LBR24400	11	3	10.56	6.76
LBR	LBR24400	11	4	11.61	6.47
LBR	LBR24400	11	5	11.28	6.38
LBR	LBR24400	11	6	8.95	5.51
LBR	LBR24400	15	1	6.45	5.63
LBR	LBR24400	15	2	7.52	5.90
LBR	LBR24400	15	3	10.57	6.80
LBR	LBR24400	15	4	11.62	6.51
LBR	LBR24400	15	5	11.30	6.42
LBR	LBR24400	15	6	8.96	5.54
LBR	LBR2440A	19	1	8.72	5.63
LBR	LBR2440A	19	2	9.41	5.90
LBR	LBR2440A	19	3	11.24	6.80
LBR	LBR2440A	19	4	10.97	6.51
LBR	LBR2440A	19	5	10.74	6.42
LBR	LBR2440A	19	6	9.10	5.54
POR	AZR13400	21	1	6.71	-13.13
POR	AZR13400	21	2	6.22	-4.51
POR	AZR13400	21	3	6.57	-9.65
POR	AZR13400	21	4	6.55	-7.99
POR	AZR13400	21	5	2.40	-25.47
POR	AZR13400	25	1	6.44	-13.03
POR	AZR13400	25	2	5.89	-4.41
POR	AZR13400	25	3	6.29	-9.55
POR	AZR13400	25	4	6.25	-7.89
POR	AZR13400	25	5	2.24	-25.37
POR	AZR13400	29	1	6.42	-13.03
POR	AZR13400	29	2	5.86	-4.42
POR	AZR13400	29	3	6.27	-9.55
POR	AZR13400	29	4	6.23	-7.89
POR	AZR13400	29	5	2.18	-25.37
POR	AZR13400	33	1	6.44	-12.93
POR	AZR13400	33	2	5.88	-4.34
POR	AZR13400	33	3	6.28	-9.46
POR	AZR13400	33	4	6.25	-7.80
POR	AZR13400	33	5	2.23	-25.27
POR	AZR13400	37	1	9.04	-12.91
POR	AZR13400	37	2	8.07	-4.16
POR	AZR13400	37	3	8.77	-9.40
POR	AZR13400	37	4	8.71	-7.72
POR	AZR13400	37	5	2.94	-25.27
POR	POR13300	21	1	5.19	-24.66
POR	POR13300	21	2	3.48	-25.63
POR	POR13300	21	3	3.74	-24.91
POR	POR13300	21	4	1.41	-26.42
POR	POR13300	25	1	5.54	-24.66
POR	POR13300	25	2	3.87	-25.63
POR	POR13300	25	3	3.78	-24.91
POR	POR13300	25	4	1.40	-26.42
POR	POR13300	29	1	5.56	-24.56
POR	POR13300	29	2	3.90	-25.53
POR	POR13300	29	3	3.79	-24.81
POR	POR13300	29	4	1.40	-26.32
POR	POR13300	33	1	5.62	-24.46
POR	POR13300	33	2	3.97	-25.43
POR	POR13300	33	3	3.87	-24.71
POR	POR13300	33	4	1.49	-26.22
POR	POR13300	37	1	5.52	-24.46

POR	POR13300	37	2	3.85	-25.43
POR	POR13300	37	3	3.73	-24.71
POR	POR13300	37	4	1.34	-26.22
SRL	SRL25900	23	1	9.13	6.81
SRL	SRL25900	23	2	8.68	6.19
SRL	SRL25900	23	3	6.98	6.17
SRL	SRL25900	23	4	7.07	5.65
SRL	SRL25900	27	1	9.17	6.84
SRL	SRL25900	27	2	8.74	6.24
SRL	SRL25900	27	3	7.02	6.20
SRL	SRL25900	27	4	7.13	5.70
SRL	SRL25900	31	1	9.24	6.88
SRL	SRL25900	31	2	8.79	6.26
SRL	SRL25900	31	3	7.09	6.24
SRL	SRL25900	31	4	7.18	5.73
SRL	SRL25900	35	1	9.16	6.82
SRL	SRL25900	35	2	8.71	6.20
SRL	SRL25900	35	3	7.00	6.18
SRL	SRL25900	35	4	7.09	5.66
SRL	SRL25900	39	1	9.25	6.87
SRL	SRL25900	39	2	8.80	6.25
SRL	SRL25900	39	3	7.09	6.23
SRL	SRL25900	39	4	7.18	5.72
KOR	KO11201D	2	1	5.59	5.59
KOR	KO11201D	2	2	5.47	5.47
KOR	KO11201D	2	3	5.38	5.38
KOR	KO11201D	2	4	8.44	8.44
KOR	KO11201D	2	5	7.71	7.71
KOR	KO11201D	2	6	7.75	7.75
KOR	KO11201D	4	1	4.80	4.80
KOR	KO11201D	4	2	4.98	4.98
KOR	KO11201D	4	3	4.94	4.94
KOR	KO11201D	4	4	7.80	7.80
KOR	KO11201D	4	5	6.84	6.84
KOR	KO11201D	4	6	6.86	6.86
KOR	KO11201D	6	1	5.45	5.45
KOR	KO11201D	6	2	5.29	5.29
KOR	KO11201D	6	3	5.19	5.19
KOR	KO11201D	6	4	8.20	8.20
KOR	KO11201D	6	5	7.45	7.45
KOR	KO11201D	6	6	7.54	7.54
KOR	KO11201D	8	1	9.06	9.06
KOR	KO11201D	8	2	9.46	9.46
KOR	KO11201D	8	3	9.11	9.11
KOR	KO11201D	8	4	10.86	10.86
KOR	KO11201D	8	5	9.22	9.22
KOR	KO11201D	8	6	10.01	10.01
KOR	KO11201D	10	1	10.59	10.59
KOR	KO11201D	10	2	10.01	10.01
KOR	KO11201D	10	3	9.73	9.73
KOR	KO11201D	10	4	11.74	11.74
KOR	KO11201D	10	5	10.34	10.34
KOR	KO11201D	10	6	11.57	11.57
KOR	KO11201D	12	1	7.92	7.92
KOR	KO11201D	12	2	5.95	5.95
KOR	KO11201D	12	3	6.07	6.07
KOR	KO11201D	12	4	9.98	9.98
KOR	KO11201D	12	5	9.05	9.05
KOR	KO11201D	12	6	9.75	9.75
KOR	KOR11200	2	1	-0.75	-0.75
KOR	KOR11200	2	2	-0.80	-0.80
KOR	KOR11200	2	3	-1.61	-1.61
KOR	KOR11200	2	4	-0.28	-0.28
KOR	KOR11200	2	5	-1.19	-1.19
KOR	KOR11200	2	6	-0.42	-0.42

KOR	KOR11200	4	1	-0.78	-0.78
KOR	KOR11200	4	2	-0.89	-0.89
KOR	KOR11200	4	3	-1.73	-1.73
KOR	KOR11200	4	4	-0.41	-0.41
KOR	KOR11200	4	5	-1.32	-1.32
KOR	KOR11200	4	6	-0.51	-0.51
KOR	KOR11200	6	1	-1.09	-1.09
KOR	KOR11200	6	2	-1.16	-1.16
KOR	KOR11200	6	3	-1.98	-1.98
KOR	KOR11200	6	4	-0.63	-0.63
KOR	KOR11200	6	5	-1.56	-1.56
KOR	KOR11200	6	6	-0.77	-0.77
KOR	KOR11200	8	1	-0.66	-0.66
KOR	KOR11200	8	2	-0.78	-0.78
KOR	KOR11200	8	3	-1.62	-1.62
KOR	KOR11200	8	4	-0.33	-0.33
KOR	KOR11200	8	5	-1.25	-1.25
KOR	KOR11200	8	6	-0.43	-0.43
KOR	KOR11200	10	1	-1.01	-1.01
KOR	KOR11200	10	2	-1.09	-1.09
KOR	KOR11200	10	3	-1.92	-1.92
KOR	KOR11200	10	4	-0.60	-0.60
KOR	KOR11200	10	5	-1.53	-1.53
KOR	KOR11200	10	6	-0.72	-0.72
KOR	KOR11200	12	1	-0.71	-0.71
KOR	KOR11200	12	2	-0.87	-0.87
KOR	KOR11200	12	3	-1.70	-1.70
KOR	KOR11200	12	4	-0.38	-0.38
KOR	KOR11200	12	5	-1.29	-1.29
KOR	KOR11200	12	6	-0.47	-0.47
KOR	KOR11201	2	1	5.59	5.59
KOR	KOR11201	2	2	5.47	5.47
KOR	KOR11201	2	3	5.38	5.38
KOR	KOR11201	2	4	8.44	8.44
KOR	KOR11201	2	5	7.71	7.71
KOR	KOR11201	2	6	7.75	7.75
KOR	KOR11201	4	1	4.80	4.80
KOR	KOR11201	4	2	4.98	4.98
KOR	KOR11201	4	3	4.94	4.94
KOR	KOR11201	4	4	7.80	7.80
KOR	KOR11201	4	5	6.84	6.84
KOR	KOR11201	4	6	6.86	6.86
KOR	KOR11201	6	1	5.45	5.45
KOR	KOR11201	6	2	5.29	5.29
KOR	KOR11201	6	3	5.19	5.19
KOR	KOR11201	6	4	8.20	8.20
KOR	KOR11201	6	5	7.45	7.45
KOR	KOR11201	6	6	7.54	7.54
KOR	KOR11201	8	1	9.06	9.06
KOR	KOR11201	8	2	9.46	9.46
KOR	KOR11201	8	3	9.11	9.11
KOR	KOR11201	8	4	10.86	10.86
KOR	KOR11201	8	5	9.22	9.22
KOR	KOR11201	8	6	10.01	10.01
KOR	KOR11201	10	1	10.59	10.59
KOR	KOR11201	10	2	10.01	10.01
KOR	KOR11201	10	3	9.73	9.73
KOR	KOR11201	10	4	11.74	11.74
KOR	KOR11201	10	5	10.34	10.34
KOR	KOR11201	10	6	11.57	11.57
KOR	KOR11201	12	1	7.92	7.92
KOR	KOR11201	12	2	5.95	5.95
KOR	KOR11201	12	3	6.07	6.07
KOR	KOR11201	12	4	9.98	9.98
KOR	KOR11201	12	5	9.05	9.05
KOR	KOR11201	12	6	9.75	9.75

KRE	KRE28600	14	1	0.49	0.09
KRE	KRE28600	14	2	0.41	-0.75
KRE	KRE28600	14	3	0.14	-0.71
KRE	KRE28600	14	4	-0.72	0.50
KRE	KRE28600	14	5	-0.69	0.38
KRE	KRE28600	14	6	0.18	0.05
KRE	KRE28600	14	7	0.19	n/a
KRE	KRE28600	14	8	0.06	n/a
KRE	KRE28600	14	9	-2.67	n/a
KRE	KRE28600	16	1	3.52	3.19
KRE	KRE28600	16	2	3.49	2.41
KRE	KRE28600	16	3	3.24	2.46
KRE	KRE28600	16	4	2.44	3.53
KRE	KRE28600	16	5	2.48	3.45
KRE	KRE28600	16	6	3.31	3.08
KRE	KRE28600	16	7	3.22	n/a
KRE	KRE28600	16	8	3.05	n/a
KRE	KRE28600	16	9	0.49	n/a
KRE	KRE28600	18	1	19.58	20.85
KRE	KRE28600	18	2	20.63	19.38
KRE	KRE28600	18	3	20.86	18.85
KRE	KRE28600	18	4	19.39	19.60
KRE	KRE28600	18	5	18.84	20.58
KRE	KRE28600	18	6	18.79	17.91
KRE	KRE28600	18	7	18.21	n/a
KRE	KRE28600	18	8	18.20	n/a
KRE	KRE28600	18	9	19.01	n/a
KRE	KRE28600	20	1	20.18	22.33
KRE	KRE28600	20	2	21.41	22.73
KRE	KRE28600	20	3	22.36	22.35
KRE	KRE28600	20	4	22.74	20.26
KRE	KRE28600	20	5	22.35	21.32
KRE	KRE28600	20	6	21.69	19.42
KRE	KRE28600	20	7	19.70	n/a
KRE	KRE28600	20	8	18.83	n/a
KRE	KRE28600	20	9	21.58	n/a
KRE	KRE28600	22	1	18.16	18.40
KRE	KRE28600	22	2	19.06	13.94
KRE	KRE28600	22	3	18.40	13.11
KRE	KRE28600	22	4	13.97	18.13
KRE	KRE28600	22	5	13.11	19.07
KRE	KRE28600	22	6	14.40	15.43
KRE	KRE28600	22	7	15.76	n/a
KRE	KRE28600	22	8	16.67	n/a
KRE	KRE28600	22	9	14.50	n/a
MLA	MLA2280A	10	1	8.13	n/a
MLA	MLA2280A	10	2	7.37	n/a
MLA	MLA2280A	10	3	8.06	n/a
MLA	MLA2280A	10	4	8.68	n/a
MLA	MLA2280A	10	5	8.71	n/a
ROU	ROU13600	3	1	3.41	-9.35
ROU	ROU13600	3	2	3.01	-7.97
ROU	ROU13600	3	3	3.72	-7.71
ROU	ROU13600	3	4	3.76	-7.76
ROU	ROU13600	3	5	4.21	-8.33
ROU	ROU13600	3	6	4.94	-9.74
ROU	ROU13600	7	1	3.44	-9.30
ROU	ROU13600	7	2	3.03	-7.95
ROU	ROU13600	7	3	3.73	-7.70
ROU	ROU13600	7	4	3.78	-7.74
ROU	ROU13600	7	5	4.24	-8.30
ROU	ROU13600	7	6	4.97	-9.70
ROU	ROU13600	11	1	3.43	-9.31
ROU	ROU13600	11	2	2.99	-7.95
ROU	ROU13600	11	3	3.69	-7.70

ROU	ROU13600	11	4	3.73	-7.74
ROU	ROU13600	11	5	4.21	-8.30
ROU	ROU13600	11	6	4.96	-9.70
ROU	ROU13600	15	1	3.50	-9.26
ROU	ROU13600	15	2	3.05	-7.92
ROU	ROU13600	15	3	3.74	-7.68
ROU	ROU13600	15	4	3.79	-7.72
ROU	ROU13600	15	5	4.27	-8.28
ROU	ROU13600	15	6	5.02	-9.65
ROU	ROU13600	19	1	3.49	-9.26
ROU	ROU13600	19	2	3.02	-7.92
ROU	ROU13600	19	3	3.70	-7.68
ROU	ROU13600	19	4	3.75	-7.72
ROU	ROU13600	19	5	4.25	-8.28
ROU	ROU13600	19	6	5.01	-9.65
VTN	VTN32500	3	1	6.64	6.23
VTN	VTN32500	3	2	6.97	6.67
VTN	VTN32500	3	3	6.60	6.13
VTN	VTN32500	3	4	3.22	5.32
VTN	VTN32500	3	5	5.22	5.80
VTN	VTN32500	3	6	6.29	6.35
VTN	VTN32500	7	1	6.66	6.29
VTN	VTN32500	7	2	6.97	6.69
VTN	VTN32500	7	3	6.59	6.15
VTN	VTN32500	7	4	3.19	5.34
VTN	VTN32500	7	5	5.20	5.82
VTN	VTN32500	7	6	6.29	6.37
VTN	VTN32500	11	1	7.96	7.15
VTN	VTN32500	11	2	9.76	9.42
VTN	VTN32500	11	3	9.45	8.99
VTN	VTN32500	11	4	6.46	8.48
VTN	VTN32500	11	5	8.19	8.80
VTN	VTN32500	11	6	7.43	7.59
VTN	VTN32500	15	1	7.26	6.21
VTN	VTN32500	15	2	10.95	10.68
VTN	VTN32500	15	3	11.19	11.01
VTN	VTN32500	15	4	5.63	8.34
VTN	VTN32500	15	5	8.61	9.39
VTN	VTN32500	15	6	8.75	8.95

Overall Co-channel Single Entry C/I listings

Step 2 entries causing Overall Co-channel Single Entry C/I below 28 dB to Step 1 entries

Beam					Interfering Beam			Single Entry C/I (dB)		
ADM	BEAM	Orb_Pos	Ch	TP	ADM1	BEAM	Orb_Pos1	Overall	Feeder-link	Down-link
SOM	SOM31200	23.00	3	1	MKD	MKD14800	23.00	27.92	27.92	
SOM	SOM31200	23.00	7	1	MKD	MKD14800	23.00	27.92	27.92	
SOM	SOM31200	23.00	11	1	MKD	MKD14800	23.00	27.92	27.92	
SOM	SOM31200	23.00	15	1	MKD	MKD14800	23.00	27.92	27.92	
SOM	SOM31200	23.00	19	1	MKD	MKD14800	23.00	27.92	27.92	
F	F2_A2722	-7.00	2	2	D	D 08700	-19.00	27.47	56.34	27.47
F	F2_A2722	-7.00	6	2	D	D 08700	-19.00	27.37	56.34	27.37
F	F2_A2722	-7.00	10	2	D	D 08700	-19.00	27.37	56.34	27.37
F	F2_A2722	-7.00	14	2	D	D 08700	-19.00	26.97	56.34	26.97
F	F2_A2722	-7.00	18	2	D	D 08700	-19.00	26.47	56.34	26.47
F	F2aA2722	-7.00	2	2	D	D 08700	-19.00	27.44	48.94	27.47
F	F2aA2722	-7.00	6	2	D	D 08700	-19.00	27.34	48.94	27.37
F	F2aA2722	-7.00	10	2	D	D 08700	-19.00	27.34	48.94	27.37
F	F2aA2722	-7.00	14	2	D	D 08700	-19.00	26.95	48.94	26.97
F	F2aA2722	-7.00	18	2	D	D 08700	-19.00	26.45	48.94	26.47
F	F2aA2762	-7.00	2	2	D	D 08700	-19.00	27.47		27.47
F	F2aA2762	-7.00	6	2	D	D 08700	-19.00	27.37		27.37
F	F2aA2762	-7.00	10	2	D	D 08700	-19.00	27.37		27.37
F	F2aA2762	-7.00	14	2	D	D 08700	-19.00	26.97		26.97
F	F2aA2762	-7.00	18	2	D	D 08700	-19.00	26.47		26.47
F	F3_A2762	-7.00	2	2	D	D 08700	-19.00	27.12		27.12
F	F3_A2762	-7.00	6	2	D	D 08700	-19.00	27.02		27.02
F	F3_A2762	-7.00	10	2	D	D 08700	-19.00	27.02		27.02
F	F3_A2762	-7.00	14	2	D	D 08700	-19.00	26.92		26.92
F	F3_A2762	-7.00	18	2	D	D 08700	-19.00	26.92		26.92
F	F3_A2722	-7.00	2	2	D	D 08700	-19.00	27.09	48.94	27.12
F	F3_A2722	-7.00	6	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_A2722	-7.00	10	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_A2722	-7.00	14	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_A2722	-7.00	18	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_A3362	-7.00	2	2	D	D 08700	-19.00	27.12		27.12
F	F3_A3362	-7.00	6	2	D	D 08700	-19.00	27.02		27.02
F	F3_A3362	-7.00	10	2	D	D 08700	-19.00	27.02		27.02
F	F3_A3362	-7.00	14	2	D	D 08700	-19.00	26.92		26.92
F	F3_A3362	-7.00	18	2	D	D 08700	-19.00	26.92		26.92
F	F3_A3322	-7.00	2	2	D	D 08700	-19.00	27.09	48.94	27.12
F	F3_A3322	-7.00	6	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_A3322	-7.00	10	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_A3322	-7.00	14	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_A3322	-7.00	18	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_D2762	-7.00	2	2	D	D 08700	-19.00	27.12		27.12
F	F3_D2762	-7.00	6	2	D	D 08700	-19.00	27.02		27.02
F	F3_D2762	-7.00	10	2	D	D 08700	-19.00	27.02		27.02
F	F3_D2762	-7.00	14	2	D	D 08700	-19.00	26.92		26.92
F	F3_D2762	-7.00	18	2	D	D 08700	-19.00	26.92		26.92
F	F3_D2722	-7.00	2	2	D	D 08700	-19.00	27.09	48.94	27.12
F	F3_D2722	-7.00	6	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_D2722	-7.00	10	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_D2722	-7.00	14	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_D2722	-7.00	18	2	D	D 08700	-19.00	26.89	48.94	26.92

F	F3_D3362	-7.00	2	2	D	D 08700	-19.00	27.12		27.12
F	F3_D3362	-7.00	6	2	D	D 08700	-19.00	27.02		27.02
F	F3_D3362	-7.00	10	2	D	D 08700	-19.00	27.02		27.02
F	F3_D3362	-7.00	14	2	D	D 08700	-19.00	26.92		26.92
F	F3_D3362	-7.00	18	2	D	D 08700	-19.00	26.92		26.92
F	F3_D3322	-7.00	2	2	D	D 08700	-19.00	27.09	48.94	27.12
F	F3_D3322	-7.00	6	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_D3322	-7.00	10	2	D	D 08700	-19.00	26.99	48.94	27.02
F	F3_D3322	-7.00	14	2	D	D 08700	-19.00	26.89	48.94	26.92
F	F3_D3322	-7.00	18	2	D	D 08700	-19.00	26.89	48.94	26.92
F	E2WA7DA1	29.00	1	3	HRV	HRV14800	34.00	24.43	40.06	24.55
F	E2WA7DA1	29.00	5	3	HRV	HRV14800	34.00	24.43	40.06	24.55
F	E2WA7DA1	29.00	9	3	HRV	HRV14800	34.00	24.43	40.06	24.55
F	E2WA7DA1	29.00	13	3	HRV	HRV14800	34.00	24.43	40.06	24.55
F	E2WA7DA1	29.00	17	3	HRV	HRV14800	34.00	24.43	40.06	24.55
F	E2WA7DA1	29.00	19	5	COM	COM2070A	29.00	25.64	25.90	38.01
F	E2WA7DA1	29.00	21	6	D	D2-21600	-1.00	26.36	60.27	26.36
F	E2WA7DA1	29.00	23	3	CZE	CZE14400	17.00	25.72	49.96	25.73
F	E2WA7DA1	29.00	25	6	D	D2-21600	-1.00	26.26	60.27	26.26
F	E2WA7DA1	29.00	27	3	CZE	CZE14400	17.00	25.72	49.96	25.73
F	E2WA7DA1	29.00	29	6	D	D2-21600	-1.00	26.26	60.27	26.26
F	E2WA7DA1	29.00	31	3	CZE	CZE14400	17.00	25.72	49.96	25.73
F	E2WA7DA1	29.00	33	6	D	D2-21600	-1.00	26.16	60.27	26.16
F	E2WA7DA1	29.00	35	3	CZE	CZE14400	17.00	25.72	49.96	25.73
F	E2WA7DA1	29.00	37	6	D	D2-21600	-1.00	26.16	60.27	26.16
F	E2WA7DA1	29.00	39	3	CZE	CZE14400	17.00	25.72	49.96	25.73
F	E2WA7DA2	29.00	2	3	D	D 08700	-19.00	21.78	61.43	21.78
F	E2WA7DA2	29.00	4	3	SVN	SVN14800	34.00	24.17	40.03	24.28
F	E2WA7DA2	29.00	6	3	D	D 08700	-19.00	21.68	61.43	21.68
F	E2WA7DA2	29.00	8	3	SVN	SVN14800	34.00	24.17	40.03	24.28
F	E2WA7DA2	29.00	10	3	D	D 08700	-19.00	21.68	61.43	21.68
F	E2WA7DA2	29.00	12	3	SVN	SVN14800	34.00	24.17	40.03	24.28
F	E2WA7DA2	29.00	14	3	D	D 08700	-19.00	21.58	61.43	21.58
F	E2WA7DA2	29.00	16	3	SVN	SVN14800	34.00	24.17	40.03	24.28
F	E2WA7DA2	29.00	18	3	D	D 08700	-19.00	21.58	61.43	21.58
F	E2WA7DA2	29.00	20	3	SVN	SVN14800	34.00	24.17	40.03	24.28
F	E2WA7DB1	29.00	1	3	HRV	HRV14800	34.00	22.45	40.06	22.52
F	E2WA7DB1	29.00	3	3	UKR	UKR06300	38.00	26.68	46.87	26.72
F	E2WA7DB1	29.00	3	3	SVK	SVK14400	17.00	20.95	50.16	20.96
F	E2WA7DB1	29.00	5	3	HRV	HRV14800	34.00	22.45	40.06	22.52
F	E2WA7DB1	29.00	7	3	UKR	UKR06300	38.00	26.68	46.87	26.72
F	E2WA7DB1	29.00	7	3	SVK	SVK14400	17.00	20.95	50.16	20.96
F	E2WA7DB1	29.00	9	3	HRV	HRV14800	34.00	22.45	40.06	22.52
F	E2WA7DB1	29.00	11	3	UKR	UKR06300	38.00	26.68	46.87	26.72
F	E2WA7DB1	29.00	11	3	SVK	SVK14400	17.00	20.95	50.16	20.96
F	E2WA7DB1	29.00	13	3	HRV	HRV14800	34.00	22.45	40.06	22.52
F	E2WA7DB1	29.00	15	3	UKR	UKR06300	38.00	26.68	46.87	26.72
F	E2WA7DB1	29.00	15	3	SVK	SVK14400	17.00	20.95	50.16	20.96
F	E2WA7DB1	29.00	17	3	HRV	HRV14800	34.00	22.45	40.06	22.52
F	E2WA7DB1	29.00	19	2	COM	COM2070A	29.00	25.71	25.90	39.39
F	E2WA7DB1	29.00	19	3	UKR	UKR06300	38.00	26.68	46.87	26.72
F	E2WA7DB1	29.00	19	3	SVK	SVK14400	17.00	20.95	50.16	20.96
F	E2WA7DB1	29.00	21	2	D	D2-21600	-1.00	24.07	60.27	24.07
F	E2WA7DB1	29.00	23	3	CZE	CZE14400	17.00	21.90	49.96	21.91
F	E2WA7DB1	29.00	23	4	YUG	YUG14800	-7.00	27.41		27.41
F	E2WA7DB1	29.00	25	2	D	D2-21600	-1.00	23.97	60.27	23.97
F	E2WA7DB1	29.00	27	3	CZE	CZE14400	17.00	21.90	49.96	21.91
F	E2WA7DB1	29.00	27	4	YUG	YUG14800	-7.00	27.41		27.41
F	E2WA7DB1	29.00	29	2	D	D2-21600	-1.00	23.97	60.27	23.97
F	E2WA7DB1	29.00	31	3	CZE	CZE14400	17.00	21.90	49.96	21.91

F	E2WA7DB1	29.00	31	4	YUG	YUG14800	-7.00	27.41		27.41
F	E2WA7DB1	29.00	33	2	D	D2-21600	-1.00	23.87	60.27	23.87
F	E2WA7DB1	29.00	35	3	CZE	CZE14400	17.00	21.90	49.96	21.91
F	E2WA7DB1	29.00	35	4	YUG	YUG14800	-7.00	27.41		27.41
F	E2WA7DB1	29.00	37	2	D	D2-21600	-1.00	23.87	60.27	23.87
F	E2WA7DB1	29.00	39	3	CZE	CZE14400	17.00	21.90	49.96	21.91
F	E2WA7DB1	29.00	39	4	YUG	YUG14800	-7.00	27.41		27.41
F	E2WA7DB2	29.00	2	2	D	D 08700	-19.00	22.56	61.43	22.56
F	E2WA7DB2	29.00	2	3	BIH	BIH14800	34.00	22.80	40.02	22.88
F	E2WA7DB2	29.00	2	4	MKD	MKD14800	23.00	26.45	42.31	26.57
F	E2WA7DB2	29.00	4	3	SVN	SVN14800	34.00	22.56	40.03	22.64
F	E2WA7DB2	29.00	6	2	D	D 08700	-19.00	22.46	61.43	22.46
F	E2WA7DB2	29.00	6	3	BIH	BIH14800	34.00	22.80	40.02	22.88
F	E2WA7DB2	29.00	6	4	MKD	MKD14800	23.00	26.45	42.31	26.57
F	E2WA7DB2	29.00	8	3	SVN	SVN14800	34.00	22.56	40.03	22.64
F	E2WA7DB2	29.00	10	2	D	D 08700	-19.00	22.46	61.43	22.46
F	E2WA7DB2	29.00	10	3	BIH	BIH14800	34.00	22.80	40.02	22.88
F	E2WA7DB2	29.00	10	4	MKD	MKD14800	23.00	26.45	42.31	26.57
F	E2WA7DB2	29.00	12	3	SVN	SVN14800	34.00	22.56	40.03	22.64
F	E2WA7DB2	29.00	14	2	D	D 08700	-19.00	22.36	61.43	22.36
F	E2WA7DB2	29.00	14	3	BIH	BIH14800	34.00	22.80	40.02	22.88
F	E2WA7DB2	29.00	14	4	MKD	MKD14800	23.00	26.45	42.31	26.57
F	E2WA7DB2	29.00	16	3	SVN	SVN14800	34.00	22.56	40.03	22.64
F	E2WA7DB2	29.00	18	2	D	D 08700	-19.00	22.36	61.43	22.36
F	E2WA7DB2	29.00	18	3	BIH	BIH14800	34.00	22.80	40.02	22.88
F	E2WA7DB2	29.00	18	4	MKD	MKD14800	23.00	26.45	42.31	26.57
F	E2WA7DB2	29.00	20	3	SVN	SVN14800	34.00	22.56	40.03	22.64
F	E2WA7DB2	29.00	20	5	MLT	MLT1470A	-13.00	27.86	61.84	27.86
F	E2WA7DC1	29.00	19	4	COM	COM2070A	29.00	25.85	25.90	45.59
F	E2WA7DD1	29.00	1	10	HRV	HRV14800	34.00	25.25	40.06	25.39
F	E2WA7DD1	29.00	5	10	HRV	HRV14800	34.00	25.25	40.06	25.39
F	E2WA7DD1	29.00	9	10	HRV	HRV14800	34.00	25.25	40.06	25.39
F	E2WA7DD1	29.00	13	10	HRV	HRV14800	34.00	25.25	40.06	25.39
F	E2WA7DD1	29.00	17	10	HRV	HRV14800	34.00	25.25	40.06	25.39
F	E2WA7DD1	29.00	19	4	COM	COM2070A	29.00	25.76	25.90	40.84
F	E2WA7DD2	29.00	2	8	D	D 08700	-19.00	27.00	61.43	27.00
F	E2WA7DD2	29.00	2	9	MKD	MKD14800	23.00	23.15	42.31	23.20
F	E2WA7DD2	29.00	4	10	SVN	SVN14800	34.00	26.32	40.03	26.51
F	E2WA7DD2	29.00	6	8	D	D 08700	-19.00	26.90	61.43	26.90
F	E2WA7DD2	29.00	6	9	MKD	MKD14800	23.00	23.15	42.31	23.20
F	E2WA7DD2	29.00	8	10	SVN	SVN14800	34.00	26.32	40.03	26.51
F	E2WA7DD2	29.00	10	8	D	D 08700	-19.00	26.90	61.43	26.90
F	E2WA7DD2	29.00	10	9	MKD	MKD14800	23.00	23.15	42.31	23.20
F	E2WA7DD2	29.00	12	10	SVN	SVN14800	34.00	26.32	40.03	26.51
F	E2WA7DD2	29.00	14	8	D	D 08700	-19.00	26.80	61.43	26.80
F	E2WA7DD2	29.00	14	9	MKD	MKD14800	23.00	23.15	42.31	23.20
F	E2WA7DD2	29.00	16	10	SVN	SVN14800	34.00	26.32	40.03	26.51
F	E2WA7DD2	29.00	18	8	D	D 08700	-19.00	26.80	61.43	26.80
F	E2WA7DD2	29.00	18	9	MKD	MKD14800	23.00	23.15	42.31	23.20
F	E2WA7DD2	29.00	20	10	SVN	SVN14800	34.00	26.32	40.03	26.51
F	E2WA7DE1	29.00	19	10	COM	COM2070A	29.00	25.81	25.90	42.81
F	E2WA7DF1	29.00	3	9	UKR	UKR06300	38.00	27.50	46.87	27.55
F	E2WA7DF1	29.00	7	9	UKR	UKR06300	38.00	27.50	46.87	27.55
F	E2WA7DF1	29.00	11	9	UKR	UKR06300	38.00	27.50	46.87	27.55
F	E2WA7DF1	29.00	15	9	UKR	UKR06300	38.00	27.50	46.87	27.55
F	E2WA7DF1	29.00	19	9	UKR	UKR06300	38.00	27.50	46.87	27.55
F	E2WA7DF1	29.00	19	9	COM	COM2070A	29.00	25.70	25.90	39.25
F	E2WA7DF2	29.00	4	10	AZE	AZE06400	23.00	22.30	47.44	22.31
F	E2WA7DF2	29.00	8	10	AZE	AZE06400	23.00	22.30	47.44	22.31
F	E2WA7DF2	29.00	12	10	AZE	AZE06400	23.00	22.30	47.44	22.31

F	E2WA7DF2	29.00	16	10	AZE	AZE06400	23.00	22.30	47.44	22.31
F	E2WA7DF2	29.00	20	10	AZE	AZE06400	23.00	22.30	47.44	22.31
F	E2WA7DF2	29.00	22	9	GEO	GEO06400	23.00	20.77	45.35	20.78
F	E2WA7DF2	29.00	24	9	KAZ	KAZ06600	44.00	27.54	56.75	27.55
F	E2WA7DF2	29.00	24	10	ARM	ARM06400	23.00	21.72	46.99	21.73
F	E2WA7DF2	29.00	26	9	GEO	GEO06400	23.00	20.77	45.35	20.78
F	E2WA7DF2	29.00	28	9	KAZ	KAZ06600	44.00	27.54	56.75	27.55
F	E2WA7DF2	29.00	28	10	ARM	ARM06400	23.00	21.72	46.99	21.73
F	E2WA7DF2	29.00	30	9	GEO	GEO06400	23.00	20.77	45.35	20.78
F	E2WA7DF2	29.00	32	9	KAZ	KAZ06600	44.00	27.54	56.75	27.55
F	E2WA7DF2	29.00	32	10	ARM	ARM06400	23.00	21.72	46.99	21.73
F	E2WA7DF2	29.00	34	9	GEO	GEO06400	23.00	20.77	45.35	20.78
F	E2WA7DF2	29.00	36	9	KAZ	KAZ06600	44.00	27.54	56.75	27.55
F	E2WA7DF2	29.00	36	10	ARM	ARM06400	23.00	21.72	46.99	21.73
F	E2WA7DF2	29.00	38	9	GEO	GEO06400	23.00	20.77	45.35	20.78
F	E2WA7DF2	29.00	40	9	KAZ	KAZ06600	44.00	27.54	56.75	27.55
F	E2WA7DF2	29.00	40	10	ARM	ARM06400	23.00	21.72	46.99	21.73
F	E2WA7DG1	29.00	1	3	HRV	HRV14800	34.00	21.36	40.06	21.42
F	E2WA7DG1	29.00	1	8	EST	EST06100	23.00	18.08	44.04	18.09
F	E2WA7DG1	29.00	1	9	BLR	BLR06200	38.00	18.81	47.38	18.81
F	E2WA7DG1	29.00	3	7	SVK	SVK14400	17.00	17.45	50.16	17.45
F	E2WA7DG1	29.00	3	8	LTU	LTU06100	23.00	17.86	43.18	17.87
F	E2WA7DG1	29.00	3	9	UKR	UKR06300	38.00	19.66	46.87	19.67
F	E2WA7DG1	29.00	5	3	HRV	HRV14800	34.00	21.36	40.06	21.42
F	E2WA7DG1	29.00	5	8	EST	EST06100	23.00	18.08	44.04	18.09
F	E2WA7DG1	29.00	5	9	BLR	BLR06200	38.00	18.81	47.38	18.81
F	E2WA7DG1	29.00	7	7	SVK	SVK14400	17.00	17.45	50.16	17.45
F	E2WA7DG1	29.00	7	8	LTU	LTU06100	23.00	17.86	43.18	17.87
F	E2WA7DG1	29.00	7	9	UKR	UKR06300	38.00	19.66	46.87	19.67
F	E2WA7DG1	29.00	9	3	HRV	HRV14800	34.00	21.36	40.06	21.42
F	E2WA7DG1	29.00	9	8	EST	EST06100	23.00	18.08	44.04	18.09
F	E2WA7DG1	29.00	9	9	BLR	BLR06200	38.00	18.81	47.38	18.81
F	E2WA7DG1	29.00	11	7	SVK	SVK14400	17.00	17.45	50.16	17.45
F	E2WA7DG1	29.00	11	8	LTU	LTU06100	23.00	17.86	43.18	17.87
F	E2WA7DG1	29.00	11	9	UKR	UKR06300	38.00	19.66	46.87	19.67
F	E2WA7DG1	29.00	13	3	HRV	HRV14800	34.00	21.36	40.06	21.42
F	E2WA7DG1	29.00	13	8	EST	EST06100	23.00	18.08	44.04	18.09
F	E2WA7DG1	29.00	13	9	BLR	BLR06200	38.00	18.81	47.38	18.81
F	E2WA7DG1	29.00	15	7	SVK	SVK14400	17.00	17.45	50.16	17.45
F	E2WA7DG1	29.00	15	8	LTU	LTU06100	23.00	17.86	43.18	17.87
F	E2WA7DG1	29.00	15	9	UKR	UKR06300	38.00	19.66	46.87	19.67
F	E2WA7DG1	29.00	17	3	HRV	HRV14800	34.00	21.36	40.06	21.42
F	E2WA7DG1	29.00	17	8	EST	EST06100	23.00	18.08	44.04	18.09
F	E2WA7DG1	29.00	17	9	BLR	BLR06200	38.00	18.81	47.38	18.81
F	E2WA7DG1	29.00	19	7	SVK	SVK14400	17.00	17.45	50.16	17.45
F	E2WA7DG1	29.00	19	8	LTU	LTU06100	23.00	17.86	43.18	17.87
F	E2WA7DG1	29.00	19	9	UKR	UKR06300	38.00	19.66	46.87	19.67
F	E2WA7DG1	29.00	19	9	COM	COM2070A	29.00	25.49	25.90	35.95
F	E2WA7DG1	29.00	21	6	D	D2-21600	-1.00	25.28	60.27	25.28
F	E2WA7DG1	29.00	21	8	LVA	LVA06100	23.00	17.94	43.46	17.95
F	E2WA7DG1	29.00	23	5	CZE	CZE14400	17.00	20.32	49.96	20.32
F	E2WA7DG1	29.00	25	6	D	D2-21600	-1.00	25.18	60.27	25.18
F	E2WA7DG1	29.00	25	8	LVA	LVA06100	23.00	17.94	43.46	17.95
F	E2WA7DG1	29.00	27	5	CZE	CZE14400	17.00	20.32	49.96	20.32
F	E2WA7DG1	29.00	29	6	D	D2-21600	-1.00	25.18	60.27	25.18
F	E2WA7DG1	29.00	29	8	LVA	LVA06100	23.00	17.94	43.46	17.95
F	E2WA7DG1	29.00	31	5	CZE	CZE14400	17.00	20.32	49.96	20.32
F	E2WA7DG1	29.00	33	6	D	D2-21600	-1.00	25.08	60.27	25.08
F	E2WA7DG1	29.00	33	8	LVA	LVA06100	23.00	17.94	43.46	17.95
F	E2WA7DG1	29.00	35	5	CZE	CZE14400	17.00	20.32	49.96	20.32

F	E2WA7DG1	29.00	37	6	D	D2-21600	-1.00	25.08	60.27	25.08
F	E2WA7DG1	29.00	37	8	LVA	LVA06100	23.00	17.94	43.46	17.95
F	E2WA7DG1	29.00	39	5	CZE	CZE14400	17.00	20.32	49.96	20.32
F	E2WA7DG2	29.00	2	1	D	D 08700	-19.00	23.86	61.43	23.86
F	E2WA7DG2	29.00	2	5	BIH	BIH14800	34.00	22.57	40.02	22.65
F	E2WA7DG2	29.00	4	3	SVN	SVN14800	34.00	20.71	40.03	20.76
F	E2WA7DG2	29.00	4	9	MDA	MDA06300	38.00	26.84	47.20	26.88
F	E2WA7DG2	29.00	6	1	D	D 08700	-19.00	23.76	61.43	23.76
F	E2WA7DG2	29.00	6	5	BIH	BIH14800	34.00	22.57	40.02	22.65
F	E2WA7DG2	29.00	8	3	SVN	SVN14800	34.00	20.71	40.03	20.76
F	E2WA7DG2	29.00	8	9	MDA	MDA06300	38.00	26.84	47.20	26.88
F	E2WA7DG2	29.00	10	1	D	D 08700	-19.00	23.76	61.43	23.76
F	E2WA7DG2	29.00	10	5	BIH	BIH14800	34.00	22.57	40.02	22.65
F	E2WA7DG2	29.00	12	3	SVN	SVN14800	34.00	20.71	40.03	20.76
F	E2WA7DG2	29.00	12	9	MDA	MDA06300	38.00	26.84	47.20	26.88
F	E2WA7DG2	29.00	14	1	D	D 08700	-19.00	23.66	61.43	23.66
F	E2WA7DG2	29.00	14	5	BIH	BIH14800	34.00	22.57	40.02	22.65
F	E2WA7DG2	29.00	16	3	SVN	SVN14800	34.00	20.71	40.03	20.76
F	E2WA7DG2	29.00	16	9	MDA	MDA06300	38.00	26.84	47.20	26.88
F	E2WA7DG2	29.00	18	1	D	D 08700	-19.00	23.66	61.43	23.66
F	E2WA7DG2	29.00	18	5	BIH	BIH14800	34.00	22.57	40.02	22.65
F	E2WA7DG2	29.00	20	3	SVN	SVN14800	34.00	20.71	40.03	20.76
F	E2WA7DG2	29.00	20	9	MDA	MDA06300	38.00	26.84	47.20	26.88
RUS	RSTRSA11	36.00	25	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSA11	36.00	29	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSA11	36.00	33	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSA11	36.00	37	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSD11	36.00	25	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSD11	36.00	29	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSD11	36.00	33	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSD11	36.00	37	16	LVA	LVA06100	23.00	23.05	54.00	23.06
RUS	RSTRSA12	36.00	26	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSA12	36.00	28	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSA12	36.00	28	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSA12	36.00	30	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSA12	36.00	32	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSA12	36.00	32	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSA12	36.00	34	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSA12	36.00	36	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSA12	36.00	36	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSA12	36.00	38	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSA12	36.00	40	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSA12	36.00	40	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSD12	36.00	26	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSD12	36.00	28	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSD12	36.00	28	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSD12	36.00	30	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSD12	36.00	32	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSD12	36.00	32	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSD12	36.00	34	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSD12	36.00	36	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSD12	36.00	36	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSD12	36.00	38	6	GEO	GEO06400	23.00	23.26	54.71	23.26
RUS	RSTRSD12	36.00	40	6	ARM	ARM06400	23.00	22.16	55.76	22.17
RUS	RSTRSD12	36.00	40	6	KAZ	KAZ06600	44.00	27.30	48.02	27.34
RUS	RSTRSA22	56.00	28	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSA22	56.00	32	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSA22	56.00	36	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSA22	56.00	40	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSD22	56.00	28	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00

RUS	RSTRSD22	56.00	32	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSD22	56.00	36	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
RUS	RSTRSD22	56.00	40	1	KAZ	KAZ06600	44.00	25.99	52.85	26.00
NOR	BIFROS22	-0.80	2	6	D	D 08700	-19.00	16.96	57.44	16.96
NOR	BIFROS22	-0.80	6	6	D	D 08700	-19.00	16.86	57.44	16.86
NOR	BIFROS22	-0.80	10	6	D	D 08700	-19.00	16.86	57.44	16.86
NOR	BIFROS22	-0.80	14	6	D	D 08700	-19.00	16.76	57.44	16.76
NOR	BIFROS22	-0.80	18	6	D	D 08700	-19.00	16.76	57.44	16.76
NOR	BIFROS22	-0.80	24	5	KAZ	KAZ06600	44.00	17.47	87.13	17.47
NOR	BIFROS22	-0.80	28	5	KAZ	KAZ06600	44.00	17.47	87.13	17.47
NOR	BIFROS22	-0.80	32	5	KAZ	KAZ06600	44.00	17.47	87.13	17.47
NOR	BIFROS22	-0.80	36	5	KAZ	KAZ06600	44.00	17.47	87.13	17.47
NOR	BIFROS22	-0.80	40	5	KAZ	KAZ06600	44.00	17.47	87.13	17.47

Step 2 entries causing Overall Co-channel Single Entry C/I below 28 dB to other Step 2 entries

no cases of this condition exist

Step 1 entries causing Overall Co-channel Single Entry C/I below 28 dB to Step 2 entries

Beam					Interfering Beam			Single Entry C/I (dB)		
ADM	BEAM	Orb_Pos	Ch	TP	ADM1	BEAM	Orb_Pos1	Overall	Feeder-link	Down-link
UKR	UKR06300	38.00	3	2	IRN	IRN10900	34.00	27.76	54.05	27.77
UKR	UKR06300	38.00	3	2	IRN	IRN10901	34.00	27.77		27.77
UKR	UKR06300	38.00	7	2	IRN	IRN10900	34.00	27.76	54.05	27.77
UKR	UKR06300	38.00	7	2	IRN	IRN10901	34.00	27.77		27.77
UKR	UKR06300	38.00	11	2	IRN	IRN10900	34.00	27.66	54.05	27.67
UKR	UKR06300	38.00	11	2	IRN	IRN10901	34.00	27.67		27.67
UKR	UKR06300	38.00	15	2	IRN	IRN10900	34.00	27.56	54.05	27.57
UKR	UKR06300	38.00	19	2	IRN	IRN10900	34.00	27.56	54.05	27.57

Step 1 entries causing Overall Co-channel Single Entry C/I below 28 dB to other Step 1 entries

Beam					Interfering Beam			Single Entry C/I (dB)		
ADM	BEAM	Orb_Pos	Ch	TP	ADM1	BEAM	Orb_Pos1	Overall	Feeder-link	Down-link
AND	AND34100	-37.00	4	3	G	G 02700	-33.50	27.43	62.79	27.43
AND	AND34100	-37.00	8	3	G	G 02700	-33.50	27.33	62.79	27.33
AND	AND34100	-37.00	12	3	G	G 02700	-33.50	27.43	62.79	27.43
AND	AND34100	-37.00	16	3	G	G 02700	-33.50	27.33	62.79	27.33
AND	AND34100	-37.00	20	3	G	G 02700	-33.50	27.43	62.79	27.43
EGY	EGY02600	-7.00	4	1	F	F2_A2744	-7.00	21.78	23.38	26.90
EGY	EGY02600	-7.00	4	1	F	F2aA2784	-7.00	26.90		26.90
EGY	EGY02600	-7.00	8	1	F	F2_A2744	-7.00	21.81	23.38	27.00
EGY	EGY02600	-7.00	8	1	F	F2aA2784	-7.00	27.00		27.00
EGY	EGY02600	-7.00	12	1	F	F2_A2744	-7.00	21.81	23.38	27.00
EGY	EGY02600	-7.00	12	1	F	F2aA2784	-7.00	27.00		27.00
EGY	EGY02600	-7.00	16	1	F	F2_A2744	-7.00	21.84	23.38	27.10
EGY	EGY02600	-7.00	16	1	F	F2aA2784	-7.00	27.10		27.10
EGY	EGY02600	-7.00	20	1	F	F2_A2744	-7.00	21.84	23.38	27.10
EGY	EGY02600	-7.00	20	1	F	F2aA2784	-7.00	27.10		27.10
USA	MRA33200	122.00	15	1	J	J 11100	110.00	27.95	55.14	27.95
USA	MRA33201	122.00	15	1	J	J 11100	110.00	27.95	85.02	27.95
MRC	MRC20900	-25.00	21	5	POR	POR13300	-30.00	25.69		25.69
MRC	MRC20900	-25.00	25	5	POR	POR13300	-30.00	25.69		25.69
MRC	MRC20900	-25.00	29	5	POR	POR13300	-30.00	25.69		25.69
MRC	MRC20900	-25.00	33	5	POR	POR13300	-30.00	25.59		25.59
MRC	MRC20900	-25.00	37	5	POR	POR13300	-30.00	25.69		25.69
F	MYT09801	29.00	24	1	F	E2WA7DA2	29.00	23.61	23.62	47.30
F	MYT09801	29.00	24	1	F	E2WA7DB2	29.00	23.60	23.62	46.29
F	MYT09801	29.00	24	1	F	E2WA7DC2	29.00	23.50	23.62	38.92
F	MYT09801	29.00	24	1	F	E2WA7DD2	29.00	23.59	23.62	44.91
F	MYT09801	29.00	24	1	F	E2WA7DE2	29.00	23.50	23.62	38.92
F	MYT09801	29.00	24	1	F	E2WA7DF2	29.00	23.59	23.62	44.91
F	MYT09801	29.00	24	1	F	E2WA7DG2	29.00	23.60	23.62	45.92
F	MYT09801	29.00	28	1	F	E2WA7DA2	29.00	23.61	23.62	47.40
F	MYT09801	29.00	28	1	F	E2WA7DB2	29.00	23.60	23.62	46.39
F	MYT09801	29.00	28	1	F	E2WA7DC2	29.00	23.50	23.62	39.02
F	MYT09801	29.00	28	1	F	E2WA7DD2	29.00	23.59	23.62	45.01
F	MYT09801	29.00	28	1	F	E2WA7DE2	29.00	23.50	23.62	39.02
F	MYT09801	29.00	28	1	F	E2WA7DF2	29.00	23.59	23.62	45.01
F	MYT09801	29.00	28	1	F	E2WA7DG2	29.00	23.60	23.62	46.02
F	MYT09801	29.00	32	1	F	E2WA7DA2	29.00	23.61	23.62	47.40
F	MYT09801	29.00	32	1	F	E2WA7DB2	29.00	23.60	23.62	46.39
F	MYT09801	29.00	32	1	F	E2WA7DC2	29.00	23.50	23.62	39.02
F	MYT09801	29.00	32	1	F	E2WA7DD2	29.00	23.59	23.62	45.01
F	MYT09801	29.00	32	1	F	E2WA7DE2	29.00	23.50	23.62	39.02
F	MYT09801	29.00	32	1	F	E2WA7DF2	29.00	23.59	23.62	45.01
F	MYT09801	29.00	32	1	F	E2WA7DG2	29.00	23.60	23.62	46.02
F	MYT09801	29.00	36	1	F	E2WA7DA2	29.00	23.61	23.62	47.50
F	MYT09801	29.00	36	1	F	E2WA7DB2	29.00	23.60	23.62	46.49
F	MYT09801	29.00	36	1	F	E2WA7DC2	29.00	23.50	23.62	39.12
F	MYT09801	29.00	36	1	F	E2WA7DD2	29.00	23.59	23.62	45.11
F	MYT09801	29.00	36	1	F	E2WA7DE2	29.00	23.50	23.62	39.12
F	MYT09801	29.00	36	1	F	E2WA7DF2	29.00	23.59	23.62	45.11
F	MYT09801	29.00	36	1	F	E2WA7DG2	29.00	23.60	23.62	46.12
F	MYT09801	29.00	40	1	F	E2WA7DA2	29.00	23.61	23.62	47.50
F	MYT09801	29.00	40	1	F	E2WA7DB2	29.00	23.60	23.62	46.49
F	MYT09801	29.00	40	1	F	E2WA7DC2	29.00	23.50	23.62	39.12
F	MYT09801	29.00	40	1	F	E2WA7DD2	29.00	23.59	23.62	45.11
F	MYT09801	29.00	40	1	F	E2WA7DE2	29.00	23.50	23.62	39.12
F	MYT09801	29.00	40	1	F	E2WA7DF2	29.00	23.59	23.62	45.11
F	MYT09801	29.00	40	1	F	E2WA7DG2	29.00	23.60	23.62	46.12
F	NCL10000	140.00	2	3	F	WAL10200	140.00	27.95		27.95
F	NCL10000	140.00	2	3	F	WAL10201	140.00	27.95		27.95

F	NCL10000	140.00	10	3	F	WAL10200	140.00	27.95		27.95
F	NCL10000	140.00	10	3	F	WAL10201	140.00	27.95		27.95
F	NCL10000	140.00	14	3	F	WAL10200	140.00	27.95		27.95
F	NCL10000	140.00	14	3	F	WAL10201	140.00	27.95		27.95
F	NCL10001	140.00	2	3	F	WAL10200	140.00	27.95		27.95
F	NCL10001	140.00	2	3	F	WAL10201	140.00	27.95		27.95
F	NCL10001	140.00	10	3	F	WAL10200	140.00	27.95		27.95
F	NCL10001	140.00	10	3	F	WAL10201	140.00	27.95		27.95
F	NCL10001	140.00	14	3	F	WAL10200	140.00	27.95		27.95
F	NCL10001	140.00	14	3	F	WAL10201	140.00	27.95		27.95
POR	POR13300	-30.00	21	4	MRC	MRC20900	-25.00	25.58		25.58
POR	POR13300	-30.00	25	4	MRC	MRC20900	-25.00	25.58		25.58
POR	POR13300	-30.00	29	4	MRC	MRC20900	-25.00	25.58		25.58
POR	POR13300	-30.00	33	4	MRC	MRC20900	-25.00	25.68		25.68
POR	POR13300	-30.00	37	4	MRC	MRC20900	-25.00	25.58		25.58
F	REU09701	29.00	22	4	F	E2WA7DA2	29.00	23.60	23.63	45.20
F	REU09701	29.00	22	4	F	E2WA7DB2	29.00	23.59	23.63	44.19
F	REU09701	29.00	22	4	F	E2WA7DC2	29.00	23.43	23.63	36.80
F	REU09701	29.00	22	4	F	E2WA7DD2	29.00	23.58	23.63	42.80
F	REU09701	29.00	22	4	F	E2WA7DE2	29.00	23.43	23.63	36.80
F	REU09701	29.00	22	4	F	E2WA7DF2	29.00	23.58	23.63	42.80
F	REU09701	29.00	22	4	F	E2WA7DG2	29.00	23.59	23.63	43.80
F	REU09701	29.00	26	4	F	E2WA7DA2	29.00	23.60	23.63	45.30
F	REU09701	29.00	26	4	F	E2WA7DB2	29.00	23.59	23.63	44.29
F	REU09701	29.00	26	4	F	E2WA7DC2	29.00	23.43	23.63	36.90
F	REU09701	29.00	26	4	F	E2WA7DD2	29.00	23.58	23.63	42.90
F	REU09701	29.00	26	4	F	E2WA7DE2	29.00	23.43	23.63	36.90
F	REU09701	29.00	26	4	F	E2WA7DF2	29.00	23.58	23.63	42.90
F	REU09701	29.00	26	4	F	E2WA7DG2	29.00	23.59	23.63	43.90
F	REU09701	29.00	30	4	F	E2WA7DA2	29.00	23.60	23.63	45.40
F	REU09701	29.00	30	4	F	E2WA7DB2	29.00	23.59	23.63	44.39
F	REU09701	29.00	30	4	F	E2WA7DC2	29.00	23.44	23.63	37.00
F	REU09701	29.00	30	4	F	E2WA7DD2	29.00	23.58	23.63	43.00
F	REU09701	29.00	30	4	F	E2WA7DE2	29.00	23.44	23.63	37.00
F	REU09701	29.00	30	4	F	E2WA7DF2	29.00	23.58	23.63	43.00
F	REU09701	29.00	30	4	F	E2WA7DG2	29.00	23.59	23.63	44.00
F	REU09701	29.00	34	4	F	E2WA7DA2	29.00	23.60	23.63	45.40
F	REU09701	29.00	34	4	F	E2WA7DB2	29.00	23.59	23.63	44.39
F	REU09701	29.00	34	4	F	E2WA7DC2	29.00	23.44	23.63	37.00
F	REU09701	29.00	34	4	F	E2WA7DD2	29.00	23.58	23.63	43.00
F	REU09701	29.00	34	4	F	E2WA7DE2	29.00	23.44	23.63	37.00
F	REU09701	29.00	34	4	F	E2WA7DF2	29.00	23.58	23.63	43.00
F	REU09701	29.00	34	4	F	E2WA7DG2	29.00	23.59	23.63	44.00
F	REU09701	29.00	38	4	F	E2WA7DA2	29.00	23.60	23.63	45.50
F	REU09701	29.00	38	4	F	E2WA7DB2	29.00	23.60	23.63	44.49
F	REU09701	29.00	38	4	F	E2WA7DC2	29.00	23.44	23.63	37.10
F	REU09701	29.00	38	4	F	E2WA7DD2	29.00	23.58	23.63	43.10
F	REU09701	29.00	38	4	F	E2WA7DE2	29.00	23.44	23.63	37.10
F	REU09701	29.00	38	4	F	E2WA7DF2	29.00	23.58	23.63	43.10
F	REU09701	29.00	38	4	F	E2WA7DG2	29.00	23.59	23.63	44.10
SDN	SDN23200	-7.00	24	2	F	F2_A2788	-7.00	25.84	26.08	38.54
SDN	SDN23200	-7.00	28	2	F	F2_A2788	-7.00	25.84	26.08	38.54
SDN	SDN23200	-7.00	32	2	F	F2_A2788	-7.00	25.84	26.08	38.64
SDN	SDN23200	-7.00	36	2	F	F2_A2788	-7.00	25.84	26.08	38.64
SDN	SDN23200	-7.00	40	2	F	F2_A2788	-7.00	25.85	26.08	38.74
S	SIRIUS02	5.20	12	4	F	E2WA7DC2	29.00	26.88	54.22	26.89
S	SIRIUS02	5.20	16	4	F	E2WA7DC2	29.00	26.88	54.22	26.89
S	SIRIUS03	5.20	20	4	F	E2WA7DC2	29.00	26.88	54.22	26.89
F	F2_A2744	-7.00	4	3	EGY	EGY02600	-7.00	24.42	32.29	25.20
F	F2_A2744	-7.00	8	3	EGY	EGY02600	-7.00	24.34	32.29	25.10
F	F2_A2744	-7.00	12	3	EGY	EGY02600	-7.00	24.34	32.29	25.10
F	F2_A2744	-7.00	16	3	EGY	EGY02600	-7.00	24.25	32.29	25.00
F	F2_A2744	-7.00	20	3	EGY	EGY02600	-7.00	24.25	32.29	25.00
F	F2_A2788	-7.00	40	1	S	S 13902	5.00	27.10	66.64	27.10
F	F2aA2728	-7.00	40	1	S	S 13902	5.00	27.10		27.10

F	F2aA2784	-7.00	4	3	EGY	EGY02600	-7.00	25.20		25.20
F	F2aA2784	-7.00	8	3	EGY	EGY02600	-7.00	25.10		25.10
F	F2aA2784	-7.00	12	3	EGY	EGY02600	-7.00	25.10		25.10
F	F2aA2784	-7.00	16	3	EGY	EGY02600	-7.00	25.00		25.00
F	F2aA2784	-7.00	20	3	EGY	EGY02600	-7.00	25.00		25.00
F	F2aA2788	-7.00	40	1	S	S 13902	5.00	27.10	58.44	27.10
F	F3_A2762	-7.00	2	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A2762	-7.00	6	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A2762	-7.00	10	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A2762	-7.00	14	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A2762	-7.00	18	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A2784	-7.00	4	3	EGY	EGY02600	-7.00	23.69		23.69
F	F3_A2784	-7.00	8	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_A2784	-7.00	12	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_A2784	-7.00	16	3	EGY	EGY02600	-7.00	23.49		23.49
F	F3_A2784	-7.00	20	3	EGY	EGY02600	-7.00	23.49		23.49
F	F3_A2728	-7.00	24	2	SDN	SDN23200	-7.00	25.89		25.89
F	F3_A2728	-7.00	24	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A2728	-7.00	28	2	SDN	SDN23200	-7.00	25.89		25.89
F	F3_A2728	-7.00	28	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A2728	-7.00	32	2	SDN	SDN23200	-7.00	25.79		25.79
F	F3_A2728	-7.00	32	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A2728	-7.00	36	2	SDN	SDN23200	-7.00	25.79		25.79
F	F3_A2728	-7.00	36	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A2728	-7.00	40	1	S	S 13902	5.00	26.98		26.98
F	F3_A2728	-7.00	40	2	SDN	SDN23200	-7.00	25.69		25.69
F	F3_A2728	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A2722	-7.00	2	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A2722	-7.00	6	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A2722	-7.00	10	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A2722	-7.00	14	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A2722	-7.00	18	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A2788	-7.00	24	2	SDN	SDN23200	-7.00	24.44	29.89	25.89
F	F3_A2788	-7.00	24	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A2788	-7.00	28	2	SDN	SDN23200	-7.00	24.44	29.89	25.89
F	F3_A2788	-7.00	28	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A2788	-7.00	32	2	SDN	SDN23200	-7.00	24.37	29.89	25.79
F	F3_A2788	-7.00	32	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A2788	-7.00	36	2	SDN	SDN23200	-7.00	24.37	29.89	25.79
F	F3_A2788	-7.00	36	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A2788	-7.00	40	1	S	S 13902	5.00	26.97	58.44	26.98
F	F3_A2788	-7.00	40	2	SDN	SDN23200	-7.00	24.29	29.89	25.69
F	F3_A2788	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A3362	-7.00	2	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A3362	-7.00	6	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A3362	-7.00	10	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A3362	-7.00	14	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A3362	-7.00	18	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_A3384	-7.00	4	3	EGY	EGY02600	-7.00	23.69		23.69
F	F3_A3384	-7.00	8	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_A3384	-7.00	12	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_A3384	-7.00	16	3	EGY	EGY02600	-7.00	23.49		23.49
F	F3_A3384	-7.00	20	3	EGY	EGY02600	-7.00	23.49		23.49
F	F3_A3328	-7.00	24	2	SDN	SDN23200	-7.00	25.89		25.89
F	F3_A3328	-7.00	24	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A3328	-7.00	28	2	SDN	SDN23200	-7.00	25.89		25.89
F	F3_A3328	-7.00	28	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A3328	-7.00	32	2	SDN	SDN23200	-7.00	25.79		25.79
F	F3_A3328	-7.00	32	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A3328	-7.00	36	2	SDN	SDN23200	-7.00	25.79		25.79
F	F3_A3328	-7.00	36	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A3328	-7.00	40	1	S	S 13902	5.00	26.98		26.98
F	F3_A3328	-7.00	40	2	SDN	SDN23200	-7.00	25.69		25.69
F	F3_A3328	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_A3322	-7.00	2	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00

F	F3_A3322	-7.00	6	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A3322	-7.00	10	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A3322	-7.00	14	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A3322	-7.00	18	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_A3388	-7.00	24	2	SDN	SDN23200	-7.00	24.44	29.89	25.89
F	F3_A3388	-7.00	24	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A3388	-7.00	28	2	SDN	SDN23200	-7.00	24.44	29.89	25.89
F	F3_A3388	-7.00	28	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A3388	-7.00	32	2	SDN	SDN23200	-7.00	24.37	29.89	25.79
F	F3_A3388	-7.00	32	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A3388	-7.00	36	2	SDN	SDN23200	-7.00	24.37	29.89	25.79
F	F3_A3388	-7.00	36	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_A3388	-7.00	40	1	S	S 13902	5.00	26.97	58.44	26.98
F	F3_A3388	-7.00	40	2	SDN	SDN23200	-7.00	24.29	29.89	25.69
F	F3_A3388	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_D2751	-7.00	1	1	ALB	ALB29600	-7.00	24.56	24.56	
F	F3_D2762	-7.00	2	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D2762	-7.00	6	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D2762	-7.00	10	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D2762	-7.00	14	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D2762	-7.00	18	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D2784	-7.00	4	3	EGY	EGY02600	-7.00	23.69		23.69
F	F3_D2784	-7.00	8	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_D2784	-7.00	12	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_D2784	-7.00	16	3	EGY	EGY02600	-7.00	23.49		23.49
F	F3_D2784	-7.00	20	3	EGY	EGY02600	-7.00	22.69		22.69
F	F3_D2728	-7.00	24	2	SDN	SDN23200	-7.00	25.39		25.39
F	F3_D2728	-7.00	24	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2728	-7.00	28	2	SDN	SDN23200	-7.00	25.29		25.29
F	F3_D2728	-7.00	28	2	NOR	BIFROS22	-0.80	25.88	49.09	25.90
F	F3_D2728	-7.00	32	1	NOR	NOR12102	5.00	27.58		27.58
F	F3_D2728	-7.00	32	2	SDN	SDN23200	-7.00	25.09		25.09
F	F3_D2728	-7.00	32	2	NOR	BIFROS22	-0.80	25.78	49.09	25.80
F	F3_D2728	-7.00	36	2	SDN	SDN23200	-7.00	25.19		25.19
F	F3_D2728	-7.00	36	2	NOR	BIFROS22	-0.80	25.88	49.09	25.90
F	F3_D2728	-7.00	40	1	S	S 13902	5.00	26.98		26.98
F	F3_D2728	-7.00	40	2	SDN	SDN23200	-7.00	25.69		25.69
F	F3_D2728	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_D2722	-7.00	2	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2722	-7.00	6	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2722	-7.00	10	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2722	-7.00	14	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2722	-7.00	18	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D2788	-7.00	24	2	SDN	SDN23200	-7.00	24.08	29.89	25.39
F	F3_D2788	-7.00	24	2	NOR	BIFROS22	-0.80	25.99	49.53	26.00
F	F3_D2788	-7.00	28	2	SDN	SDN23200	-7.00	24.00	29.89	25.29
F	F3_D2788	-7.00	28	2	NOR	BIFROS22	-0.80	25.89	49.53	25.90
F	F3_D2788	-7.00	32	1	NOR	NOR12102	5.00	27.57	58.44	27.58
F	F3_D2788	-7.00	32	2	SDN	SDN23200	-7.00	23.85	29.89	25.09
F	F3_D2788	-7.00	32	2	NOR	BIFROS22	-0.80	25.79	49.53	25.80
F	F3_D2788	-7.00	36	2	SDN	SDN23200	-7.00	23.93	29.89	25.19
F	F3_D2788	-7.00	36	2	NOR	BIFROS22	-0.80	25.89	49.53	25.90
F	F3_D2788	-7.00	40	1	S	S 13902	5.00	26.97	58.44	26.98
F	F3_D2788	-7.00	40	2	SDN	SDN23200	-7.00	24.29	29.89	25.69
F	F3_D2788	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	F3_D3351	-7.00	1	1	ALB	ALB29600	-7.00	24.56	24.56	
F	F3_D3362	-7.00	2	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D3362	-7.00	6	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D3362	-7.00	10	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D3362	-7.00	14	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D3362	-7.00	18	2	NOR	BIFROS22	-0.80	26.00		26.00
F	F3_D3384	-7.00	4	3	EGY	EGY02600	-7.00	23.69		23.69
F	F3_D3384	-7.00	8	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_D3384	-7.00	12	3	EGY	EGY02600	-7.00	23.59		23.59
F	F3_D3384	-7.00	16	3	EGY	EGY02600	-7.00	23.49		23.49

F	F3_D3384	-7.00	20	3	EGY	EGY02600	-7.00	22.19		22.19
F	F3_D3328	-7.00	24	2	SDN	SDN23200	-7.00	24.89		24.89
F	F3_D3328	-7.00	24	2	NOR	BIFROS22	-0.80	25.49	49.09	25.50
F	F3_D3328	-7.00	28	2	SDN	SDN23200	-7.00	24.69		24.69
F	F3_D3328	-7.00	28	2	NOR	BIFROS22	-0.80	25.29	49.09	25.30
F	F3_D3328	-7.00	32	1	NOR	NOR12102	5.00	27.08		27.08
F	F3_D3328	-7.00	32	2	SDN	SDN23200	-7.00	24.59		24.59
F	F3_D3328	-7.00	32	2	NOR	BIFROS22	-0.80	25.29	49.09	25.30
F	F3_D3328	-7.00	36	2	SDN	SDN23200	-7.00	24.69		24.69
F	F3_D3328	-7.00	36	2	NOR	BIFROS22	-0.80	25.39	49.09	25.40
F	F3_D3328	-7.00	40	1	S	S 13902	5.00	26.98		26.98
F	F3_D3328	-7.00	40	2	SDN	SDN23200	-7.00	25.69		25.69
F	F3_D3328	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.09	26.50
F	F3_D3322	-7.00	2	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D3322	-7.00	6	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D3322	-7.00	10	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D3322	-7.00	14	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D3322	-7.00	18	2	NOR	BIFROS22	-0.80	25.98	49.09	26.00
F	F3_D3388	-7.00	24	2	SDN	SDN23200	-7.00	23.70	29.89	24.89
F	F3_D3388	-7.00	24	2	NOR	BIFROS22	-0.80	25.49	49.53	25.50
F	F3_D3388	-7.00	28	2	SDN	SDN23200	-7.00	23.55	29.89	24.69
F	F3_D3388	-7.00	28	2	NOR	BIFROS22	-0.80	25.29	49.53	25.30
F	F3_D3388	-7.00	32	1	NOR	NOR12102	5.00	27.07	58.44	27.08
F	F3_D3388	-7.00	32	2	SDN	SDN23200	-7.00	23.47	29.89	24.59
F	F3_D3388	-7.00	32	2	NOR	BIFROS22	-0.80	25.29	49.53	25.30
F	F3_D3388	-7.00	36	2	SDN	SDN23200	-7.00	23.55	29.89	24.69
F	F3_D3388	-7.00	36	2	NOR	BIFROS22	-0.80	25.39	49.53	25.40
F	F3_D3388	-7.00	40	1	S	S 13902	5.00	26.97	58.44	26.98
F	F3_D3388	-7.00	40	2	SDN	SDN23200	-7.00	24.29	29.89	25.69
F	F3_D3388	-7.00	40	2	NOR	BIFROS22	-0.80	26.48	49.53	26.50
F	E2WA7DA1	29.00	1	5	MDG	MDG23600	29.00	24.41	25.96	29.62
F	E2WA7DA1	29.00	1	5	SMR	SMR31100	-37.00	24.58	62.12	24.58
F	E2WA7DA1	29.00	1	8	F	F 09300	-19.00	18.73	61.39	18.73
F	E2WA7DA1	29.00	1	8	F	F 09306	-7.00	23.55		23.55
F	E2WA7DA1	29.00	1	8	F	F3_A2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	1	8	F	F3_A3351	-7.00	26.46		26.46
F	E2WA7DA1	29.00	1	8	F	F3_D2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	1	8	F	F3_D3351	-7.00	27.33		27.33
F	E2WA7DA1	29.00	1	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	3	3	LIE	LIE25300	-37.00	24.71	61.43	24.71
F	E2WA7DA1	29.00	3	5	COM	COM20700	29.00	25.65	25.90	38.21
F	E2WA7DA1	29.00	3	6	LUX	LUX11400	-19.00	25.44	61.75	25.44
F	E2WA7DA1	29.00	3	8	F	F2_A2733	-7.00	24.46	62.01	24.46
F	E2WA7DA1	29.00	3	8	F	F2aA2773	-7.00	24.46		24.46
F	E2WA7DA1	29.00	3	8	F	F3_A2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	3	8	F	F3_A3373	-7.00	26.46		26.46
F	E2WA7DA1	29.00	3	8	F	F3_D2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	3	8	F	F3_D3373	-7.00	27.33		27.33
F	E2WA7DA1	29.00	3	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	5	5	MDG	MDG23600	29.00	24.38	25.96	29.52
F	E2WA7DA1	29.00	5	5	SMR	SMR31100	-37.00	24.48	62.12	24.48
F	E2WA7DA1	29.00	5	8	F	F 09300	-19.00	18.73	61.39	18.73
F	E2WA7DA1	29.00	5	8	F	F 09306	-7.00	23.55		23.55
F	E2WA7DA1	29.00	5	8	F	F3_A2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	5	8	F	F3_A3351	-7.00	26.46		26.46
F	E2WA7DA1	29.00	5	8	F	F3_D2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	5	8	F	F3_D3351	-7.00	27.33		27.33
F	E2WA7DA1	29.00	5	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	7	3	LIE	LIE25300	-37.00	24.61	61.43	24.61
F	E2WA7DA1	29.00	7	5	COM	COM20700	29.00	25.65	25.90	38.21
F	E2WA7DA1	29.00	7	6	LUX	LUX11400	-19.00	25.34	61.75	25.34
F	E2WA7DA1	29.00	7	8	F	F2_A2733	-7.00	24.46	62.01	24.46
F	E2WA7DA1	29.00	7	8	F	F2aA2773	-7.00	24.46		24.46
F	E2WA7DA1	29.00	7	8	F	F3_A2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	7	8	F	F3_A3373	-7.00	26.46		26.46

F	E2WA7DA1	29.00	7	8	F	F3_D2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	7	8	F	F3_D3373	-7.00	27.33		27.33
F	E2WA7DA1	29.00	7	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	9	5	MDG	MDG23600	29.00	24.38	25.96	29.52
F	E2WA7DA1	29.00	9	5	SMR	SMR31100	-37.00	24.48	62.12	24.48
F	E2WA7DA1	29.00	9	8	F	F 09300	-19.00	18.63	61.39	18.63
F	E2WA7DA1	29.00	9	8	F	F 09306	-7.00	23.55		23.55
F	E2WA7DA1	29.00	9	8	F	F3_A2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	9	8	F	F3_A3351	-7.00	26.46		26.46
F	E2WA7DA1	29.00	9	8	F	F3_D2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	9	8	F	F3_D3351	-7.00	27.33		27.33
F	E2WA7DA1	29.00	9	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	11	3	LIE	LIE25300	-37.00	24.61	61.43	24.61
F	E2WA7DA1	29.00	11	5	COM	COM20700	29.00	25.64	25.90	38.11
F	E2WA7DA1	29.00	11	6	LUX	LUX11400	-19.00	25.34	61.75	25.34
F	E2WA7DA1	29.00	11	8	F	F2_A2733	-7.00	24.46	62.01	24.46
F	E2WA7DA1	29.00	11	8	F	F2aA2773	-7.00	24.46		24.46
F	E2WA7DA1	29.00	11	8	F	F3_A2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	11	8	F	F3_A3373	-7.00	26.46		26.46
F	E2WA7DA1	29.00	11	8	F	F3_D2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	11	8	F	F3_D3373	-7.00	27.33		27.33
F	E2WA7DA1	29.00	11	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	13	5	MDG	MDG23600	29.00	24.35	25.96	29.42
F	E2WA7DA1	29.00	13	5	SMR	SMR31100	-37.00	24.38	62.12	24.38
F	E2WA7DA1	29.00	13	8	F	F 09300	-19.00	18.53	61.39	18.53
F	E2WA7DA1	29.00	13	8	F	F 09306	-7.00	23.55		23.55
F	E2WA7DA1	29.00	13	8	F	F3_A2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	13	8	F	F3_A3351	-7.00	26.46		26.46
F	E2WA7DA1	29.00	13	8	F	F3_D2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	13	8	F	F3_D3351	-7.00	27.33		27.33
F	E2WA7DA1	29.00	13	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	15	3	LIE	LIE25300	-37.00	24.51	61.43	24.51
F	E2WA7DA1	29.00	15	5	COM	COM20700	29.00	25.64	25.90	38.01
F	E2WA7DA1	29.00	15	6	LUX	LUX11400	-19.00	25.24	61.75	25.24
F	E2WA7DA1	29.00	15	8	F	F2_A2733	-7.00	24.76	62.01	24.76
F	E2WA7DA1	29.00	15	8	F	F2aA2773	-7.00	24.76		24.76
F	E2WA7DA1	29.00	15	8	F	F3_A2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	15	8	F	F3_A3373	-7.00	26.46		26.46
F	E2WA7DA1	29.00	15	8	F	F3_D2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	15	8	F	F3_D3373	-7.00	27.33		27.33
F	E2WA7DA1	29.00	15	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	17	5	MDG	MDG23600	29.00	24.35	25.96	29.42
F	E2WA7DA1	29.00	17	5	SMR	SMR31100	-37.00	24.28	62.12	24.28
F	E2WA7DA1	29.00	17	8	F	F 09300	-19.00	18.53	61.39	18.53
F	E2WA7DA1	29.00	17	8	F	F 09306	-7.00	23.55		23.55
F	E2WA7DA1	29.00	17	8	F	F3_A2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	17	8	F	F3_A3351	-7.00	26.46		26.46
F	E2WA7DA1	29.00	17	8	F	F3_D2751	-7.00	26.46		26.46
F	E2WA7DA1	29.00	17	8	F	F3_D3351	-7.00	27.33		27.33
F	E2WA7DA1	29.00	17	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	19	3	LIE	LIE25300	-37.00	24.51	61.43	24.51
F	E2WA7DA1	29.00	19	6	LUX	LUX11400	-19.00	25.24	61.75	25.24
F	E2WA7DA1	29.00	19	8	F	F2_A2733	-7.00	25.26	62.01	25.26
F	E2WA7DA1	29.00	19	8	F	F2aA2773	-7.00	25.26		25.26
F	E2WA7DA1	29.00	19	8	F	F3_A2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	19	8	F	F3_A3373	-7.00	26.46		26.46
F	E2WA7DA1	29.00	19	8	F	F3_D2773	-7.00	26.46		26.46
F	E2WA7DA1	29.00	19	8	F	F3_D3373	-7.00	27.33		27.33
F	E2WA7DA1	29.00	19	8	E	HISPASA2	-30.00	24.65		24.65
F	E2WA7DA1	29.00	21	2	BEL	BEL01800	-19.00	23.58	61.98	23.58
F	E2WA7DA1	29.00	21	8	MCO	MCO11600	-37.00	25.70	62.46	25.70
F	E2WA7DA1	29.00	23	2	HOL	HOL21300	-19.00	23.24	62.06	23.24
F	E2WA7DA1	29.00	23	4	ISL	ISL05000	5.00	23.74	60.77	23.74
F	E2WA7DA1	29.00	23	4	NOR	BIFROS21	-0.80	27.50	60.84	27.50
F	E2WA7DA1	29.00	23	5	CVA	CVA08500	-37.00	23.18	60.81	23.19

F	E2WA7DA1	29.00	23	8	E	E 12900	-30.00	24.44		24.44
F	E2WA7DA1	29.00	23	8	E	HISPASA4	-30.00	26.01		26.01
F	E2WA7DA1	29.00	23	8	E	HISPASA6	-30.00	26.01		26.01
F	E2WA7DA1	29.00	25	2	BEL	BEL01800	-19.00	23.68	61.98	23.68
F	E2WA7DA1	29.00	25	8	MCO	MCO11600	-37.00	25.60	62.46	25.60
F	E2WA7DA1	29.00	27	2	HOL	HOL21300	-19.00	23.14	62.06	23.14
F	E2WA7DA1	29.00	27	4	DNK	DNK09100	5.00	23.84	60.77	23.84
F	E2WA7DA1	29.00	27	4	NOR	BIFROS21	-0.80	27.50	60.84	27.50
F	E2WA7DA1	29.00	27	5	CVA	CVA08300	-37.00	22.24	60.77	22.24
F	E2WA7DA1	29.00	27	8	E	E 12900	-30.00	24.34		24.34
F	E2WA7DA1	29.00	27	8	E	HISPASA4	-30.00	26.01		26.01
F	E2WA7DA1	29.00	27	8	E	HISPASA6	-30.00	26.01		26.01
F	E2WA7DA1	29.00	29	2	BEL	BEL01800	-19.00	24.28	61.98	24.28
F	E2WA7DA1	29.00	29	8	MCO	MCO11600	-37.00	25.60	62.46	25.60
F	E2WA7DA1	29.00	31	2	HOL	HOL21300	-19.00	23.04	62.06	23.04
F	E2WA7DA1	29.00	31	4	ISL	ISL05000	5.00	23.64	60.77	23.64
F	E2WA7DA1	29.00	31	4	NOR	BIFROS21	-0.80	27.50	60.84	27.50
F	E2WA7DA1	29.00	31	5	CVA	CVA08300	-37.00	22.14	60.77	22.14
F	E2WA7DA1	29.00	31	8	E	E 12900	-30.00	24.34		24.34
F	E2WA7DA1	29.00	31	8	E	HISPASA4	-30.00	26.01		26.01
F	E2WA7DA1	29.00	31	8	E	HISPASA6	-30.00	26.01		26.01
F	E2WA7DA1	29.00	33	2	BEL	BEL01800	-19.00	23.88	61.98	23.88
F	E2WA7DA1	29.00	33	8	MCO	MCO11600	-37.00	25.50	62.46	25.50
F	E2WA7DA1	29.00	35	2	HOL	HOL21300	-19.00	23.04	62.06	23.04
F	E2WA7DA1	29.00	35	4	DNK	DNK09100	5.00	23.74	60.77	23.74
F	E2WA7DA1	29.00	35	4	NOR	BIFROS21	-0.80	27.50	60.84	27.50
F	E2WA7DA1	29.00	35	5	CVA	CVA08300	-37.00	22.14	60.77	22.14
F	E2WA7DA1	29.00	35	8	E	E 12900	-30.00	24.24		24.24
F	E2WA7DA1	29.00	35	8	E	HISPASA4	-30.00	26.01		26.01
F	E2WA7DA1	29.00	35	8	E	HISPASA6	-30.00	26.01		26.01
F	E2WA7DA1	29.00	37	2	BEL	BEL01800	-19.00	23.38	61.98	23.38
F	E2WA7DA1	29.00	37	8	MCO	MCO11600	-37.00	25.50	62.46	25.50
F	E2WA7DA1	29.00	39	2	HOL	HOL21300	-19.00	22.94	62.06	22.94
F	E2WA7DA1	29.00	39	4	ISL	ISL05000	5.00	23.54	60.77	23.54
F	E2WA7DA1	29.00	39	4	NOR	BIFROS21	-0.80	27.50	60.84	27.50
F	E2WA7DA1	29.00	39	5	CVA	CVA08300	-37.00	22.04	60.77	22.04
F	E2WA7DA1	29.00	39	8	E	E 12900	-30.00	24.14		24.14
F	E2WA7DA1	29.00	39	8	E	HISPASA4	-30.00	26.01		26.01
F	E2WA7DA1	29.00	39	8	E	HISPASA6	-30.00	26.01		26.01
F	E2WA7DA2	29.00	2	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	2	5	MAU	MAU24200	29.00	24.84	26.10	30.82
F	E2WA7DA2	29.00	2	8	F	F2_A2722	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	2	8	F	F2aA2722	-7.00	24.37	69.41	24.37
F	E2WA7DA2	29.00	2	8	F	F2aA2762	-7.00	24.37		24.37
F	E2WA7DA2	29.00	2	8	F	F3_A2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	2	8	F	F3_A2722	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	2	8	F	F3_A3362	-7.00	26.37		26.37
F	E2WA7DA2	29.00	2	8	F	F3_A3322	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	2	8	F	F3_D2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	2	8	F	F3_D2722	-7.00	26.37	70.28	26.37
F	E2WA7DA2	29.00	2	8	F	F3_D3362	-7.00	27.24		27.24
F	E2WA7DA2	29.00	2	8	F	F3_D3322	-7.00	27.24	70.28	27.24
F	E2WA7DA2	29.00	2	10	IRL	IRL21100	-33.50	23.57	63.25	23.57
F	E2WA7DA2	29.00	4	3	AUT	AUT01600	-19.00	22.80	61.15	22.80
F	E2WA7DA2	29.00	4	4	G	G 02700	-33.50	22.43	62.30	22.43
F	E2WA7DA2	29.00	4	5	MAU	MAU24300	29.00	24.79	26.03	30.81
F	E2WA7DA2	29.00	4	8	AND	AND34100	-37.00	25.59	62.18	25.59
F	E2WA7DA2	29.00	4	8	F	F2_A2744	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	4	8	F	F2aA2784	-7.00	24.37		24.37
F	E2WA7DA2	29.00	4	8	F	F3_A2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	4	8	F	F3_A3384	-7.00	26.37		26.37
F	E2WA7DA2	29.00	4	8	F	F3_D2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	4	8	F	F3_D3384	-7.00	27.24		27.24
F	E2WA7DA2	29.00	6	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	6	5	MAU	MAU24200	29.00	24.84	26.10	30.82

F	E2WA7DA2	29.00	6	8	F	F2_A2722	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	6	8	F	F2aA2722	-7.00	24.37	69.41	24.37
F	E2WA7DA2	29.00	6	8	F	F2aA2762	-7.00	24.37		24.37
F	E2WA7DA2	29.00	6	8	F	F3_A2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	6	8	F	F3_A2722	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	6	8	F	F3_A3362	-7.00	26.37		26.37
F	E2WA7DA2	29.00	6	8	F	F3_A3322	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	6	8	F	F3_D2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	6	8	F	F3_D2722	-7.00	26.37	70.28	26.37
F	E2WA7DA2	29.00	6	8	F	F3_D3362	-7.00	27.24		27.24
F	E2WA7DA2	29.00	6	8	F	F3_D3322	-7.00	27.24	70.28	27.24
F	E2WA7DA2	29.00	6	10	IRL	IRL21100	-33.50	23.47	63.25	23.47
F	E2WA7DA2	29.00	8	3	AUT	AUT01600	-19.00	22.70	61.15	22.70
F	E2WA7DA2	29.00	8	4	G	G 02700	-33.50	22.33	62.30	22.33
F	E2WA7DA2	29.00	8	5	MAU	MAU24300	29.00	24.76	26.03	30.71
F	E2WA7DA2	29.00	8	8	AND	AND34100	-37.00	25.59	62.18	25.59
F	E2WA7DA2	29.00	8	8	F	F2_A2744	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	8	8	F	F2aA2784	-7.00	24.37		24.37
F	E2WA7DA2	29.00	8	8	F	F3_A2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	8	8	F	F3_A3384	-7.00	26.37		26.37
F	E2WA7DA2	29.00	8	8	F	F3_D2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	8	8	F	F3_D3384	-7.00	27.24		27.24
F	E2WA7DA2	29.00	10	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	10	5	MAU	MAU24200	29.00	24.81	26.10	30.72
F	E2WA7DA2	29.00	10	8	F	F2_A2722	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	10	8	F	F2aA2722	-7.00	24.37	69.41	24.37
F	E2WA7DA2	29.00	10	8	F	F2aA2762	-7.00	24.37		24.37
F	E2WA7DA2	29.00	10	8	F	F3_A2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	10	8	F	F3_A2722	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	10	8	F	F3_A3362	-7.00	26.37		26.37
F	E2WA7DA2	29.00	10	8	F	F3_A3322	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	10	8	F	F3_D2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	10	8	F	F3_D2722	-7.00	26.37	70.28	26.37
F	E2WA7DA2	29.00	10	8	F	F3_D3362	-7.00	27.24		27.24
F	E2WA7DA2	29.00	10	8	F	F3_D3322	-7.00	27.24	70.28	27.24
F	E2WA7DA2	29.00	10	10	IRL	IRL21100	-33.50	23.37	63.25	23.37
F	E2WA7DA2	29.00	12	3	AUT	AUT01600	-19.00	22.70	61.15	22.70
F	E2WA7DA2	29.00	12	4	G	G 02700	-33.50	22.33	62.30	22.33
F	E2WA7DA2	29.00	12	5	MAU	MAU24300	29.00	24.76	26.03	30.71
F	E2WA7DA2	29.00	12	8	AND	AND34100	-37.00	25.49	62.18	25.49
F	E2WA7DA2	29.00	12	8	F	F2_A2744	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	12	8	F	F2aA2784	-7.00	24.37		24.37
F	E2WA7DA2	29.00	12	8	F	F3_A2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	12	8	F	F3_A3384	-7.00	26.37		26.37
F	E2WA7DA2	29.00	12	8	F	F3_D2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	12	8	F	F3_D3384	-7.00	27.24		27.24
F	E2WA7DA2	29.00	14	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	14	5	MAU	MAU24200	29.00	24.81	26.10	30.72
F	E2WA7DA2	29.00	14	8	F	F2_A2722	-7.00	24.67	62.01	24.67
F	E2WA7DA2	29.00	14	8	F	F2aA2722	-7.00	24.67	69.41	24.67
F	E2WA7DA2	29.00	14	8	F	F2aA2762	-7.00	24.67		24.67
F	E2WA7DA2	29.00	14	8	F	F3_A2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	14	8	F	F3_A2722	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	14	8	F	F3_A3362	-7.00	26.37		26.37
F	E2WA7DA2	29.00	14	8	F	F3_A3322	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	14	8	F	F3_D2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	14	8	F	F3_D2722	-7.00	26.37	70.28	26.37
F	E2WA7DA2	29.00	14	8	F	F3_D3362	-7.00	27.24		27.24
F	E2WA7DA2	29.00	14	8	F	F3_D3322	-7.00	27.24	70.28	27.24
F	E2WA7DA2	29.00	14	10	IRL	IRL21100	-33.50	23.37	63.25	23.37
F	E2WA7DA2	29.00	16	3	AUT	AUT01600	-19.00	22.60	61.15	22.60
F	E2WA7DA2	29.00	16	4	G	G 02700	-33.50	22.23	62.30	22.23
F	E2WA7DA2	29.00	16	5	MAU	MAU24300	29.00	24.74	26.03	30.61
F	E2WA7DA2	29.00	16	8	AND	AND34100	-37.00	25.49	62.18	25.49
F	E2WA7DA2	29.00	16	8	F	F2_A2744	-7.00	24.37	62.01	24.37

F	E2WA7DA2	29.00	16	8	F	F2aA2784	-7.00	24.37		24.37
F	E2WA7DA2	29.00	16	8	F	F3_A2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	16	8	F	F3_A3384	-7.00	26.37		26.37
F	E2WA7DA2	29.00	16	8	F	F3_D2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	16	8	F	F3_D3384	-7.00	27.24		27.24
F	E2WA7DA2	29.00	18	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	18	5	MAU	MAU24200	29.00	24.78	26.10	30.62
F	E2WA7DA2	29.00	18	8	F	F2_A2722	-7.00	25.17	62.01	25.17
F	E2WA7DA2	29.00	18	8	F	F2aA2722	-7.00	25.17	69.41	25.17
F	E2WA7DA2	29.00	18	8	F	F2aA2762	-7.00	25.17		25.17
F	E2WA7DA2	29.00	18	8	F	F3_A2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	18	8	F	F3_A2722	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	18	8	F	F3_A3362	-7.00	26.37		26.37
F	E2WA7DA2	29.00	18	8	F	F3_A3322	-7.00	26.37	69.41	26.37
F	E2WA7DA2	29.00	18	8	F	F3_D2762	-7.00	26.37		26.37
F	E2WA7DA2	29.00	18	8	F	F3_D2722	-7.00	26.37	70.28	26.37
F	E2WA7DA2	29.00	18	8	F	F3_D3362	-7.00	27.24		27.24
F	E2WA7DA2	29.00	18	8	F	F3_D3322	-7.00	27.24	70.28	27.24
F	E2WA7DA2	29.00	18	10	IRL	IRL21100	-33.50	23.27	63.25	23.27
F	E2WA7DA2	29.00	20	3	AUT	AUT01600	-19.00	22.60	61.15	22.60
F	E2WA7DA2	29.00	20	4	G	G 02700	-33.50	22.23	62.30	22.23
F	E2WA7DA2	29.00	20	8	AND	AND34100	-37.00	25.39	62.18	25.39
F	E2WA7DA2	29.00	20	8	F	F2_A2744	-7.00	24.37	62.01	24.37
F	E2WA7DA2	29.00	20	8	F	F2aA2784	-7.00	24.37		24.37
F	E2WA7DA2	29.00	20	8	F	F3_A2784	-7.00	26.37		26.37
F	E2WA7DA2	29.00	20	8	F	F3_A3384	-7.00	26.37		26.37
F	E2WA7DA2	29.00	20	8	F	F3_D2784	-7.00	27.17		27.17
F	E2WA7DA2	29.00	22	2	FIN	FIN10400	5.00	24.22	58.92	24.22
F	E2WA7DA2	29.00	22	3	SUI	SUI14000	-19.00	22.82	61.36	22.82
F	E2WA7DA2	29.00	22	4	G	G UKDBS	-33.50	22.36	62.30	22.36
F	E2WA7DA2	29.00	22	5	F	REU09700	29.00	25.29	26.07	33.11
F	E2WA7DA2	29.00	22	5	F	REU09701	29.00	20.29	20.52	33.11
F	E2WA7DA2	29.00	24	2	DNK	DNK09000	5.00	24.42	58.92	24.42
F	E2WA7DA2	29.00	24	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	24	5	I	I 08200	-19.00	22.75	61.18	22.75
F	E2WA7DA2	29.00	24	5	F	MYT09800	29.00	25.72	25.93	38.91
F	E2WA7DA2	29.00	24	5	F	MYT09801	29.00	20.46	20.52	38.91
F	E2WA7DA2	29.00	24	8	F	F2_A2788	-7.00	24.46	62.01	24.46
F	E2WA7DA2	29.00	24	8	F	F2aA2728	-7.00	24.46		24.46
F	E2WA7DA2	29.00	24	8	F	F2aA2788	-7.00	24.46	69.14	24.46
F	E2WA7DA2	29.00	24	8	F	F3_A2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	24	8	F	F3_A2788	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	24	8	F	F3_A3328	-7.00	26.46		26.46
F	E2WA7DA2	29.00	24	8	F	F3_A3388	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	24	8	F	F3_D2728	-7.00	26.96		26.96
F	E2WA7DA2	29.00	24	8	F	F3_D2788	-7.00	26.96	70.01	26.96
F	E2WA7DA2	29.00	26	2	FIN	FIN10400	5.00	24.42	58.92	24.42
F	E2WA7DA2	29.00	26	3	SUI	SUI14000	-19.00	22.82	61.36	22.82
F	E2WA7DA2	29.00	26	4	G	G UKDBS	-33.50	22.36	62.30	22.36
F	E2WA7DA2	29.00	26	5	F	REU09700	29.00	25.27	26.07	33.01
F	E2WA7DA2	29.00	26	5	F	REU09701	29.00	20.28	20.52	33.01
F	E2WA7DA2	29.00	28	2	NOR	NOR12101	5.00	25.12	58.92	25.12
F	E2WA7DA2	29.00	28	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	28	5	I	I 08200	-19.00	22.65	61.18	22.65
F	E2WA7DA2	29.00	28	5	F	MYT09800	29.00	25.71	25.93	38.81
F	E2WA7DA2	29.00	28	5	F	MYT09801	29.00	20.45	20.52	38.81
F	E2WA7DA2	29.00	28	8	F	F2_A2788	-7.00	24.46	62.01	24.46
F	E2WA7DA2	29.00	28	8	F	F2aA2728	-7.00	24.46		24.46
F	E2WA7DA2	29.00	28	8	F	F2aA2788	-7.00	24.46	69.14	24.46
F	E2WA7DA2	29.00	28	8	F	F3_A2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	28	8	F	F3_A2788	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	28	8	F	F3_A3328	-7.00	26.46		26.46
F	E2WA7DA2	29.00	28	8	F	F3_A3388	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	28	8	F	F3_D2728	-7.00	27.06		27.06
F	E2WA7DA2	29.00	28	8	F	F3_D2788	-7.00	27.06	70.01	27.06

F	E2WA7DA2	29.00	30	2	S	S 13900	5.00	24.82	58.92	24.82
F	E2WA7DA2	29.00	30	3	SUI	SUI14000	-19.00	22.72	61.36	22.72
F	E2WA7DA2	29.00	30	4	G	G UKDBS	-33.50	22.36	62.30	22.36
F	E2WA7DA2	29.00	30	5	F	REU09700	29.00	25.25	26.07	32.91
F	E2WA7DA2	29.00	30	5	F	REU09701	29.00	20.27	20.52	32.91
F	E2WA7DA2	29.00	32	2	NOR	NOR12102	5.00	19.91	55.92	19.91
F	E2WA7DA2	29.00	32	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	32	5	I	I 08200	-19.00	22.65	61.18	22.65
F	E2WA7DA2	29.00	32	5	F	MYT09800	29.00	25.71	25.93	38.81
F	E2WA7DA2	29.00	32	5	F	MYT09801	29.00	20.45	20.52	38.81
F	E2WA7DA2	29.00	32	8	F	F2_A2788	-7.00	24.46	62.01	24.46
F	E2WA7DA2	29.00	32	8	F	F2aA2728	-7.00	24.46		24.46
F	E2WA7DA2	29.00	32	8	F	F2aA2788	-7.00	24.46	69.14	24.46
F	E2WA7DA2	29.00	32	8	F	F3_A2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	32	8	F	F3_A2788	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	32	8	F	F3_A3328	-7.00	26.46		26.46
F	E2WA7DA2	29.00	32	8	F	F3_A3388	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	32	8	F	F3_D2728	-7.00	27.16		27.16
F	E2WA7DA2	29.00	32	8	F	F3_D2788	-7.00	27.16	70.01	27.16
F	E2WA7DA2	29.00	34	3	SUI	SUI14000	-19.00	22.62	61.36	22.62
F	E2WA7DA2	29.00	34	4	G	G UKDBS	-33.50	22.36	62.30	22.36
F	E2WA7DA2	29.00	34	5	F	REU09700	29.00	25.25	26.07	32.91
F	E2WA7DA2	29.00	34	5	F	REU09701	29.00	20.27	20.52	32.91
F	E2WA7DA2	29.00	36	2	DNK	DNK09000	5.00	23.72	58.92	23.72
F	E2WA7DA2	29.00	36	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	36	5	I	I 08200	-19.00	22.55	61.18	22.55
F	E2WA7DA2	29.00	36	5	F	MYT09800	29.00	25.71	25.93	38.71
F	E2WA7DA2	29.00	36	5	F	MYT09801	29.00	20.45	20.52	38.71
F	E2WA7DA2	29.00	36	8	F	F2_A2788	-7.00	24.46	62.01	24.46
F	E2WA7DA2	29.00	36	8	F	F2aA2728	-7.00	24.46		24.46
F	E2WA7DA2	29.00	36	8	F	F2aA2788	-7.00	24.46	69.14	24.46
F	E2WA7DA2	29.00	36	8	F	F3_A2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	36	8	F	F3_A2788	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	36	8	F	F3_A3328	-7.00	26.46		26.46
F	E2WA7DA2	29.00	36	8	F	F3_A3388	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	36	8	F	F3_D2728	-7.00	27.06		27.06
F	E2WA7DA2	29.00	36	8	F	F3_D2788	-7.00	27.06	70.01	27.06
F	E2WA7DA2	29.00	38	3	SUI	SUI14000	-19.00	22.62	61.36	22.62
F	E2WA7DA2	29.00	38	4	G	G UKDBS	-33.50	22.36	62.30	22.36
F	E2WA7DA2	29.00	38	4	NOR	NOR12000	5.00	26.21	58.92	26.21
F	E2WA7DA2	29.00	38	5	F	REU09700	29.00	25.24	26.07	32.81
F	E2WA7DA2	29.00	38	5	F	REU09701	29.00	20.27	20.52	32.81
F	E2WA7DA2	29.00	40	2	S	S 13902	5.00	18.61	55.92	18.61
F	E2WA7DA2	29.00	40	4	NOR	BIFROS22	-0.80	27.50	60.84	27.50
F	E2WA7DA2	29.00	40	5	I	I 08200	-19.00	22.55	61.18	22.55
F	E2WA7DA2	29.00	40	5	F	MYT09800	29.00	25.71	25.93	38.71
F	E2WA7DA2	29.00	40	5	F	MYT09801	29.00	20.45	20.52	38.71
F	E2WA7DA2	29.00	40	8	F	F2_A2788	-7.00	24.46	62.01	24.46
F	E2WA7DA2	29.00	40	8	F	F2aA2728	-7.00	24.46		24.46
F	E2WA7DA2	29.00	40	8	F	F2aA2788	-7.00	24.46	69.14	24.46
F	E2WA7DA2	29.00	40	8	F	F3_A2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	40	8	F	F3_A2788	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	40	8	F	F3_A3328	-7.00	26.46		26.46
F	E2WA7DA2	29.00	40	8	F	F3_A3388	-7.00	26.46	69.14	26.46
F	E2WA7DA2	29.00	40	8	F	F3_D2728	-7.00	26.46		26.46
F	E2WA7DA2	29.00	40	8	F	F3_D2788	-7.00	26.46	70.01	26.46
F	E2WA7DA2	29.00	40	8	F	F3_D3328	-7.00	27.33		27.33
F	E2WA7DA2	29.00	40	8	F	F3_D3388	-7.00	27.33	70.01	27.33
F	E2WA7DB1	29.00	1	2	MDG	MDG23600	29.00	24.78	25.96	31.00
F	E2WA7DB1	29.00	1	3	POL	POL13200	-1.00	26.29	57.09	26.29
F	E2WA7DB1	29.00	1	6	SMR	SMR31100	-37.00	26.81	62.12	26.81
F	E2WA7DB1	29.00	1	7	F	F 09300	-19.00	19.73	61.39	19.73
F	E2WA7DB1	29.00	1	7	F	F 09306	-7.00	24.61		24.61
F	E2WA7DB1	29.00	1	7	F	F3_A2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	1	7	F	F3_A3351	-7.00	27.52		27.52

F	E2WA7DB1	29.00	1	7	F	F3_D2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	1	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	3	2	COM	COM20700	29.00	25.71	25.90	39.59
F	E2WA7DB1	29.00	3	2	LUX	LUX11400	-19.00	26.05	61.75	26.06
F	E2WA7DB1	29.00	3	4	GRC	GRC10500	5.00	27.35	58.01	27.36
F	E2WA7DB1	29.00	3	7	LIE	LIE25300	-37.00	26.26	61.43	26.26
F	E2WA7DB1	29.00	3	7	F	F2_A2733	-7.00	25.52	62.01	25.52
F	E2WA7DB1	29.00	3	7	F	F2aA2773	-7.00	25.52		25.52
F	E2WA7DB1	29.00	3	7	F	F3_A2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	3	7	F	F3_A3373	-7.00	27.52		27.52
F	E2WA7DB1	29.00	3	7	F	F3_D2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	3	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	5	2	MDG	MDG23600	29.00	24.75	25.96	30.90
F	E2WA7DB1	29.00	5	3	POL	POL13200	-1.00	26.19	57.09	26.19
F	E2WA7DB1	29.00	5	6	SMR	SMR31100	-37.00	26.71	62.12	26.71
F	E2WA7DB1	29.00	5	7	F	F 09300	-19.00	19.73	61.39	19.73
F	E2WA7DB1	29.00	5	7	F	F 09306	-7.00	24.61		24.61
F	E2WA7DB1	29.00	5	7	F	F3_A2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	5	7	F	F3_A3351	-7.00	27.52		27.52
F	E2WA7DB1	29.00	5	7	F	F3_D2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	5	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	7	2	COM	COM20700	29.00	25.71	25.90	39.59
F	E2WA7DB1	29.00	7	2	LUX	LUX11400	-19.00	25.95	61.75	25.96
F	E2WA7DB1	29.00	7	4	GRC	GRC10500	5.00	27.25	58.01	27.26
F	E2WA7DB1	29.00	7	7	LIE	LIE25300	-37.00	26.16	61.43	26.16
F	E2WA7DB1	29.00	7	7	F	F2_A2733	-7.00	25.52	62.01	25.52
F	E2WA7DB1	29.00	7	7	F	F2aA2773	-7.00	25.52		25.52
F	E2WA7DB1	29.00	7	7	F	F3_A2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	7	7	F	F3_A3373	-7.00	27.52		27.52
F	E2WA7DB1	29.00	7	7	F	F3_D2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	7	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	9	2	MDG	MDG23600	29.00	24.75	25.96	30.90
F	E2WA7DB1	29.00	9	3	POL	POL13200	-1.00	26.19	57.09	26.19
F	E2WA7DB1	29.00	9	6	SMR	SMR31100	-37.00	26.71	62.12	26.71
F	E2WA7DB1	29.00	9	7	F	F 09300	-19.00	19.63	61.39	19.63
F	E2WA7DB1	29.00	9	7	F	F 09306	-7.00	24.61		24.61
F	E2WA7DB1	29.00	9	7	F	F3_A2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	9	7	F	F3_A3351	-7.00	27.52		27.52
F	E2WA7DB1	29.00	9	7	F	F3_D2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	9	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	11	2	COM	COM20700	29.00	25.71	25.90	39.49
F	E2WA7DB1	29.00	11	2	LUX	LUX11400	-19.00	25.95	61.75	25.96
F	E2WA7DB1	29.00	11	4	GRC	GRC10500	5.00	27.25	58.01	27.26
F	E2WA7DB1	29.00	11	7	LIE	LIE25300	-37.00	26.16	61.43	26.16
F	E2WA7DB1	29.00	11	7	F	F2_A2733	-7.00	25.52	62.01	25.52
F	E2WA7DB1	29.00	11	7	F	F2aA2773	-7.00	25.52		25.52
F	E2WA7DB1	29.00	11	7	F	F3_A2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	11	7	F	F3_A3373	-7.00	27.52		27.52
F	E2WA7DB1	29.00	11	7	F	F3_D2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	11	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	13	2	MDG	MDG23600	29.00	24.73	25.96	30.80
F	E2WA7DB1	29.00	13	3	POL	POL13200	-1.00	26.09	57.09	26.09
F	E2WA7DB1	29.00	13	6	SMR	SMR31100	-37.00	26.61	62.12	26.61
F	E2WA7DB1	29.00	13	7	F	F 09300	-19.00	19.53	61.39	19.53
F	E2WA7DB1	29.00	13	7	F	F 09306	-7.00	24.61		24.61
F	E2WA7DB1	29.00	13	7	F	F3_A2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	13	7	F	F3_A3351	-7.00	27.52		27.52
F	E2WA7DB1	29.00	13	7	F	F3_D2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	13	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	15	2	COM	COM20700	29.00	25.71	25.90	39.39
F	E2WA7DB1	29.00	15	2	LUX	LUX11400	-19.00	25.85	61.75	25.86
F	E2WA7DB1	29.00	15	4	GRC	GRC10500	5.00	27.15	58.01	27.16
F	E2WA7DB1	29.00	15	7	LIE	LIE25300	-37.00	26.06	61.43	26.06
F	E2WA7DB1	29.00	15	7	F	F2_A2733	-7.00	25.82	62.01	25.82
F	E2WA7DB1	29.00	15	7	F	F2aA2773	-7.00	25.82		25.82

F	E2WA7DB1	29.00	15	7	F	F3_A2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	15	7	F	F3_A3373	-7.00	27.52		27.52
F	E2WA7DB1	29.00	15	7	F	F3_D2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	15	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	17	2	MDG	MDG23600	29.00	24.73	25.96	30.80
F	E2WA7DB1	29.00	17	3	POL	POL13200	-1.00	26.09	57.09	26.09
F	E2WA7DB1	29.00	17	6	SMR	SMR31100	-37.00	26.51	62.12	26.51
F	E2WA7DB1	29.00	17	7	F	F 09300	-19.00	19.53	61.39	19.53
F	E2WA7DB1	29.00	17	7	F	F 09306	-7.00	24.61		24.61
F	E2WA7DB1	29.00	17	7	F	F3_A2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	17	7	F	F3_A3351	-7.00	27.52		27.52
F	E2WA7DB1	29.00	17	7	F	F3_D2751	-7.00	27.52		27.52
F	E2WA7DB1	29.00	17	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	19	2	LUX	LUX11400	-19.00	25.85	61.75	25.86
F	E2WA7DB1	29.00	19	4	GRC	GRC10500	5.00	27.15	58.01	27.16
F	E2WA7DB1	29.00	19	7	LIE	LIE25300	-37.00	26.06	61.43	26.06
F	E2WA7DB1	29.00	19	7	F	F2_A2733	-7.00	26.32	62.01	26.32
F	E2WA7DB1	29.00	19	7	F	F2aA2773	-7.00	26.32		26.32
F	E2WA7DB1	29.00	19	7	F	F3_A2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	19	7	F	F3_A3373	-7.00	27.52		27.52
F	E2WA7DB1	29.00	19	7	F	F3_D2773	-7.00	27.52		27.52
F	E2WA7DB1	29.00	19	7	E	HISPASA2	-30.00	27.00		27.00
F	E2WA7DB1	29.00	21	2	BEL	BEL01800	-19.00	25.49	61.98	25.49
F	E2WA7DB1	29.00	21	9	MCO	MCO11600	-37.00	26.44	62.46	26.44
F	E2WA7DB1	29.00	23	2	HOL	HOL21300	-19.00	25.19	62.06	25.19
F	E2WA7DB1	29.00	23	6	CVA	CVA08500	-37.00	24.72	60.81	24.72
F	E2WA7DB1	29.00	25	2	BEL	BEL01800	-19.00	25.59	61.98	25.59
F	E2WA7DB1	29.00	25	9	MCO	MCO11600	-37.00	26.34	62.46	26.34
F	E2WA7DB1	29.00	27	2	HOL	HOL21300	-19.00	25.09	62.06	25.09
F	E2WA7DB1	29.00	27	6	CVA	CVA08300	-37.00	23.37	60.77	23.37
F	E2WA7DB1	29.00	29	2	BEL	BEL01800	-19.00	26.19	61.98	26.19
F	E2WA7DB1	29.00	29	9	MCO	MCO11600	-37.00	26.34	62.46	26.34
F	E2WA7DB1	29.00	31	2	HOL	HOL21300	-19.00	24.99	62.06	24.99
F	E2WA7DB1	29.00	31	6	CVA	CVA08300	-37.00	23.27	60.77	23.27
F	E2WA7DB1	29.00	33	2	BEL	BEL01800	-19.00	25.79	61.98	25.79
F	E2WA7DB1	29.00	33	9	MCO	MCO11600	-37.00	26.24	62.46	26.24
F	E2WA7DB1	29.00	35	2	HOL	HOL21300	-19.00	24.99	62.06	24.99
F	E2WA7DB1	29.00	35	6	CVA	CVA08300	-37.00	23.27	60.77	23.27
F	E2WA7DB1	29.00	37	2	BEL	BEL01800	-19.00	25.29	61.98	25.29
F	E2WA7DB1	29.00	37	9	MCO	MCO11600	-37.00	26.24	62.46	26.24
F	E2WA7DB1	29.00	39	2	HOL	HOL21300	-19.00	24.89	62.06	24.89
F	E2WA7DB1	29.00	39	6	CVA	CVA08300	-37.00	23.17	60.77	23.17
F	E2WA7DB2	29.00	2	2	MAU	MAU24200	29.00	25.14	26.10	32.20
F	E2WA7DB2	29.00	2	7	F	F2_A2722	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	2	7	F	F2aA2722	-7.00	25.47	69.41	25.47
F	E2WA7DB2	29.00	2	7	F	F2aA2762	-7.00	25.47		25.47
F	E2WA7DB2	29.00	2	7	F	F3_A2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	2	7	F	F3_A2722	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	2	7	F	F3_A3362	-7.00	27.47		27.47
F	E2WA7DB2	29.00	2	7	F	F3_A3322	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	2	7	F	F3_D2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	2	7	F	F3_D2722	-7.00	27.47	70.28	27.47
F	E2WA7DB2	29.00	4	2	MAU	MAU24300	29.00	25.09	26.03	32.19
F	E2WA7DB2	29.00	4	2	S	S 13800	5.00	25.00	58.92	25.00
F	E2WA7DB2	29.00	4	3	AUT	AUT01600	-19.00	25.28	61.15	25.28
F	E2WA7DB2	29.00	4	7	F	F2_A2744	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	4	7	F	F2aA2784	-7.00	25.47		25.47
F	E2WA7DB2	29.00	4	7	F	F3_A2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	4	7	F	F3_A3384	-7.00	27.47		27.47
F	E2WA7DB2	29.00	4	7	F	F3_D2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	6	2	MAU	MAU24200	29.00	25.14	26.10	32.20
F	E2WA7DB2	29.00	6	7	F	F2_A2722	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	6	7	F	F2aA2722	-7.00	25.47	69.41	25.47
F	E2WA7DB2	29.00	6	7	F	F2aA2762	-7.00	25.47		25.47
F	E2WA7DB2	29.00	6	7	F	F3_A2762	-7.00	27.47		27.47

F	E2WA7DB2	29.00	6	7	F	F3_A2722	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	6	7	F	F3_A3362	-7.00	27.47		27.47
F	E2WA7DB2	29.00	6	7	F	F3_A3322	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	6	7	F	F3_D2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	6	7	F	F3_D2722	-7.00	27.47	70.28	27.47
F	E2WA7DB2	29.00	8	2	MAU	MAU24300	29.00	25.07	26.03	32.09
F	E2WA7DB2	29.00	8	2	S	S 13800	5.00	25.00	58.92	25.00
F	E2WA7DB2	29.00	8	3	AUT	AUT01600	-19.00	25.18	61.15	25.18
F	E2WA7DB2	29.00	8	7	F	F2_A2744	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	8	7	F	F2aA2784	-7.00	25.47		25.47
F	E2WA7DB2	29.00	8	7	F	F3_A2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	8	7	F	F3_A3384	-7.00	27.47		27.47
F	E2WA7DB2	29.00	8	7	F	F3_D2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	10	2	MAU	MAU24200	29.00	25.12	26.10	32.10
F	E2WA7DB2	29.00	10	7	F	F2_A2722	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	10	7	F	F2aA2722	-7.00	25.47	69.41	25.47
F	E2WA7DB2	29.00	10	7	F	F2aA2762	-7.00	25.47		25.47
F	E2WA7DB2	29.00	10	7	F	F3_A2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	10	7	F	F3_A2722	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	10	7	F	F3_A3362	-7.00	27.47		27.47
F	E2WA7DB2	29.00	10	7	F	F3_A3322	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	10	7	F	F3_D2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	10	7	F	F3_D2722	-7.00	27.47	70.28	27.47
F	E2WA7DB2	29.00	12	2	DNK	DNK08900	5.00	26.03	58.92	26.03
F	E2WA7DB2	29.00	12	2	MAU	MAU24300	29.00	25.07	26.03	32.09
F	E2WA7DB2	29.00	12	3	AUT	AUT01600	-19.00	25.18	61.15	25.18
F	E2WA7DB2	29.00	12	5	MLT	MLT14700	-13.00	27.96	61.84	27.96
F	E2WA7DB2	29.00	12	7	F	F2_A2744	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	12	7	F	F2aA2784	-7.00	25.47		25.47
F	E2WA7DB2	29.00	12	7	F	F3_A2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	12	7	F	F3_A3384	-7.00	27.47		27.47
F	E2WA7DB2	29.00	12	7	F	F3_D2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	14	2	MAU	MAU24200	29.00	25.12	26.10	32.10
F	E2WA7DB2	29.00	14	7	F	F2_A2722	-7.00	25.77	62.01	25.77
F	E2WA7DB2	29.00	14	7	F	F2aA2722	-7.00	25.77	69.41	25.77
F	E2WA7DB2	29.00	14	7	F	F2aA2762	-7.00	25.77		25.77
F	E2WA7DB2	29.00	14	7	F	F3_A2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	14	7	F	F3_A2722	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	14	7	F	F3_A3362	-7.00	27.47		27.47
F	E2WA7DB2	29.00	14	7	F	F3_A3322	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	14	7	F	F3_D2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	14	7	F	F3_D2722	-7.00	27.47	70.28	27.47
F	E2WA7DB2	29.00	16	2	DNK	DNK08900	5.00	25.93	58.92	25.93
F	E2WA7DB2	29.00	16	2	MAU	MAU24300	29.00	25.05	26.03	31.99
F	E2WA7DB2	29.00	16	3	AUT	AUT01600	-19.00	25.08	61.15	25.08
F	E2WA7DB2	29.00	16	5	MLT	MLT14700	-13.00	27.86	61.84	27.86
F	E2WA7DB2	29.00	16	7	F	F2_A2744	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	16	7	F	F2aA2784	-7.00	25.47		25.47
F	E2WA7DB2	29.00	16	7	F	F3_A2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	16	7	F	F3_A3384	-7.00	27.47		27.47
F	E2WA7DB2	29.00	16	7	F	F3_D2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	18	2	MAU	MAU24200	29.00	25.10	26.10	32.00
F	E2WA7DB2	29.00	18	7	F	F2_A2722	-7.00	26.27	62.01	26.27
F	E2WA7DB2	29.00	18	7	F	F2aA2722	-7.00	26.27	69.41	26.27
F	E2WA7DB2	29.00	18	7	F	F2aA2762	-7.00	26.27		26.27
F	E2WA7DB2	29.00	18	7	F	F3_A2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	18	7	F	F3_A2722	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	18	7	F	F3_A3362	-7.00	27.47		27.47
F	E2WA7DB2	29.00	18	7	F	F3_A3322	-7.00	27.47	69.41	27.47
F	E2WA7DB2	29.00	18	7	F	F3_D2762	-7.00	27.47		27.47
F	E2WA7DB2	29.00	18	7	F	F3_D2722	-7.00	27.47	70.28	27.47
F	E2WA7DB2	29.00	20	2	DNK	DNK08901	5.00	25.93	58.92	25.93
F	E2WA7DB2	29.00	20	3	AUT	AUT01600	-19.00	25.08	61.15	25.08
F	E2WA7DB2	29.00	20	7	F	F2_A2744	-7.00	25.47	62.01	25.47
F	E2WA7DB2	29.00	20	7	F	F2aA2784	-7.00	25.47		25.47

F	E2WA7DB2	29.00	20	7	F	F3_A2784	-7.00	27.47		27.47
F	E2WA7DB2	29.00	20	7	F	F3_A3384	-7.00	27.47		27.47
F	E2WA7DB2	29.00	22	2	FIN	FIN10400	5.00	23.25	58.92	23.25
F	E2WA7DB2	29.00	22	2	F	REU09700	29.00	25.49	26.07	34.49
F	E2WA7DB2	29.00	22	2	F	REU09701	29.00	20.35	20.52	34.49
F	E2WA7DB2	29.00	22	3	HNG	HNG10600	-1.00	24.62	59.80	24.62
F	E2WA7DB2	29.00	22	4	ALB	ALB29600	-7.00	24.51		24.51
F	E2WA7DB2	29.00	22	7	SUI	SUI14000	-19.00	24.28	61.36	24.28
F	E2WA7DB2	29.00	24	2	DNK	DNK09000	5.00	23.45	58.92	23.45
F	E2WA7DB2	29.00	24	2	F	MYT09800	29.00	25.77	25.93	40.30
F	E2WA7DB2	29.00	24	2	F	MYT09801	29.00	20.47	20.52	40.30
F	E2WA7DB2	29.00	24	6	I	I 08200	-19.00	24.35	61.18	24.36
F	E2WA7DB2	29.00	24	7	F	F2_A2788	-7.00	25.52	62.01	25.52
F	E2WA7DB2	29.00	24	7	F	F2aA2728	-7.00	25.52		25.52
F	E2WA7DB2	29.00	24	7	F	F2aA2788	-7.00	25.52	69.14	25.52
F	E2WA7DB2	29.00	24	7	F	F3_A2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	24	7	F	F3_A2788	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	24	7	F	F3_A3328	-7.00	27.52		27.52
F	E2WA7DB2	29.00	24	7	F	F3_A3388	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	26	2	FIN	FIN10400	5.00	23.45	58.92	23.45
F	E2WA7DB2	29.00	26	2	F	REU09700	29.00	25.47	26.07	34.39
F	E2WA7DB2	29.00	26	2	F	REU09701	29.00	20.34	20.52	34.39
F	E2WA7DB2	29.00	26	3	HNG	HNG10600	-1.00	24.62	59.80	24.62
F	E2WA7DB2	29.00	26	4	ALB	ALB29600	-7.00	24.51		24.51
F	E2WA7DB2	29.00	26	7	SUI	SUI14000	-19.00	24.28	61.36	24.28
F	E2WA7DB2	29.00	28	2	F	MYT09800	29.00	25.77	25.93	40.20
F	E2WA7DB2	29.00	28	2	F	MYT09801	29.00	20.47	20.52	40.20
F	E2WA7DB2	29.00	28	2	NOR	NOR12101	5.00	24.15	58.92	24.15
F	E2WA7DB2	29.00	28	6	I	I 08200	-19.00	24.25	61.18	24.26
F	E2WA7DB2	29.00	28	7	F	F2_A2788	-7.00	25.52	62.01	25.52
F	E2WA7DB2	29.00	28	7	F	F2aA2728	-7.00	25.52		25.52
F	E2WA7DB2	29.00	28	7	F	F2aA2788	-7.00	25.52	69.14	25.52
F	E2WA7DB2	29.00	28	7	F	F3_A2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	28	7	F	F3_A2788	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	28	7	F	F3_A3328	-7.00	27.52		27.52
F	E2WA7DB2	29.00	28	7	F	F3_A3388	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	30	2	F	REU09700	29.00	25.46	26.07	34.29
F	E2WA7DB2	29.00	30	2	F	REU09701	29.00	20.34	20.52	34.29
F	E2WA7DB2	29.00	30	2	S	S 13900	5.00	23.85	58.92	23.85
F	E2WA7DB2	29.00	30	3	HNG	HNG10600	-1.00	24.52	59.80	24.52
F	E2WA7DB2	29.00	30	4	ALB	ALB29600	-7.00	24.41		24.41
F	E2WA7DB2	29.00	30	7	SUI	SUI14000	-19.00	24.18	61.36	24.18
F	E2WA7DB2	29.00	32	2	F	MYT09800	29.00	25.77	25.93	40.20
F	E2WA7DB2	29.00	32	2	F	MYT09801	29.00	20.47	20.52	40.20
F	E2WA7DB2	29.00	32	2	NOR	NOR12102	5.00	18.98	55.92	18.98
F	E2WA7DB2	29.00	32	6	I	I 08200	-19.00	24.25	61.18	24.26
F	E2WA7DB2	29.00	32	7	F	F2_A2788	-7.00	25.52	62.01	25.52
F	E2WA7DB2	29.00	32	7	F	F2aA2728	-7.00	25.52		25.52
F	E2WA7DB2	29.00	32	7	F	F2aA2788	-7.00	25.52	69.14	25.52
F	E2WA7DB2	29.00	32	7	F	F3_A2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	32	7	F	F3_A2788	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	32	7	F	F3_A3328	-7.00	27.52		27.52
F	E2WA7DB2	29.00	32	7	F	F3_A3388	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	34	2	F	REU09700	29.00	25.46	26.07	34.29
F	E2WA7DB2	29.00	34	2	F	REU09701	29.00	20.34	20.52	34.29
F	E2WA7DB2	29.00	34	2	S	S 13800	5.00	24.70	58.92	24.70
F	E2WA7DB2	29.00	34	3	HNG	HNG10600	-1.00	24.52	59.80	24.52
F	E2WA7DB2	29.00	34	4	ALB	ALB29600	-7.00	24.41		24.41
F	E2WA7DB2	29.00	34	7	SUI	SUI14000	-19.00	24.08	61.36	24.08
F	E2WA7DB2	29.00	36	2	DNK	DNK09000	5.00	22.75	58.92	22.75
F	E2WA7DB2	29.00	36	2	F	MYT09800	29.00	25.77	25.93	40.10
F	E2WA7DB2	29.00	36	2	F	MYT09801	29.00	20.47	20.52	40.10
F	E2WA7DB2	29.00	36	6	I	I 08200	-19.00	24.15	61.18	24.16
F	E2WA7DB2	29.00	36	7	F	F2_A2788	-7.00	25.52	62.01	25.52
F	E2WA7DB2	29.00	36	7	F	F2aA2728	-7.00	25.52		25.52

F	E2WA7DB2	29.00	36	7	F	F2aA2788	-7.00	25.52	69.14	25.52
F	E2WA7DB2	29.00	36	7	F	F3_A2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	36	7	F	F3_A2788	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	36	7	F	F3_A3328	-7.00	27.52		27.52
F	E2WA7DB2	29.00	36	7	F	F3_A3388	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	38	2	NOR	NOR12000	5.00	27.48	58.92	27.48
F	E2WA7DB2	29.00	38	2	F	REU09700	29.00	25.45	26.07	34.19
F	E2WA7DB2	29.00	38	2	F	REU09701	29.00	20.34	20.52	34.19
F	E2WA7DB2	29.00	38	3	HNG	HNG10600	-1.00	24.42	59.80	24.42
F	E2WA7DB2	29.00	38	4	ALB	ALB29600	-7.00	24.31		24.31
F	E2WA7DB2	29.00	38	7	SUI	SUI14000	-19.00	24.08	61.36	24.08
F	E2WA7DB2	29.00	40	2	F	MYT09800	29.00	25.77	25.93	40.10
F	E2WA7DB2	29.00	40	2	F	MYT09801	29.00	20.47	20.52	40.10
F	E2WA7DB2	29.00	40	2	S	S 13902	5.00	17.68	55.92	17.68
F	E2WA7DB2	29.00	40	6	I	I 08200	-19.00	24.15	61.18	24.16
F	E2WA7DB2	29.00	40	7	F	F2_A2788	-7.00	25.52	62.01	25.52
F	E2WA7DB2	29.00	40	7	F	F2aA2728	-7.00	25.52		25.52
F	E2WA7DB2	29.00	40	7	F	F2aA2788	-7.00	25.52	69.14	25.52
F	E2WA7DB2	29.00	40	7	F	F3_A2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	40	7	F	F3_A2788	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	40	7	F	F3_A3328	-7.00	27.52		27.52
F	E2WA7DB2	29.00	40	7	F	F3_A3388	-7.00	27.52	69.14	27.52
F	E2WA7DB2	29.00	40	7	F	F3_D2728	-7.00	27.52		27.52
F	E2WA7DB2	29.00	40	7	F	F3_D2788	-7.00	27.52	70.01	27.52
F	E2WA7DC1	29.00	1	4	MDG	MDG23600	29.00	25.65	25.96	37.19
F	E2WA7DC1	29.00	3	4	COM	COM20700	29.00	25.85	25.90	45.79
F	E2WA7DC1	29.00	5	4	MDG	MDG23600	29.00	25.64	25.96	37.09
F	E2WA7DC1	29.00	7	4	COM	COM20700	29.00	25.85	25.90	45.79
F	E2WA7DC1	29.00	9	4	MDG	MDG23600	29.00	25.64	25.96	37.09
F	E2WA7DC1	29.00	11	4	COM	COM20700	29.00	25.85	25.90	45.69
F	E2WA7DC1	29.00	13	4	MDG	MDG23600	29.00	25.63	25.96	36.99
F	E2WA7DC1	29.00	15	4	COM	COM20700	29.00	25.85	25.90	45.59
F	E2WA7DC1	29.00	17	4	MDG	MDG23600	29.00	25.63	25.96	36.99
F	E2WA7DC2	29.00	2	4	MAU	MAU24200	29.00	25.85	26.10	38.39
F	E2WA7DC2	29.00	2	8	FIN	FIN10300	5.00	27.03	58.92	27.03
F	E2WA7DC2	29.00	4	4	MAU	MAU24300	29.00	25.79	26.03	38.38
F	E2WA7DC2	29.00	6	4	MAU	MAU24200	29.00	25.85	26.10	38.39
F	E2WA7DC2	29.00	6	8	FIN	FIN10300	5.00	26.93	58.92	26.93
F	E2WA7DC2	29.00	8	4	MAU	MAU24300	29.00	25.78	26.03	38.28
F	E2WA7DC2	29.00	10	4	MAU	MAU24200	29.00	25.84	26.10	38.29
F	E2WA7DC2	29.00	10	8	FIN	FIN10300	5.00	26.83	58.92	26.83
F	E2WA7DC2	29.00	12	4	MAU	MAU24300	29.00	25.78	26.03	38.28
F	E2WA7DC2	29.00	14	4	MAU	MAU24200	29.00	25.84	26.10	38.29
F	E2WA7DC2	29.00	16	4	MAU	MAU24300	29.00	25.78	26.03	38.18
F	E2WA7DC2	29.00	18	4	MAU	MAU24200	29.00	25.84	26.10	38.19
F	E2WA7DC2	29.00	22	4	F	REU09700	29.00	25.92	26.07	40.67
F	E2WA7DC2	29.00	22	4	F	REU09701	29.00	20.48	20.52	40.67
F	E2WA7DC2	29.00	22	8	FIN	FIN10400	5.00	27.61	58.92	27.61
F	E2WA7DC2	29.00	24	4	F	MYT09800	29.00	25.89	25.93	46.49
F	E2WA7DC2	29.00	24	4	F	MYT09801	29.00	20.51	20.52	46.49
F	E2WA7DC2	29.00	24	8	DNK	DNK09000	5.00	27.81	58.92	27.81
F	E2WA7DC2	29.00	26	4	F	REU09700	29.00	25.92	26.07	40.57
F	E2WA7DC2	29.00	26	4	F	REU09701	29.00	20.48	20.52	40.57
F	E2WA7DC2	29.00	26	8	FIN	FIN10400	5.00	27.81	58.92	27.81
F	E2WA7DC2	29.00	28	4	F	MYT09800	29.00	25.89	25.93	46.39
F	E2WA7DC2	29.00	28	4	F	MYT09801	29.00	20.51	20.52	46.39
F	E2WA7DC2	29.00	30	4	F	REU09700	29.00	25.92	26.07	40.47
F	E2WA7DC2	29.00	30	4	F	REU09701	29.00	20.47	20.52	40.47
F	E2WA7DC2	29.00	32	4	F	MYT09800	29.00	25.89	25.93	46.39
F	E2WA7DC2	29.00	32	4	F	MYT09801	29.00	20.51	20.52	46.39
F	E2WA7DC2	29.00	32	8	NOR	NOR12102	5.00	23.39	55.92	23.39
F	E2WA7DC2	29.00	34	4	F	REU09700	29.00	25.92	26.07	40.47
F	E2WA7DC2	29.00	34	4	F	REU09701	29.00	20.47	20.52	40.47
F	E2WA7DC2	29.00	36	4	F	MYT09800	29.00	25.89	25.93	46.29
F	E2WA7DC2	29.00	36	4	F	MYT09801	29.00	20.51	20.52	46.29

F	E2WA7DC2	29.00	36	8	DNK	DNK09000	5.00	27.11	58.92	27.11
F	E2WA7DC2	29.00	38	4	F	REU09700	29.00	25.91	26.07	40.37
F	E2WA7DC2	29.00	38	4	F	REU09701	29.00	20.47	20.52	40.37
F	E2WA7DC2	29.00	40	4	F	MYT09800	29.00	25.89	25.93	46.29
F	E2WA7DC2	29.00	40	4	F	MYT09801	29.00	20.51	20.52	46.29
F	E2WA7DC2	29.00	40	8	S	S 13902	5.00	22.09	55.92	22.09
F	E2WA7DD1	29.00	1	4	MDG	MDG23600	29.00	25.08	25.96	32.45
F	E2WA7DD1	29.00	1	7	TUR	TUR14500	5.00	27.84	58.33	27.85
F	E2WA7DD1	29.00	1	8	F	F 09300	-19.00	22.33	61.39	22.33
F	E2WA7DD1	29.00	1	8	F	F 09306	-7.00	27.21		27.21
F	E2WA7DD1	29.00	1	10	SMR	SMR31100	-37.00	27.92	62.12	27.92
F	E2WA7DD1	29.00	3	2	GRC	GRC10500	5.00	26.25	58.01	26.25
F	E2WA7DD1	29.00	3	4	COM	COM20700	29.00	25.77	25.90	41.04
F	E2WA7DD1	29.00	5	4	MDG	MDG23600	29.00	25.07	25.96	32.35
F	E2WA7DD1	29.00	5	7	TUR	TUR14500	5.00	27.74	58.33	27.75
F	E2WA7DD1	29.00	5	8	F	F 09300	-19.00	22.33	61.39	22.33
F	E2WA7DD1	29.00	5	8	F	F 09306	-7.00	27.21		27.21
F	E2WA7DD1	29.00	5	10	SMR	SMR31100	-37.00	27.82	62.12	27.82
F	E2WA7DD1	29.00	7	2	GRC	GRC10500	5.00	26.15	58.01	26.15
F	E2WA7DD1	29.00	7	4	COM	COM20700	29.00	25.77	25.90	41.04
F	E2WA7DD1	29.00	9	4	MDG	MDG23600	29.00	25.07	25.96	32.35
F	E2WA7DD1	29.00	9	7	TUR	TUR14500	5.00	27.74	58.33	27.75
F	E2WA7DD1	29.00	9	8	F	F 09300	-19.00	22.23	61.39	22.23
F	E2WA7DD1	29.00	9	8	F	F 09306	-7.00	27.21		27.21
F	E2WA7DD1	29.00	9	10	SMR	SMR31100	-37.00	27.82	62.12	27.82
F	E2WA7DD1	29.00	11	2	GRC	GRC10500	5.00	26.15	58.01	26.15
F	E2WA7DD1	29.00	11	4	COM	COM20700	29.00	25.76	25.90	40.94
F	E2WA7DD1	29.00	13	4	MDG	MDG23600	29.00	25.05	25.96	32.25
F	E2WA7DD1	29.00	13	7	TUR	TUR14500	5.00	27.64	58.33	27.65
F	E2WA7DD1	29.00	13	8	F	F 09300	-19.00	22.13	61.39	22.13
F	E2WA7DD1	29.00	13	8	F	F 09306	-7.00	27.21		27.21
F	E2WA7DD1	29.00	13	10	SMR	SMR31100	-37.00	27.72	62.12	27.72
F	E2WA7DD1	29.00	15	2	GRC	GRC10500	5.00	26.05	58.01	26.05
F	E2WA7DD1	29.00	15	4	COM	COM20700	29.00	25.76	25.90	40.84
F	E2WA7DD1	29.00	17	4	MDG	MDG23600	29.00	25.05	25.96	32.25
F	E2WA7DD1	29.00	17	7	TUR	TUR14500	5.00	27.64	58.33	27.65
F	E2WA7DD1	29.00	17	8	F	F 09300	-19.00	22.13	61.39	22.13
F	E2WA7DD1	29.00	17	8	F	F 09306	-7.00	27.21		27.21
F	E2WA7DD1	29.00	17	10	SMR	SMR31100	-37.00	27.62	62.12	27.62
F	E2WA7DD1	29.00	19	2	GRC	GRC10500	5.00	26.05	58.01	26.05
F	E2WA7DD1	29.00	21	8	MCO	MCO11600	-37.00	27.81	62.46	27.81
F	E2WA7DD1	29.00	23	4	CVA	CVA08500	-37.00	25.99	60.81	25.99
F	E2WA7DD1	29.00	25	8	MCO	MCO11600	-37.00	27.71	62.46	27.71
F	E2WA7DD1	29.00	27	4	CVA	CVA08300	-37.00	24.64	60.77	24.64
F	E2WA7DD1	29.00	29	8	MCO	MCO11600	-37.00	27.71	62.46	27.71
F	E2WA7DD1	29.00	31	4	CVA	CVA08300	-37.00	24.54	60.77	24.54
F	E2WA7DD1	29.00	33	8	MCO	MCO11600	-37.00	27.61	62.46	27.61
F	E2WA7DD1	29.00	35	4	CVA	CVA08300	-37.00	24.54	60.77	24.54
F	E2WA7DD1	29.00	37	8	MCO	MCO11600	-37.00	27.61	62.46	27.61
F	E2WA7DD1	29.00	39	4	CVA	CVA08300	-37.00	24.44	60.77	24.44
F	E2WA7DD2	29.00	2	4	MAU	MAU24200	29.00	25.40	26.10	33.65
F	E2WA7DD2	29.00	4	4	MAU	MAU24300	29.00	25.34	26.03	33.64
F	E2WA7DD2	29.00	4	8	AUT	AUT01600	-19.00	27.41	61.15	27.41
F	E2WA7DD2	29.00	4	9	BUL	BUL02000	-1.00	26.81	59.96	26.81
F	E2WA7DD2	29.00	6	4	MAU	MAU24200	29.00	25.40	26.10	33.65
F	E2WA7DD2	29.00	8	4	MAU	MAU24300	29.00	25.32	26.03	33.54
F	E2WA7DD2	29.00	8	8	AUT	AUT01600	-19.00	27.31	61.15	27.31
F	E2WA7DD2	29.00	8	9	BUL	BUL02000	-1.00	26.71	59.96	26.71
F	E2WA7DD2	29.00	10	4	MAU	MAU24200	29.00	25.38	26.10	33.55
F	E2WA7DD2	29.00	12	4	MAU	MAU24300	29.00	25.32	26.03	33.54
F	E2WA7DD2	29.00	12	8	AUT	AUT01600	-19.00	27.31	61.15	27.31
F	E2WA7DD2	29.00	12	9	BUL	BUL02000	-1.00	26.61	59.96	26.61
F	E2WA7DD2	29.00	14	4	MAU	MAU24200	29.00	25.38	26.10	33.55
F	E2WA7DD2	29.00	16	4	MAU	MAU24300	29.00	25.31	26.03	33.44
F	E2WA7DD2	29.00	16	8	AUT	AUT01600	-19.00	27.21	61.15	27.21

F	E2WA7DD2	29.00	16	9	BUL	BUL02000	-1.00	26.61	59.96	26.61
F	E2WA7DD2	29.00	18	4	MAU	MAU24200	29.00	25.36	26.10	33.45
F	E2WA7DD2	29.00	20	8	AUT	AUT01600	-19.00	27.21	61.15	27.21
F	E2WA7DD2	29.00	20	9	BUL	BUL02000	-1.00	26.51	59.96	26.51
F	E2WA7DD2	29.00	22	4	F	REU09700	29.00	25.64	26.07	35.94
F	E2WA7DD2	29.00	22	4	F	REU09701	29.00	20.39	20.52	35.94
F	E2WA7DD2	29.00	22	8	SUI	SUI14000	-19.00	27.53	61.36	27.53
F	E2WA7DD2	29.00	22	9	ALB	ALB29600	-7.00	27.81		27.81
F	E2WA7DD2	29.00	24	4	I	I 08200	-19.00	25.63	61.18	25.63
F	E2WA7DD2	29.00	24	4	F	MYT09800	29.00	25.82	25.93	41.74
F	E2WA7DD2	29.00	24	4	F	MYT09801	29.00	20.49	20.52	41.74
F	E2WA7DD2	29.00	26	4	F	REU09700	29.00	25.63	26.07	35.84
F	E2WA7DD2	29.00	26	4	F	REU09701	29.00	20.39	20.52	35.84
F	E2WA7DD2	29.00	26	8	SUI	SUI14000	-19.00	27.53	61.36	27.53
F	E2WA7DD2	29.00	26	9	ALB	ALB29600	-7.00	27.81		27.81
F	E2WA7DD2	29.00	28	4	I	I 08200	-19.00	25.53	61.18	25.53
F	E2WA7DD2	29.00	28	4	F	MYT09800	29.00	25.81	25.93	41.64
F	E2WA7DD2	29.00	28	4	F	MYT09801	29.00	20.48	20.52	41.64
F	E2WA7DD2	29.00	30	4	F	REU09700	29.00	25.63	26.07	35.74
F	E2WA7DD2	29.00	30	4	F	REU09701	29.00	20.39	20.52	35.74
F	E2WA7DD2	29.00	30	8	SUI	SUI14000	-19.00	27.43	61.36	27.43
F	E2WA7DD2	29.00	30	9	ALB	ALB29600	-7.00	27.71		27.71
F	E2WA7DD2	29.00	32	4	I	I 08200	-19.00	25.53	61.18	25.53
F	E2WA7DD2	29.00	32	4	F	MYT09800	29.00	25.81	25.93	41.64
F	E2WA7DD2	29.00	32	4	F	MYT09801	29.00	20.48	20.52	41.64
F	E2WA7DD2	29.00	34	4	F	REU09700	29.00	25.63	26.07	35.74
F	E2WA7DD2	29.00	34	4	F	REU09701	29.00	20.39	20.52	35.74
F	E2WA7DD2	29.00	34	8	SUI	SUI14000	-19.00	27.33	61.36	27.33
F	E2WA7DD2	29.00	34	9	ALB	ALB29600	-7.00	27.71		27.71
F	E2WA7DD2	29.00	36	4	I	I 08200	-19.00	25.43	61.18	25.43
F	E2WA7DD2	29.00	36	4	F	MYT09800	29.00	25.81	25.93	41.54
F	E2WA7DD2	29.00	36	4	F	MYT09801	29.00	20.48	20.52	41.54
F	E2WA7DD2	29.00	38	4	F	REU09700	29.00	25.62	26.07	35.64
F	E2WA7DD2	29.00	38	4	F	REU09701	29.00	20.39	20.52	35.64
F	E2WA7DD2	29.00	38	8	SUI	SUI14000	-19.00	27.33	61.36	27.33
F	E2WA7DD2	29.00	38	9	ALB	ALB29600	-7.00	27.61		27.61
F	E2WA7DD2	29.00	40	4	I	I 08200	-19.00	25.43	61.18	25.43
F	E2WA7DD2	29.00	40	4	F	MYT09800	29.00	25.81	25.93	41.54
F	E2WA7DD2	29.00	40	4	F	MYT09801	29.00	20.48	20.52	41.54
F	E2WA7DE1	29.00	1	9	F	F 09300	-19.00	27.60	61.39	27.60
F	E2WA7DE1	29.00	1	10	MDG	MDG23600	29.00	25.39	25.96	34.42
F	E2WA7DE1	29.00	3	10	COM	COM20700	29.00	25.81	25.90	43.01
F	E2WA7DE1	29.00	5	9	F	F 09300	-19.00	27.60	61.39	27.60
F	E2WA7DE1	29.00	5	10	MDG	MDG23600	29.00	25.37	25.96	34.32
F	E2WA7DE1	29.00	7	10	COM	COM20700	29.00	25.81	25.90	43.01
F	E2WA7DE1	29.00	9	9	F	F 09300	-19.00	27.50	61.39	27.50
F	E2WA7DE1	29.00	9	10	MDG	MDG23600	29.00	25.37	25.96	34.32
F	E2WA7DE1	29.00	11	10	COM	COM20700	29.00	25.81	25.90	42.91
F	E2WA7DE1	29.00	13	9	F	F 09300	-19.00	27.40	61.39	27.40
F	E2WA7DE1	29.00	13	10	MDG	MDG23600	29.00	25.36	25.96	34.22
F	E2WA7DE1	29.00	15	10	COM	COM20700	29.00	25.81	25.90	42.81
F	E2WA7DE1	29.00	17	9	F	F 09300	-19.00	27.40	61.39	27.40
F	E2WA7DE1	29.00	17	10	MDG	MDG23600	29.00	25.36	25.96	34.22
F	E2WA7DE2	29.00	2	10	MAU	MAU24200	29.00	25.64	26.10	35.62
F	E2WA7DE2	29.00	4	10	MAU	MAU24300	29.00	25.58	26.03	35.62
F	E2WA7DE2	29.00	6	10	MAU	MAU24200	29.00	25.64	26.10	35.62
F	E2WA7DE2	29.00	8	10	MAU	MAU24300	29.00	25.57	26.03	35.52
F	E2WA7DE2	29.00	10	10	MAU	MAU24200	29.00	25.63	26.10	35.52
F	E2WA7DE2	29.00	12	10	MAU	MAU24300	29.00	25.57	26.03	35.52
F	E2WA7DE2	29.00	14	10	MAU	MAU24200	29.00	25.63	26.10	35.52
F	E2WA7DE2	29.00	16	10	MAU	MAU24300	29.00	25.56	26.03	35.42
F	E2WA7DE2	29.00	18	10	MAU	MAU24200	29.00	25.62	26.10	35.42
F	E2WA7DE2	29.00	22	10	F	REU09700	29.00	25.80	26.07	37.92
F	E2WA7DE2	29.00	22	10	F	REU09701	29.00	20.44	20.52	37.92
F	E2WA7DE2	29.00	24	10	F	MYT09800	29.00	25.86	25.93	43.72

F	E2WA7DE2	29.00	24	10	F	MYT09801	29.00	20.50	20.52	43.72
F	E2WA7DE2	29.00	26	10	F	REU09700	29.00	25.79	26.07	37.82
F	E2WA7DE2	29.00	26	10	F	REU09701	29.00	20.44	20.52	37.82
F	E2WA7DE2	29.00	28	10	F	MYT09800	29.00	25.86	25.93	43.62
F	E2WA7DE2	29.00	28	10	F	MYT09801	29.00	20.50	20.52	43.62
F	E2WA7DE2	29.00	30	10	F	REU09700	29.00	25.78	26.07	37.72
F	E2WA7DE2	29.00	30	10	F	REU09701	29.00	20.44	20.52	37.72
F	E2WA7DE2	29.00	32	10	F	MYT09800	29.00	25.86	25.93	43.62
F	E2WA7DE2	29.00	32	10	F	MYT09801	29.00	20.50	20.52	43.62
F	E2WA7DE2	29.00	34	10	F	REU09700	29.00	25.78	26.07	37.72
F	E2WA7DE2	29.00	34	10	F	REU09701	29.00	20.44	20.52	37.72
F	E2WA7DE2	29.00	36	10	F	MYT09800	29.00	25.85	25.93	43.52
F	E2WA7DE2	29.00	36	10	F	MYT09801	29.00	20.50	20.52	43.52
F	E2WA7DE2	29.00	38	10	F	REU09700	29.00	25.78	26.07	37.62
F	E2WA7DE2	29.00	38	10	F	REU09701	29.00	20.43	20.52	37.62
F	E2WA7DE2	29.00	40	10	F	MYT09800	29.00	25.85	25.93	43.52
F	E2WA7DE2	29.00	40	10	F	MYT09801	29.00	20.50	20.52	43.52
F	E2WA7DF1	29.00	1	9	MDG	MDG23600	29.00	24.74	25.96	30.84
F	E2WA7DF1	29.00	1	9	TUR	TUR14500	5.00	25.93	58.33	25.93
F	E2WA7DF1	29.00	3	5	GRC	GRC10500	5.00	27.36	58.01	27.36
F	E2WA7DF1	29.00	3	7	IRN	IRN10900	34.00	24.23	45.85	24.26
F	E2WA7DF1	29.00	3	7	IRN	IRN10901	34.00	24.26		24.26
F	E2WA7DF1	29.00	3	9	COM	COM20700	29.00	25.71	25.90	39.45
F	E2WA7DF1	29.00	5	9	MDG	MDG23600	29.00	24.72	25.96	30.74
F	E2WA7DF1	29.00	5	9	TUR	TUR14500	5.00	25.83	58.33	25.83
F	E2WA7DF1	29.00	7	5	GRC	GRC10500	5.00	27.26	58.01	27.26
F	E2WA7DF1	29.00	7	7	IRN	IRN10900	34.00	24.23	45.85	24.26
F	E2WA7DF1	29.00	7	7	IRN	IRN10901	34.00	24.26		24.26
F	E2WA7DF1	29.00	7	9	COM	COM20700	29.00	25.71	25.90	39.45
F	E2WA7DF1	29.00	9	9	MDG	MDG23600	29.00	24.72	25.96	30.74
F	E2WA7DF1	29.00	9	9	TUR	TUR14500	5.00	25.83	58.33	25.83
F	E2WA7DF1	29.00	11	5	GRC	GRC10500	5.00	27.26	58.01	27.26
F	E2WA7DF1	29.00	11	7	IRN	IRN10900	34.00	24.13	45.85	24.16
F	E2WA7DF1	29.00	11	7	IRN	IRN10901	34.00	24.16		24.16
F	E2WA7DF1	29.00	11	9	COM	COM20700	29.00	25.70	25.90	39.35
F	E2WA7DF1	29.00	13	9	MDG	MDG23600	29.00	24.69	25.96	30.64
F	E2WA7DF1	29.00	13	9	TUR	TUR14500	5.00	25.73	58.33	25.73
F	E2WA7DF1	29.00	15	5	GRC	GRC10500	5.00	27.16	58.01	27.16
F	E2WA7DF1	29.00	15	7	IRN	IRN10900	34.00	24.03	45.85	24.06
F	E2WA7DF1	29.00	15	9	COM	COM20700	29.00	25.70	25.90	39.25
F	E2WA7DF1	29.00	17	9	MDG	MDG23600	29.00	24.69	25.96	30.64
F	E2WA7DF1	29.00	17	9	TUR	TUR14500	5.00	25.73	58.33	25.73
F	E2WA7DF1	29.00	19	5	GRC	GRC10500	5.00	27.16	58.01	27.16
F	E2WA7DF1	29.00	19	7	IRN	IRN10900	34.00	24.03	45.85	24.06
F	E2WA7DF2	29.00	2	7	ARS	ARS27500	17.00	27.25	58.52	27.25
F	E2WA7DF2	29.00	2	9	MAU	MAU24200	29.00	25.12	26.10	32.05
F	E2WA7DF2	29.00	4	9	MAU	MAU24300	29.00	25.06	26.03	32.04
F	E2WA7DF2	29.00	6	7	ARS	ARS27500	17.00	27.15	58.52	27.15
F	E2WA7DF2	29.00	6	9	MAU	MAU24200	29.00	25.12	26.10	32.05
F	E2WA7DF2	29.00	8	9	MAU	MAU24300	29.00	25.04	26.03	31.94
F	E2WA7DF2	29.00	10	7	ARS	ARS27500	17.00	27.05	58.52	27.05
F	E2WA7DF2	29.00	10	9	MAU	MAU24200	29.00	25.10	26.10	31.95
F	E2WA7DF2	29.00	12	9	MAU	MAU24300	29.00	25.04	26.03	31.94
F	E2WA7DF2	29.00	14	7	ARS	ARS27500	17.00	26.95	58.52	26.95
F	E2WA7DF2	29.00	14	9	MAU	MAU24200	29.00	25.10	26.10	31.95
F	E2WA7DF2	29.00	16	9	MAU	MAU24300	29.00	25.02	26.03	31.84
F	E2WA7DF2	29.00	18	7	ARS	ARS27500	17.00	26.95	58.52	26.95
F	E2WA7DF2	29.00	18	9	MAU	MAU24200	29.00	25.07	26.10	31.85
F	E2WA7DF2	29.00	22	9	F	REU09700	29.00	25.46	26.07	34.32
F	E2WA7DF2	29.00	22	9	F	REU09701	29.00	20.34	20.52	34.32
F	E2WA7DF2	29.00	24	7	IRQ	IRQ25600	11.00	26.91	60.47	26.91
F	E2WA7DF2	29.00	24	9	F	MYT09800	29.00	25.77	25.93	40.15
F	E2WA7DF2	29.00	24	9	F	MYT09801	29.00	20.47	20.52	40.15
F	E2WA7DF2	29.00	26	9	F	REU09700	29.00	25.45	26.07	34.22
F	E2WA7DF2	29.00	26	9	F	REU09701	29.00	20.34	20.52	34.22

F	E2WA7DF2	29.00	28	7	IRQ	IRQ25600	11.00	26.81	60.47	26.81
F	E2WA7DF2	29.00	28	9	F	MYT09800	29.00	25.76	25.93	40.05
F	E2WA7DF2	29.00	28	9	F	MYT09801	29.00	20.47	20.52	40.05
F	E2WA7DF2	29.00	30	9	F	REU09700	29.00	25.44	26.07	34.12
F	E2WA7DF2	29.00	30	9	F	REU09701	29.00	20.33	20.52	34.12
F	E2WA7DF2	29.00	32	7	IRQ	IRQ25600	11.00	26.81	60.47	26.81
F	E2WA7DF2	29.00	32	9	F	MYT09800	29.00	25.76	25.93	40.05
F	E2WA7DF2	29.00	32	9	F	MYT09801	29.00	20.47	20.52	40.05
F	E2WA7DF2	29.00	34	9	F	REU09700	29.00	25.44	26.07	34.12
F	E2WA7DF2	29.00	34	9	F	REU09701	29.00	20.33	20.52	34.12
F	E2WA7DF2	29.00	36	7	IRQ	IRQ25600	11.00	26.71	60.47	26.71
F	E2WA7DF2	29.00	36	9	F	MYT09800	29.00	25.76	25.93	39.95
F	E2WA7DF2	29.00	36	9	F	MYT09801	29.00	20.47	20.52	39.95
F	E2WA7DF2	29.00	38	9	F	REU09700	29.00	25.42	26.07	34.02
F	E2WA7DF2	29.00	38	9	F	REU09701	29.00	20.33	20.52	34.02
F	E2WA7DF2	29.00	40	7	IRQ	IRQ25600	11.00	26.71	60.47	26.71
F	E2WA7DF2	29.00	40	9	F	MYT09800	29.00	25.76	25.93	39.95
F	E2WA7DF2	29.00	40	9	F	MYT09801	29.00	20.47	20.52	39.95
F	E2WA7DG1	29.00	1	2	F	F 09300	-19.00	19.81	61.39	19.81
F	E2WA7DG1	29.00	1	2	F	F 09306	-7.00	24.59		24.59
F	E2WA7DG1	29.00	1	2	F	F3_A2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	1	2	F	F3_A3351	-7.00	27.48		27.48
F	E2WA7DG1	29.00	1	2	F	F3_D2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	1	3	SMR	SMR31100	-37.00	27.26	62.12	27.26
F	E2WA7DG1	29.00	1	9	MDG	MDG23600	29.00	23.67	25.96	27.55
F	E2WA7DG1	29.00	1	9	POL	POL13200	-1.00	20.67	57.09	20.67
F	E2WA7DG1	29.00	1	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	3	1	LUX	LUX11400	-19.00	26.74	61.75	26.74
F	E2WA7DG1	29.00	3	2	F	F2_A2733	-7.00	25.49	62.01	25.49
F	E2WA7DG1	29.00	3	2	F	F2aA2773	-7.00	25.49		25.49
F	E2WA7DG1	29.00	3	2	F	F3_A2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	3	2	F	F3_A3373	-7.00	27.48		27.48
F	E2WA7DG1	29.00	3	2	F	F3_D2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	3	7	ROU	ROU13600	-1.00	25.24	57.86	25.24
F	E2WA7DG1	29.00	3	9	COM	COM20700	29.00	25.50	25.90	36.15
F	E2WA7DG1	29.00	3	9	LIE	LIE25300	-37.00	25.57	61.43	25.58
F	E2WA7DG1	29.00	3	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	5	2	F	F 09300	-19.00	19.81	61.39	19.81
F	E2WA7DG1	29.00	5	2	F	F 09306	-7.00	24.59		24.59
F	E2WA7DG1	29.00	5	2	F	F3_A2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	5	2	F	F3_A3351	-7.00	27.48		27.48
F	E2WA7DG1	29.00	5	2	F	F3_D2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	5	3	SMR	SMR31100	-37.00	27.16	62.12	27.16
F	E2WA7DG1	29.00	5	9	MDG	MDG23600	29.00	23.63	25.96	27.45
F	E2WA7DG1	29.00	5	9	POL	POL13200	-1.00	20.57	57.09	20.57
F	E2WA7DG1	29.00	5	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	7	1	LUX	LUX11400	-19.00	26.64	61.75	26.64
F	E2WA7DG1	29.00	7	2	F	F2_A2733	-7.00	25.49	62.01	25.49
F	E2WA7DG1	29.00	7	2	F	F2aA2773	-7.00	25.49		25.49
F	E2WA7DG1	29.00	7	2	F	F3_A2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	7	2	F	F3_A3373	-7.00	27.48		27.48
F	E2WA7DG1	29.00	7	2	F	F3_D2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	7	7	ROU	ROU13600	-1.00	25.14	57.86	25.14
F	E2WA7DG1	29.00	7	9	COM	COM20700	29.00	25.50	25.90	36.15
F	E2WA7DG1	29.00	7	9	LIE	LIE25300	-37.00	25.47	61.43	25.48
F	E2WA7DG1	29.00	7	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	9	2	F	F 09300	-19.00	19.71	61.39	19.71
F	E2WA7DG1	29.00	9	2	F	F 09306	-7.00	24.59		24.59
F	E2WA7DG1	29.00	9	2	F	F3_A2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	9	2	F	F3_A3351	-7.00	27.48		27.48
F	E2WA7DG1	29.00	9	2	F	F3_D2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	9	3	SMR	SMR31100	-37.00	27.16	62.12	27.16
F	E2WA7DG1	29.00	9	9	MDG	MDG23600	29.00	23.63	25.96	27.45
F	E2WA7DG1	29.00	9	9	POL	POL13200	-1.00	20.57	57.09	20.57
F	E2WA7DG1	29.00	9	9	E	HISPASA2	-30.00	26.64		26.64

F	E2WA7DG1	29.00	11	1	LUX	LUX11400	-19.00	26.64	61.75	26.64
F	E2WA7DG1	29.00	11	2	F	F2_A2733	-7.00	25.49	62.01	25.49
F	E2WA7DG1	29.00	11	2	F	F2aA2773	-7.00	25.49		25.49
F	E2WA7DG1	29.00	11	2	F	F3_A2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	11	2	F	F3_A3373	-7.00	27.48		27.48
F	E2WA7DG1	29.00	11	2	F	F3_D2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	11	7	ROU	ROU13600	-1.00	25.14	57.86	25.14
F	E2WA7DG1	29.00	11	9	COM	COM20700	29.00	25.50	25.90	36.05
F	E2WA7DG1	29.00	11	9	LIE	LIE25300	-37.00	25.47	61.43	25.48
F	E2WA7DG1	29.00	11	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	13	2	F	F 09300	-19.00	19.61	61.39	19.61
F	E2WA7DG1	29.00	13	2	F	F 09306	-7.00	24.59		24.59
F	E2WA7DG1	29.00	13	2	F	F3_A2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	13	2	F	F3_A3351	-7.00	27.48		27.48
F	E2WA7DG1	29.00	13	2	F	F3_D2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	13	3	SMR	SMR31100	-37.00	27.06	62.12	27.06
F	E2WA7DG1	29.00	13	9	MDG	MDG23600	29.00	23.59	25.96	27.35
F	E2WA7DG1	29.00	13	9	POL	POL13200	-1.00	20.47	57.09	20.47
F	E2WA7DG1	29.00	13	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	15	1	LUX	LUX11400	-19.00	26.54	61.75	26.54
F	E2WA7DG1	29.00	15	2	F	F2_A2733	-7.00	25.79	62.01	25.79
F	E2WA7DG1	29.00	15	2	F	F2aA2773	-7.00	25.79		25.79
F	E2WA7DG1	29.00	15	2	F	F3_A2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	15	2	F	F3_A3373	-7.00	27.48		27.48
F	E2WA7DG1	29.00	15	2	F	F3_D2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	15	7	ROU	ROU13600	-1.00	25.04	57.86	25.04
F	E2WA7DG1	29.00	15	9	COM	COM20700	29.00	25.49	25.90	35.95
F	E2WA7DG1	29.00	15	9	LIE	LIE25300	-37.00	25.37	61.43	25.38
F	E2WA7DG1	29.00	15	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	17	2	F	F 09300	-19.00	19.61	61.39	19.61
F	E2WA7DG1	29.00	17	2	F	F 09306	-7.00	24.59		24.59
F	E2WA7DG1	29.00	17	2	F	F3_A2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	17	2	F	F3_A3351	-7.00	27.48		27.48
F	E2WA7DG1	29.00	17	2	F	F3_D2751	-7.00	27.48		27.48
F	E2WA7DG1	29.00	17	3	SMR	SMR31100	-37.00	26.96	62.12	26.96
F	E2WA7DG1	29.00	17	9	MDG	MDG23600	29.00	23.59	25.96	27.35
F	E2WA7DG1	29.00	17	9	POL	POL13200	-1.00	20.47	57.09	20.47
F	E2WA7DG1	29.00	17	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	19	1	LUX	LUX11400	-19.00	26.54	61.75	26.54
F	E2WA7DG1	29.00	19	2	F	F2_A2733	-7.00	26.29	62.01	26.29
F	E2WA7DG1	29.00	19	2	F	F2aA2773	-7.00	26.29		26.29
F	E2WA7DG1	29.00	19	2	F	F3_A2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	19	2	F	F3_A3373	-7.00	27.48		27.48
F	E2WA7DG1	29.00	19	2	F	F3_D2773	-7.00	27.48		27.48
F	E2WA7DG1	29.00	19	7	ROU	ROU13600	-1.00	25.04	57.86	25.04
F	E2WA7DG1	29.00	19	9	LIE	LIE25300	-37.00	25.37	61.43	25.38
F	E2WA7DG1	29.00	19	9	E	HISPASA2	-30.00	26.64		26.64
F	E2WA7DG1	29.00	21	2	MCO	MCO11600	-37.00	25.89	62.46	25.90
F	E2WA7DG1	29.00	21	4	BEL	BEL01800	-19.00	25.43	61.98	25.43
F	E2WA7DG1	29.00	23	2	CVA	CVA08500	-37.00	25.33	60.81	25.33
F	E2WA7DG1	29.00	23	4	HOL	HOL21300	-19.00	25.34	62.06	25.34
F	E2WA7DG1	29.00	23	10	ISL	ISL05000	5.00	21.75	60.77	21.75
F	E2WA7DG1	29.00	23	10	NOR	BIFROS21	-0.80	25.93	60.84	25.93
F	E2WA7DG1	29.00	25	2	MCO	MCO11600	-37.00	25.79	62.46	25.80
F	E2WA7DG1	29.00	25	4	BEL	BEL01800	-19.00	25.53	61.98	25.53
F	E2WA7DG1	29.00	25	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	25	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	27	4	HOL	HOL21300	-19.00	25.24	62.06	25.24
F	E2WA7DG1	29.00	27	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	27	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	27	10	DNK	DNK09100	5.00	21.85	60.77	21.85
F	E2WA7DG1	29.00	27	10	NOR	BIFROS21	-0.80	25.93	60.84	25.93
F	E2WA7DG1	29.00	29	2	MCO	MCO11600	-37.00	25.79	62.46	25.80
F	E2WA7DG1	29.00	29	4	BEL	BEL01800	-19.00	26.13	61.98	26.13
F	E2WA7DG1	29.00	29	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83

F	E2WA7DG1	29.00	29	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	31	4	HOL	HOL21300	-19.00	25.14	62.06	25.14
F	E2WA7DG1	29.00	31	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	31	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	31	10	ISL	ISL05000	5.00	21.65	60.77	21.65
F	E2WA7DG1	29.00	31	10	NOR	BIFROS21	-0.80	25.93	60.84	25.93
F	E2WA7DG1	29.00	33	2	MCO	MCO11600	-37.00	25.69	62.46	25.70
F	E2WA7DG1	29.00	33	4	BEL	BEL01800	-19.00	25.73	61.98	25.73
F	E2WA7DG1	29.00	33	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	33	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	35	4	HOL	HOL21300	-19.00	25.14	62.06	25.14
F	E2WA7DG1	29.00	35	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	35	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	35	10	DNK	DNK09100	5.00	21.75	60.77	21.75
F	E2WA7DG1	29.00	35	10	NOR	BIFROS21	-0.80	25.93	60.84	25.93
F	E2WA7DG1	29.00	37	2	MCO	MCO11600	-37.00	25.69	62.46	25.70
F	E2WA7DG1	29.00	37	4	BEL	BEL01800	-19.00	25.23	61.98	25.23
F	E2WA7DG1	29.00	37	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	37	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	39	2	E	E 12900	-30.00	27.98		27.98
F	E2WA7DG1	29.00	39	4	HOL	HOL21300	-19.00	25.04	62.06	25.04
F	E2WA7DG1	29.00	39	8	RUS	RSTRSA11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	39	8	RUS	RSTRSD11	36.00	27.77	46.29	27.83
F	E2WA7DG1	29.00	39	10	ISL	ISL05000	5.00	21.55	60.77	21.55
F	E2WA7DG1	29.00	39	10	NOR	BIFROS21	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	2	2	F	F2_A2722	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	2	2	F	F2aA2722	-7.00	25.54	69.41	25.54
F	E2WA7DG2	29.00	2	2	F	F2aA2762	-7.00	25.54		25.54
F	E2WA7DG2	29.00	2	2	F	F3_A2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	2	2	F	F3_A2722	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	2	2	F	F3_A3362	-7.00	27.53		27.53
F	E2WA7DG2	29.00	2	2	F	F3_A3322	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	2	2	F	F3_D2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	2	2	F	F3_D2722	-7.00	27.53	70.28	27.53
F	E2WA7DG2	29.00	2	8	FIN	FIN10300	5.00	18.78	58.92	18.78
F	E2WA7DG2	29.00	2	9	MAU	MAU24200	29.00	24.21	26.10	28.75
F	E2WA7DG2	29.00	2	10	IRL	IRL21100	-33.50	22.63	63.25	22.63
F	E2WA7DG2	29.00	2	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	4	2	F	F2_A2744	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	4	2	F	F2aA2784	-7.00	25.54		25.54
F	E2WA7DG2	29.00	4	2	F	F3_A2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	4	2	F	F3_A3384	-7.00	27.53		27.53
F	E2WA7DG2	29.00	4	2	F	F3_D2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	4	5	AUT	AUT01600	-19.00	23.84	61.15	23.85
F	E2WA7DG2	29.00	4	6	S	S 13800	5.00	20.16	58.92	20.16
F	E2WA7DG2	29.00	4	6	S	SIRIUS01	5.20	23.36	55.48	23.37
F	E2WA7DG2	29.00	4	9	MAU	MAU24300	29.00	24.17	26.03	28.74
F	E2WA7DG2	29.00	4	10	G	G 02700	-33.50	20.99	62.30	20.99
F	E2WA7DG2	29.00	6	2	F	F2_A2722	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	6	2	F	F2aA2722	-7.00	25.54	69.41	25.54
F	E2WA7DG2	29.00	6	2	F	F2aA2762	-7.00	25.54		25.54
F	E2WA7DG2	29.00	6	2	F	F3_A2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	6	2	F	F3_A2722	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	6	2	F	F3_A3362	-7.00	27.53		27.53
F	E2WA7DG2	29.00	6	2	F	F3_A3322	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	6	2	F	F3_D2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	6	2	F	F3_D2722	-7.00	27.53	70.28	27.53
F	E2WA7DG2	29.00	6	8	FIN	FIN10300	5.00	18.68	58.92	18.68
F	E2WA7DG2	29.00	6	9	MAU	MAU24200	29.00	24.21	26.10	28.75
F	E2WA7DG2	29.00	6	10	IRL	IRL21100	-33.50	22.53	63.25	22.53
F	E2WA7DG2	29.00	6	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	8	2	F	F2_A2744	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	8	2	F	F2aA2784	-7.00	25.54		25.54
F	E2WA7DG2	29.00	8	2	F	F3_A2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	8	2	F	F3_A3384	-7.00	27.53		27.53

F	E2WA7DG2	29.00	8	2	F	F3_D2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	8	5	AUT	AUT01600	-19.00	23.74	61.15	23.75
F	E2WA7DG2	29.00	8	6	S	S 13800	5.00	20.16	58.92	20.16
F	E2WA7DG2	29.00	8	6	S	SIRIUS01	5.20	23.36	55.48	23.37
F	E2WA7DG2	29.00	8	9	MAU	MAU24300	29.00	24.14	26.03	28.64
F	E2WA7DG2	29.00	8	10	G	G 02700	-33.50	20.89	62.30	20.89
F	E2WA7DG2	29.00	10	2	F	F2_A2722	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	10	2	F	F2aA2722	-7.00	25.54	69.41	25.54
F	E2WA7DG2	29.00	10	2	F	F2aA2762	-7.00	25.54		25.54
F	E2WA7DG2	29.00	10	2	F	F3_A2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	10	2	F	F3_A2722	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	10	2	F	F3_A3362	-7.00	27.53		27.53
F	E2WA7DG2	29.00	10	2	F	F3_A3322	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	10	2	F	F3_D2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	10	2	F	F3_D2722	-7.00	27.53	70.28	27.53
F	E2WA7DG2	29.00	10	8	FIN	FIN10300	5.00	18.58	58.92	18.58
F	E2WA7DG2	29.00	10	9	MAU	MAU24200	29.00	24.18	26.10	28.65
F	E2WA7DG2	29.00	10	10	IRL	IRL21100	-33.50	22.43	63.25	22.43
F	E2WA7DG2	29.00	10	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	12	2	F	F2_A2744	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	12	2	F	F2aA2784	-7.00	25.54		25.54
F	E2WA7DG2	29.00	12	2	F	F3_A2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	12	2	F	F3_A3384	-7.00	27.53		27.53
F	E2WA7DG2	29.00	12	2	F	F3_D2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	12	5	AUT	AUT01600	-19.00	23.74	61.15	23.75
F	E2WA7DG2	29.00	12	6	DNK	DNK08900	5.00	22.89	58.92	22.89
F	E2WA7DG2	29.00	12	6	S	SIRIUS02	5.20	24.86	55.48	24.87
F	E2WA7DG2	29.00	12	9	MAU	MAU24300	29.00	24.14	26.03	28.64
F	E2WA7DG2	29.00	12	10	G	G 02700	-33.50	20.89	62.30	20.89
F	E2WA7DG2	29.00	14	2	F	F2_A2722	-7.00	25.83	62.01	25.84
F	E2WA7DG2	29.00	14	2	F	F2aA2722	-7.00	25.84	69.41	25.84
F	E2WA7DG2	29.00	14	2	F	F2aA2762	-7.00	25.84		25.84
F	E2WA7DG2	29.00	14	2	F	F3_A2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	14	2	F	F3_A2722	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	14	2	F	F3_A3362	-7.00	27.53		27.53
F	E2WA7DG2	29.00	14	2	F	F3_A3322	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	14	2	F	F3_D2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	14	2	F	F3_D2722	-7.00	27.53	70.28	27.53
F	E2WA7DG2	29.00	14	6	NOR	NOR12000	5.00	24.30	58.92	24.30
F	E2WA7DG2	29.00	14	9	MAU	MAU24200	29.00	24.18	26.10	28.65
F	E2WA7DG2	29.00	14	10	IRL	IRL21100	-33.50	22.43	63.25	22.43
F	E2WA7DG2	29.00	14	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	16	2	F	F2_A2744	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	16	2	F	F2aA2784	-7.00	25.54		25.54
F	E2WA7DG2	29.00	16	2	F	F3_A2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	16	2	F	F3_A3384	-7.00	27.53		27.53
F	E2WA7DG2	29.00	16	2	F	F3_D2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	16	5	AUT	AUT01600	-19.00	23.64	61.15	23.65
F	E2WA7DG2	29.00	16	6	DNK	DNK08900	5.00	22.79	58.92	22.79
F	E2WA7DG2	29.00	16	6	S	SIRIUS02	5.20	24.86	55.48	24.87
F	E2WA7DG2	29.00	16	9	MAU	MAU24300	29.00	24.10	26.03	28.54
F	E2WA7DG2	29.00	16	10	G	G 02700	-33.50	20.79	62.30	20.79
F	E2WA7DG2	29.00	18	2	F	F2_A2722	-7.00	26.33	62.01	26.34
F	E2WA7DG2	29.00	18	2	F	F2aA2722	-7.00	26.34	69.41	26.34
F	E2WA7DG2	29.00	18	2	F	F2aA2762	-7.00	26.34		26.34
F	E2WA7DG2	29.00	18	2	F	F3_A2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	18	2	F	F3_A2722	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	18	2	F	F3_A3362	-7.00	27.53		27.53
F	E2WA7DG2	29.00	18	2	F	F3_A3322	-7.00	27.53	69.41	27.53
F	E2WA7DG2	29.00	18	2	F	F3_D2762	-7.00	27.53		27.53
F	E2WA7DG2	29.00	18	2	F	F3_D2722	-7.00	27.53	70.28	27.53
F	E2WA7DG2	29.00	18	6	NOR	NOR12000	5.00	24.30	58.92	24.30
F	E2WA7DG2	29.00	18	9	MAU	MAU24200	29.00	24.14	26.10	28.55
F	E2WA7DG2	29.00	18	10	IRL	IRL21100	-33.50	22.33	63.25	22.33
F	E2WA7DG2	29.00	18	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93

F	E2WA7DG2	29.00	20	2	F	F2_A2744	-7.00	25.53	62.01	25.54
F	E2WA7DG2	29.00	20	2	F	F2aA2784	-7.00	25.54		25.54
F	E2WA7DG2	29.00	20	2	F	F3_A2784	-7.00	27.53		27.53
F	E2WA7DG2	29.00	20	2	F	F3_A3384	-7.00	27.53		27.53
F	E2WA7DG2	29.00	20	5	AUT	AUT01600	-19.00	23.64	61.15	23.65
F	E2WA7DG2	29.00	20	6	DNK	DNK08901	5.00	22.79	58.92	22.79
F	E2WA7DG2	29.00	20	6	S	SIRIUS03	5.20	24.86	55.48	24.87
F	E2WA7DG2	29.00	20	10	G	G 02700	-33.50	20.79	62.30	20.79
F	E2WA7DG2	29.00	22	2	SUI	SUI14000	-19.00	24.51	61.36	24.51
F	E2WA7DG2	29.00	22	7	HNG	HNG10600	-1.00	22.46	59.80	22.46
F	E2WA7DG2	29.00	22	8	FIN	FIN10400	5.00	18.27	58.92	18.27
F	E2WA7DG2	29.00	22	9	F	REU09700	29.00	24.87	26.07	31.04
F	E2WA7DG2	29.00	22	9	F	REU09701	29.00	20.15	20.52	31.04
F	E2WA7DG2	29.00	22	10	G	G UKDBS	-33.50	20.92	62.30	20.92
F	E2WA7DG2	29.00	24	2	F	F2_A2788	-7.00	25.49	62.01	25.49
F	E2WA7DG2	29.00	24	2	F	F2aA2728	-7.00	25.49		25.49
F	E2WA7DG2	29.00	24	2	F	F2aA2788	-7.00	25.49	69.14	25.49
F	E2WA7DG2	29.00	24	2	F	F3_A2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	24	2	F	F3_A2788	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	24	2	F	F3_A3328	-7.00	27.48		27.48
F	E2WA7DG2	29.00	24	2	F	F3_A3388	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	24	2	F	F3_D2728	-7.00	27.98		27.98
F	E2WA7DG2	29.00	24	2	F	F3_D2788	-7.00	27.98	70.01	27.98
F	E2WA7DG2	29.00	24	3	I	I 08200	-19.00	24.67	61.18	24.67
F	E2WA7DG2	29.00	24	8	DNK	DNK09000	5.00	18.47	58.92	18.47
F	E2WA7DG2	29.00	24	9	F	MYT09800	29.00	25.59	25.93	36.85
F	E2WA7DG2	29.00	24	9	F	MYT09801	29.00	20.42	20.52	36.85
F	E2WA7DG2	29.00	24	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	26	2	SUI	SUI14000	-19.00	24.51	61.36	24.51
F	E2WA7DG2	29.00	26	7	HNG	HNG10600	-1.00	22.46	59.80	22.46
F	E2WA7DG2	29.00	26	8	FIN	FIN10400	5.00	18.47	58.92	18.47
F	E2WA7DG2	29.00	26	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	26	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	26	9	F	REU09700	29.00	24.84	26.07	30.94
F	E2WA7DG2	29.00	26	9	F	REU09701	29.00	20.14	20.52	30.94
F	E2WA7DG2	29.00	26	10	G	G UKDBS	-33.50	20.92	62.30	20.92
F	E2WA7DG2	29.00	28	2	F	F2_A2788	-7.00	25.49	62.01	25.49
F	E2WA7DG2	29.00	28	2	F	F2aA2728	-7.00	25.49		25.49
F	E2WA7DG2	29.00	28	2	F	F2aA2788	-7.00	25.49	69.14	25.49
F	E2WA7DG2	29.00	28	2	F	F3_A2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	28	2	F	F3_A2788	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	28	2	F	F3_A3328	-7.00	27.48		27.48
F	E2WA7DG2	29.00	28	2	F	F3_A3388	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	28	3	I	I 08200	-19.00	24.57	61.18	24.57
F	E2WA7DG2	29.00	28	8	NOR	NOR12101	5.00	19.17	58.92	19.17
F	E2WA7DG2	29.00	28	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	28	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	28	9	F	MYT09800	29.00	25.58	25.93	36.75
F	E2WA7DG2	29.00	28	9	F	MYT09801	29.00	20.42	20.52	36.75
F	E2WA7DG2	29.00	28	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	30	2	SUI	SUI14000	-19.00	24.41	61.36	24.41
F	E2WA7DG2	29.00	30	7	HNG	HNG10600	-1.00	22.36	59.80	22.36
F	E2WA7DG2	29.00	30	8	S	S 13900	5.00	18.87	58.92	18.87
F	E2WA7DG2	29.00	30	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	30	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	30	9	F	REU09700	29.00	24.82	26.07	30.84
F	E2WA7DG2	29.00	30	9	F	REU09701	29.00	20.13	20.52	30.84
F	E2WA7DG2	29.00	30	10	G	G UKDBS	-33.50	20.92	62.30	20.92
F	E2WA7DG2	29.00	32	2	F	F2_A2788	-7.00	25.49	62.01	25.49
F	E2WA7DG2	29.00	32	2	F	F2aA2728	-7.00	25.49		25.49
F	E2WA7DG2	29.00	32	2	F	F2aA2788	-7.00	25.49	69.14	25.49
F	E2WA7DG2	29.00	32	2	F	F3_A2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	32	2	F	F3_A2788	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	32	2	F	F3_A3328	-7.00	27.48		27.48
F	E2WA7DG2	29.00	32	2	F	F3_A3388	-7.00	27.48	69.14	27.48

F	E2WA7DG2	29.00	32	3	I	I 08200	-19.00	24.57	61.18	24.57
F	E2WA7DG2	29.00	32	8	NOR	NOR12102	5.00	14.03	55.92	14.03
F	E2WA7DG2	29.00	32	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	32	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	32	9	F	MYT09800	29.00	25.58	25.93	36.75
F	E2WA7DG2	29.00	32	9	F	MYT09801	29.00	20.42	20.52	36.75
F	E2WA7DG2	29.00	32	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	34	2	SUI	SUI14000	-19.00	24.31	61.36	24.31
F	E2WA7DG2	29.00	34	6	S	S 13800	5.00	19.86	58.92	19.86
F	E2WA7DG2	29.00	34	7	HNG	HNG10600	-1.00	22.36	59.80	22.36
F	E2WA7DG2	29.00	34	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	34	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	34	9	F	REU09700	29.00	24.82	26.07	30.84
F	E2WA7DG2	29.00	34	9	F	REU09701	29.00	20.13	20.52	30.84
F	E2WA7DG2	29.00	34	10	G	G UKDBS	-33.50	20.92	62.30	20.92
F	E2WA7DG2	29.00	36	2	F	F2_A2788	-7.00	25.49	62.01	25.49
F	E2WA7DG2	29.00	36	2	F	F2aA2728	-7.00	25.49		25.49
F	E2WA7DG2	29.00	36	2	F	F2aA2788	-7.00	25.49	69.14	25.49
F	E2WA7DG2	29.00	36	2	F	F3_A2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	36	2	F	F3_A2788	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	36	2	F	F3_A3328	-7.00	27.48		27.48
F	E2WA7DG2	29.00	36	2	F	F3_A3388	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	36	3	I	I 08200	-19.00	24.47	61.18	24.47
F	E2WA7DG2	29.00	36	8	DNK	DNK09000	5.00	17.77	58.92	17.77
F	E2WA7DG2	29.00	36	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	36	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	36	9	F	MYT09800	29.00	25.58	25.93	36.65
F	E2WA7DG2	29.00	36	9	F	MYT09801	29.00	20.41	20.52	36.65
F	E2WA7DG2	29.00	36	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
F	E2WA7DG2	29.00	38	2	SUI	SUI14000	-19.00	24.31	61.36	24.31
F	E2WA7DG2	29.00	38	6	NOR	NOR12000	5.00	22.30	58.92	22.30
F	E2WA7DG2	29.00	38	7	HNG	HNG10600	-1.00	22.26	59.80	22.26
F	E2WA7DG2	29.00	38	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	38	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	38	9	F	REU09700	29.00	24.79	26.07	30.74
F	E2WA7DG2	29.00	38	9	F	REU09701	29.00	20.12	20.52	30.74
F	E2WA7DG2	29.00	38	10	G	G UKDBS	-33.50	20.92	62.30	20.92
F	E2WA7DG2	29.00	40	2	F	F2_A2788	-7.00	25.49	62.01	25.49
F	E2WA7DG2	29.00	40	2	F	F2aA2728	-7.00	25.49		25.49
F	E2WA7DG2	29.00	40	2	F	F2aA2788	-7.00	25.49	69.14	25.49
F	E2WA7DG2	29.00	40	2	F	F3_A2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	40	2	F	F3_A2788	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	40	2	F	F3_A3328	-7.00	27.48		27.48
F	E2WA7DG2	29.00	40	2	F	F3_A3388	-7.00	27.48	69.14	27.48
F	E2WA7DG2	29.00	40	2	F	F3_D2728	-7.00	27.48		27.48
F	E2WA7DG2	29.00	40	2	F	F3_D2788	-7.00	27.48	70.01	27.48
F	E2WA7DG2	29.00	40	3	I	I 08200	-19.00	24.47	61.18	24.47
F	E2WA7DG2	29.00	40	8	S	S 13902	5.00	12.73	55.92	12.73
F	E2WA7DG2	29.00	40	8	RUS	RSTRSA12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	40	8	RUS	RSTRSD12	36.00	27.77	46.29	27.83
F	E2WA7DG2	29.00	40	9	F	MYT09800	29.00	25.58	25.93	36.65
F	E2WA7DG2	29.00	40	9	F	MYT09801	29.00	20.41	20.52	36.65
F	E2WA7DG2	29.00	40	10	NOR	BIFROS22	-0.80	25.93	60.84	25.93
RUS	RSTRSA11	36.00	25	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	27	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	29	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	31	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	33	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	35	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	37	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA11	36.00	39	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	25	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	27	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	29	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	31	17	F	E2WA7DC1	29.00	26.58	43.58	26.67

RUS	RSTRSD11	36.00	33	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	35	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	37	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSD11	36.00	39	17	F	E2WA7DC1	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	26	17	FIN	FIN10400	5.00	25.95	63.03	25.95
RUS	RSTRSA12	36.00	26	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	28	17	NOR	NOR12101	5.00	26.65	63.03	26.65
RUS	RSTRSA12	36.00	28	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	30	17	S	S 13900	5.00	26.35	63.03	26.35
RUS	RSTRSA12	36.00	30	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	32	17	NOR	NOR12102	5.00	21.50	60.03	21.50
RUS	RSTRSA12	36.00	32	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	34	17	S	S 13800	5.00	27.48	63.03	27.48
RUS	RSTRSA12	36.00	34	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	36	17	DNK	DNK09000	5.00	25.25	63.03	25.25
RUS	RSTRSA12	36.00	36	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	38	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSA12	36.00	40	17	S	S 13902	5.00	20.20	60.03	20.20
RUS	RSTRSA12	36.00	40	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	26	17	FIN	FIN10400	5.00	25.95	63.03	25.95
RUS	RSTRSD12	36.00	26	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	28	17	NOR	NOR12101	5.00	26.65	63.03	26.65
RUS	RSTRSD12	36.00	28	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	30	17	S	S 13900	5.00	26.35	63.03	26.35
RUS	RSTRSD12	36.00	30	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	32	17	NOR	NOR12102	5.00	21.50	60.03	21.50
RUS	RSTRSD12	36.00	32	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	34	17	S	S 13800	5.00	27.48	63.03	27.48
RUS	RSTRSD12	36.00	34	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	36	17	DNK	DNK09000	5.00	25.25	63.03	25.25
RUS	RSTRSD12	36.00	36	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	38	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
RUS	RSTRSD12	36.00	40	17	S	S 13902	5.00	20.20	60.03	20.20
RUS	RSTRSD12	36.00	40	17	F	E2WA7DC2	29.00	26.58	43.58	26.67
NOR	BIFROS21	-0.80	23	6	HOL	HOL21300	-19.00	27.43	58.62	27.44
NOR	BIFROS21	-0.80	23	6	ISL	ISL05000	5.00	17.52	53.29	17.52
NOR	BIFROS21	-0.80	23	6	SDN	SDN23000	-7.00	25.33	74.63	25.33
NOR	BIFROS21	-0.80	23	6	F	E2WA7DC1	29.00	7.59	57.96	7.59
NOR	BIFROS21	-0.80	23	6	F	E2WA7DG1	29.00	22.39	57.96	22.39
NOR	BIFROS21	-0.80	27	5	RUS	RSTRSA11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	27	5	RUS	RSTRSD11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	27	6	DNK	DNK09100	5.00	17.62	53.29	17.62
NOR	BIFROS21	-0.80	27	6	HOL	HOL21300	-19.00	27.33	58.62	27.34
NOR	BIFROS21	-0.80	27	6	SDN	SDN23000	-7.00	25.23	74.63	25.23
NOR	BIFROS21	-0.80	27	6	F	E2WA7DC1	29.00	7.59	57.96	7.59
NOR	BIFROS21	-0.80	27	6	F	E2WA7DG1	29.00	22.39	57.96	22.39
NOR	BIFROS21	-0.80	31	5	RUS	RSTRSA11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	31	5	RUS	RSTRSD11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	31	6	HOL	HOL21300	-19.00	27.23	58.62	27.24
NOR	BIFROS21	-0.80	31	6	ISL	ISL05000	5.00	17.42	53.29	17.42
NOR	BIFROS21	-0.80	31	6	SDN	SDN23000	-7.00	25.23	74.63	25.23
NOR	BIFROS21	-0.80	31	6	F	E2WA7DC1	29.00	7.59	57.96	7.59
NOR	BIFROS21	-0.80	31	6	F	E2WA7DG1	29.00	22.39	57.96	22.39
NOR	BIFROS21	-0.80	35	5	RUS	RSTRSA11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	35	5	RUS	RSTRSD11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	35	6	DNK	DNK09100	5.00	17.52	53.29	17.52
NOR	BIFROS21	-0.80	35	6	HOL	HOL21300	-19.00	27.23	58.62	27.24
NOR	BIFROS21	-0.80	35	6	SDN	SDN23000	-7.00	25.13	74.63	25.13
NOR	BIFROS21	-0.80	35	6	F	E2WA7DC1	29.00	7.59	57.96	7.59
NOR	BIFROS21	-0.80	35	6	F	E2WA7DG1	29.00	22.39	57.96	22.39
NOR	BIFROS21	-0.80	39	5	MNG	MNG24800	74.00	27.21		27.21
NOR	BIFROS21	-0.80	39	5	RUS	RSTRSA11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	39	5	RUS	RSTRSD11	36.00	14.37	69.02	14.37
NOR	BIFROS21	-0.80	39	6	HOL	HOL21300	-19.00	27.13	58.62	27.14
NOR	BIFROS21	-0.80	39	6	ISL	ISL05000	5.00	17.32	53.29	17.32

NOR	BIFROS21	-0.80	39	6	SDN	SDN23000	-7.00	25.13	74.63	25.13
NOR	BIFROS21	-0.80	39	6	F	E2WA7DC1	29.00	7.59	57.96	7.59
NOR	BIFROS21	-0.80	39	6	F	E2WA7DG1	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	2	5	IRL	IRL21100	-33.50	22.92	72.39	22.92
NOR	BIFROS22	-0.80	2	5	F	F2_A2722	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	2	5	F	F2aA2722	-7.00	24.67	61.50	24.67
NOR	BIFROS22	-0.80	2	5	F	F2aA2762	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	2	6	BOT	BOT29700	-1.00	5.22	34.70	5.22
NOR	BIFROS22	-0.80	2	6	FIN	FIN10300	5.00	-4.47	43.21	-4.47
NOR	BIFROS22	-0.80	2	6	F	F3_A2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	2	6	F	F3_A2722	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	2	6	F	F3_A3362	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	2	6	F	F3_A3322	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	2	6	F	F3_D2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	2	6	F	F3_D2722	-7.00	23.80	62.37	23.80
NOR	BIFROS22	-0.80	2	6	F	F3_D3362	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	2	6	F	F3_D3322	-7.00	24.67	62.37	24.67
NOR	BIFROS22	-0.80	2	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	2	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	6	5	IRL	IRL21100	-33.50	22.82	72.39	22.82
NOR	BIFROS22	-0.80	6	5	F	F2_A2722	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	6	5	F	F2aA2722	-7.00	24.67	61.50	24.67
NOR	BIFROS22	-0.80	6	5	F	F2aA2762	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	6	6	BOT	BOT29700	-1.00	5.12	34.70	5.12
NOR	BIFROS22	-0.80	6	6	FIN	FIN10300	5.00	-4.57	43.21	-4.57
NOR	BIFROS22	-0.80	6	6	F	F3_A2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	6	6	F	F3_A2722	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	6	6	F	F3_A3362	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	6	6	F	F3_A3322	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	6	6	F	F3_D2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	6	6	F	F3_D2722	-7.00	23.80	62.37	23.80
NOR	BIFROS22	-0.80	6	6	F	F3_D3362	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	6	6	F	F3_D3322	-7.00	24.67	62.37	24.67
NOR	BIFROS22	-0.80	6	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	6	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	10	5	IRL	IRL21100	-33.50	22.72	72.39	22.72
NOR	BIFROS22	-0.80	10	5	F	F2_A2722	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	10	5	F	F2aA2722	-7.00	24.67	61.50	24.67
NOR	BIFROS22	-0.80	10	5	F	F2aA2762	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	10	6	BOT	BOT29700	-1.00	5.02	34.70	5.02
NOR	BIFROS22	-0.80	10	6	FIN	FIN10300	5.00	-4.67	43.21	-4.67
NOR	BIFROS22	-0.80	10	6	F	F3_A2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	10	6	F	F3_A2722	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	10	6	F	F3_A3362	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	10	6	F	F3_A3322	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	10	6	F	F3_D2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	10	6	F	F3_D2722	-7.00	23.80	62.37	23.80
NOR	BIFROS22	-0.80	10	6	F	F3_D3362	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	10	6	F	F3_D3322	-7.00	24.67	62.37	24.67
NOR	BIFROS22	-0.80	10	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	10	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	14	5	IRL	IRL21100	-33.50	22.72	72.39	22.72
NOR	BIFROS22	-0.80	14	5	F	F2_A2722	-7.00	24.97	54.10	24.97
NOR	BIFROS22	-0.80	14	5	F	F2aA2722	-7.00	24.97	61.50	24.97
NOR	BIFROS22	-0.80	14	5	F	F2aA2762	-7.00	24.97		24.97
NOR	BIFROS22	-0.80	14	6	BOT	BOT29700	-1.00	5.02	34.70	5.02
NOR	BIFROS22	-0.80	14	6	NOR	NOR12000	5.00	-0.57	43.21	-0.57
NOR	BIFROS22	-0.80	14	6	F	F3_A2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	14	6	F	F3_A2722	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	14	6	F	F3_A3362	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	14	6	F	F3_A3322	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	14	6	F	F3_D2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	14	6	F	F3_D2722	-7.00	23.80	62.37	23.80
NOR	BIFROS22	-0.80	14	6	F	F3_D3362	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	14	6	F	F3_D3322	-7.00	24.67	62.37	24.67

NOR	BIFROS22	-0.80	14	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	14	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	18	5	IRL	IRL21100	-33.50	22.62	72.39	22.62
NOR	BIFROS22	-0.80	18	5	F	F2_A2722	-7.00	25.47	54.10	25.47
NOR	BIFROS22	-0.80	18	5	F	F2aA2722	-7.00	25.47	61.50	25.47
NOR	BIFROS22	-0.80	18	5	F	F2aA2762	-7.00	25.47		25.47
NOR	BIFROS22	-0.80	18	6	BOT	BOT29700	-1.00	4.92	34.70	4.92
NOR	BIFROS22	-0.80	18	6	NOR	NOR12000	5.00	-0.57	43.21	-0.57
NOR	BIFROS22	-0.80	18	6	F	F3_A2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	18	6	F	F3_A2722	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	18	6	F	F3_A3362	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	18	6	F	F3_A3322	-7.00	23.80	61.50	23.80
NOR	BIFROS22	-0.80	18	6	F	F3_D2762	-7.00	23.80		23.80
NOR	BIFROS22	-0.80	18	6	F	F3_D2722	-7.00	23.80	62.37	23.80
NOR	BIFROS22	-0.80	18	6	F	F3_D3362	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	18	6	F	F3_D3322	-7.00	24.67	62.37	24.67
NOR	BIFROS22	-0.80	18	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	18	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	24	5	MWI	MWI30800	-1.00	10.10	35.96	10.11
NOR	BIFROS22	-0.80	24	5	SDN	SDN23200	-7.00	23.91	73.01	23.91
NOR	BIFROS22	-0.80	24	5	F	F2_A2788	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	24	5	F	F2aA2728	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	24	5	F	F2aA2788	-7.00	24.67	62.01	24.67
NOR	BIFROS22	-0.80	24	6	DNK	DNK09000	5.00	-3.71	43.21	-3.71
NOR	BIFROS22	-0.80	24	6	I	I 08200	-19.00	20.30	69.52	20.30
NOR	BIFROS22	-0.80	24	6	F	F3_A2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	24	6	F	F3_A2788	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	24	6	F	F3_A3328	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	24	6	F	F3_A3388	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	24	6	F	F3_D2728	-7.00	24.23		24.23
NOR	BIFROS22	-0.80	24	6	F	F3_D2788	-7.00	24.23	62.88	24.23
NOR	BIFROS22	-0.80	24	6	F	F3_D3328	-7.00	25.60		25.60
NOR	BIFROS22	-0.80	24	6	F	F3_D3388	-7.00	25.60	62.88	25.60
NOR	BIFROS22	-0.80	24	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	24	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	28	5	MWI	MWI30800	-1.00	10.00	35.96	10.01
NOR	BIFROS22	-0.80	28	5	SDN	SDN23200	-7.00	23.91	73.01	23.91
NOR	BIFROS22	-0.80	28	5	F	F2_A2788	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	28	5	F	F2aA2728	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	28	5	F	F2aA2788	-7.00	24.67	62.01	24.67
NOR	BIFROS22	-0.80	28	5	RUS	RSTRSA12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	28	5	RUS	RSTRSD12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	28	6	I	I 08200	-19.00	20.20	69.52	20.20
NOR	BIFROS22	-0.80	28	6	NOR	NOR12101	5.00	-3.01	43.21	-3.01
NOR	BIFROS22	-0.80	28	6	F	F3_A2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	28	6	F	F3_A2788	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	28	6	F	F3_A3328	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	28	6	F	F3_A3388	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	28	6	F	F3_D2728	-7.00	24.33		24.33
NOR	BIFROS22	-0.80	28	6	F	F3_D2788	-7.00	24.33	62.88	24.33
NOR	BIFROS22	-0.80	28	6	F	F3_D3328	-7.00	25.80		25.80
NOR	BIFROS22	-0.80	28	6	F	F3_D3388	-7.00	25.80	62.88	25.80
NOR	BIFROS22	-0.80	28	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	28	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	32	5	MWI	MWI30800	-1.00	9.90	35.96	9.91
NOR	BIFROS22	-0.80	32	5	SDN	SDN23200	-7.00	23.81	73.01	23.81
NOR	BIFROS22	-0.80	32	5	F	F2_A2788	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	32	5	F	F2aA2728	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	32	5	F	F2aA2788	-7.00	24.67	62.01	24.67
NOR	BIFROS22	-0.80	32	5	RUS	RSTRSA12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	32	5	RUS	RSTRSD12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	32	6	I	I 08200	-19.00	20.20	69.52	20.20
NOR	BIFROS22	-0.80	32	6	NOR	NOR12102	5.00	-8.13	40.21	-8.13
NOR	BIFROS22	-0.80	32	6	F	F3_A2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	32	6	F	F3_A2788	-7.00	23.73	62.01	23.73

NOR	BIFROS22	-0.80	32	6	F	F3_A3328	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	32	6	F	F3_A3388	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	32	6	F	F3_D2728	-7.00	24.43		24.43
NOR	BIFROS22	-0.80	32	6	F	F3_D2788	-7.00	24.43	62.88	24.43
NOR	BIFROS22	-0.80	32	6	F	F3_D3328	-7.00	25.80		25.80
NOR	BIFROS22	-0.80	32	6	F	F3_D3388	-7.00	25.80	62.88	25.80
NOR	BIFROS22	-0.80	32	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	32	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	36	5	MWI	MWI30800	-1.00	9.90	35.96	9.91
NOR	BIFROS22	-0.80	36	5	SDN	SDN23200	-7.00	23.81	73.01	23.81
NOR	BIFROS22	-0.80	36	5	F	F2_A2788	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	36	5	F	F2aA2728	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	36	5	F	F2aA2788	-7.00	24.67	62.01	24.67
NOR	BIFROS22	-0.80	36	5	RUS	RSTRSA12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	36	5	RUS	RSTRSD12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	36	6	DNK	DNK09000	5.00	-4.41	43.21	-4.41
NOR	BIFROS22	-0.80	36	6	I	I 08200	-19.00	20.10	69.52	20.10
NOR	BIFROS22	-0.80	36	6	F	F3_A2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	36	6	F	F3_A2788	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	36	6	F	F3_A3328	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	36	6	F	F3_A3388	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	36	6	F	F3_D2728	-7.00	24.33		24.33
NOR	BIFROS22	-0.80	36	6	F	F3_D2788	-7.00	24.33	62.88	24.33
NOR	BIFROS22	-0.80	36	6	F	F3_D3328	-7.00	25.70		25.70
NOR	BIFROS22	-0.80	36	6	F	F3_D3388	-7.00	25.70	62.88	25.70
NOR	BIFROS22	-0.80	36	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	36	6	F	E2WA7DG2	29.00	22.39	57.96	22.39
NOR	BIFROS22	-0.80	40	5	MWI	MWI30800	-1.00	9.80	35.96	9.81
NOR	BIFROS22	-0.80	40	5	SDN	SDN23200	-7.00	23.71	73.01	23.71
NOR	BIFROS22	-0.80	40	5	F	F2_A2788	-7.00	24.67	54.10	24.67
NOR	BIFROS22	-0.80	40	5	F	F2aA2728	-7.00	24.67		24.67
NOR	BIFROS22	-0.80	40	5	F	F2aA2788	-7.00	24.67	62.01	24.67
NOR	BIFROS22	-0.80	40	5	RUS	RSTRSA12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	40	5	RUS	RSTRSD12	36.00	14.37	69.02	14.37
NOR	BIFROS22	-0.80	40	6	I	I 08200	-19.00	20.10	69.52	20.10
NOR	BIFROS22	-0.80	40	6	S	S 13902	5.00	-9.43	40.21	-9.43
NOR	BIFROS22	-0.80	40	6	F	F3_A2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	40	6	F	F3_A2788	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	40	6	F	F3_A3328	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	40	6	F	F3_A3388	-7.00	23.73	62.01	23.73
NOR	BIFROS22	-0.80	40	6	F	F3_D2728	-7.00	23.73		23.73
NOR	BIFROS22	-0.80	40	6	F	F3_D2788	-7.00	23.73	62.88	23.73
NOR	BIFROS22	-0.80	40	6	F	F3_D3328	-7.00	24.60		24.60
NOR	BIFROS22	-0.80	40	6	F	F3_D3388	-7.00	24.60	62.88	24.60
NOR	BIFROS22	-0.80	40	6	F	E2WA7DC2	29.00	7.59	57.96	7.59
NOR	BIFROS22	-0.80	40	6	F	E2WA7DG2	29.00	22.39	57.96	22.39

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 274-E
27 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

SIXTH MEETING OF COMMITTEE 5

(ALLOCATIONS AND ASSOCIATED ISSUES)

Tuesday, 11 November 1997, at 0935 hours

Chairman: Mrs. V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Progress of work in Working Group 5B	-
2	Progress of work in Working Group 5C	171(Rev.2), 206, 207, 225, 227
3	MSS and FSS issues	208+Corr.1
4	Consideration of country footnotes (continued)	174+Corr.1, 195, 196

1 Progress of work in Working Group 5B

1.1 The **Chairman** said that Working Group 5B had not yet completed its work and that discussion would continue on the outstanding items.

1.2 In reply to the **delegate of Indonesia**, who had made a request concerning an item that had been considered in Working Group 5B, the **Chairman** suggested that the delegation of Indonesia and those of the other countries concerned by the matter should meet in order to prepare a document for BR stating their request in more precise terms.

1.3 It was so **agreed**.

2 Progress of work in Working Group 5C (Documents 171(Rev.2), 206, 207, 225, 227)

Document 227

2.1 The **Chairman of Working Group 5C** said that Document 227 was the final report of Working Group 5C. He drew the Committee's attention to the fact that Sub-Working Group 2 had drafted several temporary documents - Documents DT/79(Rev.1), DT/81(Rev.1) and DT/88(Rev.1) - but, because of shortage of time, had not been able to reach conclusions on them. He therefore suggested that the Committee should establish an ad hoc Group to finish off the consideration of those documents, which might be chaired by the Chairman of Sub-Working Group 5C2. The **Chairman** said that, if there were no objections, an ad hoc Working Group 3 would be established.

2.2 It was so **agreed**.

2.3 The **Chairman of Sub-Working Group 5C2** agreed to chair ad hoc Group 3 and asked whether consideration of proposal EUR/5/319 concerning the operation of high density systems in the fixed and fixed-satellite services, which was the subject of Document 212, would fall within the terms of reference of ad hoc Group 3. The **Chairman** replied that consideration of Document 212 logically fell within the terms of reference of ad hoc Group 3.

2.4 Document 227 was **noted**.

Document 171(Rev.2) (continued)

2.5 The **Chairman of ad hoc Group 1**, reporting on the progress of work in the Group, said that he would set down in writing the compromise solutions that had emerged at the most recent meeting and that discussions would continue as soon as possible with a view to reaching a final resolution of the matters discussed. More specifically with reference to Document 171(Rev.2), he said that a consensus had emerged within the Group in favour of amending the second paragraph 3.4*bis*, which would be reworded as follows: "to consider the inclusion, in the Radio Regulations, of general limits for out-of-band emissions, in particular with regard to whether it is appropriate to do so, taking into account the results of ITU-R studies." The square brackets around the new paragraph had been deleted as had the first paragraph 3.4*bis*.

2.6 Document 171(Rev.2), as amended, was **approved**.

Document 207

2.7 The **Chairman of Working Group 5C**, introducing Document 207, explained that the operation of wind profiler radars was permitted through the inclusion of additional footnotes and that a draft resolution, which would replace Recommendation 621 (WARC-92), was before the Committee for approval.

MOD Table 40.98 - 68 MHz, ADD S5.162A

2.8 **Approved**.

MOD Table 470 - 890 MHz, ADD S5.291A

2.9 The **delegate of Sweden** asked for his country's name to be deleted from the list of countries given in ADD S5.291A and the **delegate of Switzerland**, for the sake of consistency, requested the addition of the name of Liechtenstein to that list.

2.10 It was so **agreed**.

Table 1 240 - 1 452 MHz

2.11 **Approved.**

Draft Resolution [COM5-5]

2.12 The **observer for IMO**, referring to *resolves* 3 and 4, said that the band in question, from 400.15 to 406.0 MHz, did not provide protection for COSPAS-SARSAT systems on 406.025 MHz.

2.13 That observation was **noted**.

2.14 Draft Resolution [COM5-5] (WRC-97) was **approved**.

Recommendation 621 (WARC-92)

2.15 **Deleted.**

Document 206

2.16 The **Chairman of Working Group 5C** said that the document before the Committee had been unanimously approved by the Working Group.

ADD S1.X, ADD S4.15A, Table 42.5 - 54.25 GHz, ADD S5.552A, ADD S11.26, MOD S11.24

2.17 **Approved.**

ADD Draft Resolution [COM5-7]

2.18 On the proposal of the **delegate of Malaysia**, it was **agreed** to amend *considering* k) as follows: in the penultimate line, the word "could", as indicating too great a degree of certainty, was to be replaced by "may".

2.19 The **Chairman** proposed that the wording of *resolves* 4 should be brought into line with similar earlier texts and that, accordingly, the date of WRC should be put in square brackets and the expression "review … and consider" replaced by "should review … and consider".

2.20 It was so **agreed**.

2.21 The **delegate of Malaysia** said with reference to *instructs the Director* 1, that in order to enable BR to continue to process the notices submitted, in particular, by his own Administration concerning BSS and FSS systems, the deadline of 27 October 1997 should be put back pending the outcome of the studies on the feasibility of the shared use of the bands in question. It was only after such studies had been made that the date at which high altitude relay stations would be recorded in the ITU Master International Frequency Register could be fixed. He added, with reference to paragraph 2 of the same section, that the draft new Resolution under study should ensure full protection for all systems for which information had been transmitted to BR under Appendices 4 or

3, that the new systems in question should have no retroactive impact on existing or planned systems and that all notices received by BR concerning in particular FSS systems should be considered without reference to any cut-off date and afforded full protection with respect to high altitude relay stations.

2.22 The **representative of BR** explained that the notices concerning high altitude relay stations had been recorded provisionally in the Master International Frequency Register in accordance with the provisional Rule of Procedure issued by the Radio Regulations Board, which provided, among other things, that they should be recorded provisionally until the end of 1997 pending a decision by the Conference and that if the Conference approved paragraph 1, they would then be recorded permanently. The **Chairman** noted that there was no connection between the recording of notices and the sharing studies referred to in *considering* h). The **delegate of Malaysia** said that, in view of that information, his delegation would make no objection concerning the paragraph 1 under consideration provided that his own Administration's systems were fully protected under paragraph 2.

2.23 The **representative of the BR** said that the Bureau had in fact received information for advance publication concerning some 15 networks in the 47.2 - 50.2 GHz bands. It turned out that all those requests concerned uplinks, some of them for feeder links for the broadcasting-satellite service and others for the fixed service. The question raised in paragraph 2 was whether all those requests which had been received for advance publication were free to go through the rest of the procedure, or whether, in the case of requests for coordination or notification, BR would only agree to process notices for BSS feeder links.

2.24 The **Chairman**, noting that the proposed wording excluded the FSS, suggested, in response to the concern expressed by the delegate of Malaysia, that the expression "and for those FSS systems for which Appendix 4 and/or 3 information has been received before 22 November 1997" be added after the reference to feeder links for the broadcasting-satellite service.

2.25 The **delegate of the United States**, noting how difficult it had been for the Working Group to reach agreement on the provision, the purpose of which was to promote the development of a new technology, wanted to see the text of the proposed amendment in writing before expressing an opinion. The **Chairman** pointed out that, quite apart from the text, the important thing was to ascertain whether the idea of taking the FSS into consideration was accepted in principle.

2.26 The **delegate of Colombia** had doubts as to the possible impact of the proposed amendment on the development of the new technology in question and said that he would be in favour of retaining the original wording. The **delegate of Portugal** agreed, pointing out that there were no incompatibilities or constraints in the bands in question between high altitude relay stations and existing systems and that they could therefore be operated concurrently. Supporting that view, the **delegate of the United Kingdom** added that the text under consideration had been approved by the Working Group following a long discussion. The **delegates of Trinidad and Tobago**, **Russia**, **France** and **Sweden** were also in favour of retaining the compromise text prepared by the Working Group.

2.27 The **delegate of Canada** was not in favour of amending the text proposed by the Working Group, but, as he considered that the instruction given to the Bureau to accept notices only for high altitude relay stations of the fixed service and for feeder links for the broadcasting-satellite service ought to reconsidered at WRC-99, he asked the Chairman to include a note to that effect in the report that she would be submitting to the Plenary.

2.28 The **Chairman** took note of that request. Having observed that only the delegation of Thailand supported the proposal by the delegation of Malaysia and that the majority of speakers had been in favour of retaining the original text, she withdrew her own amendment.

2.29 The **representative of BR** pointed out, first, that, with reference to the proposal by the Administration of Malaysia concerning the operation of BSS systems in the frequency bands between 40.5 and 42.5 GHz, that country's systems would continue to be taken into consideration under the present text and, second, that in order to bridge the time gap, the date of 27 October 1997 in paragraph 1 should be replaced by 22 November 1997. The **delegate of Malaysia** noted that the first part of the statement that had just been made was incompatible with the reply which the Bureau had given his Administration earlier concerning the processing of notices submitted under Appendix 3, a reply which had led his delegation to take the position it had.

2.30 After a short suspension of the meeting, during which the representatives of BR and the interested parties consulted together, the **Chairman** read out the following proposed addition to paragraph 2: "…for feeder links for the broadcasting-satellite service, and shall continue to process notices for FSS networks (except for feeder links for BSS) for which complete information for advance publication had been received before 27 October 1997, and shall inform …". In paragraph 1 the date of 27 October 1997 should then be replaced by 22 November 1997. Following a statement by the **delegate of Portugal**, who accepted the amendment to the date mentioned in paragraph 1 but saw that she would prefer to keep the text proposed by the Working Group in view of the large number of delegations that had spoken in favour of it, the **Chairman** explained that the proposed addition was not intended to amend the provision as drafted, but to clarify the procedures for the processing of notices by the Bureau.

2.31 The **delegate of the United Kingdom**, supported by the **delegate of Germany**, endorsed the statement by the delegate of Portugal, considering that the new text seemed to go beyond the original intention.

2.32 The **delegate of Oman** was in favour of the proposed addition, and the **Chairman of Sub-Working Group 3**, noting that the original intention had been to facilitate access to a new technology and that the question of the processing of notices had not been discussed in the Group, was in favour of the clarification thus made.

2.33 There being no objections, it was **agreed** that *instructs the Director* 1 and 2 should be amended as follows: in paragraph 1 the date of 27 October 1997 would be replaced by 22 November 1997 and in paragraph 2 the phrase spelling out the procedures for the processing of notices by the Bureau would be inserted.

2.34 Draft Resolution [COM5-7], as amended, was **approved**.

Document 225

2.35 The **Legal Adviser** said that, after consultation with the diplomatic mission of The Former Yugoslav Republic of Macedonia, it had been decided that the symbol FYROM should be replaced by the symbol MKD, which was the officially recognized symbol of that country. The amendment would be made in Document 225 wherever the symbol FYROM appeared.

2.36 That amendment was **noted**.

2.37 With reference to proposals ASP/14/3 and IRN/44/1, concerning the deletion of No. S5.186, the **Chairman of Working Group 5C** said that it had not been possible to take a decision on the deletion since not all the countries in Region 3 had spoken on the issue. The

delegate of Sweden considered that it was for the Committee to decide on the question of deletion, and not just the members of Region 3. The **Legal Adviser** endorsed that opinion, on the grounds that the Conference as a whole was sovereign in performing its function of drafting an international treaty applicable to all Regions. In the case in point, it was not necessary for all the members of Region 3 to give their agreement.

2.38 There being no objections, it was **agreed** to delete No. S5.186.

2.39 Proposal ASP/14/4 MOD amending No. S5.149 was **approved**.

2.40 The **delegates of Italy** and **Ireland** requested the deletion of their countries' names from MOD S5.190. Those requests were **noted**.

2.41 The **delegate of Turkey** asked for the deletion of his country's name from MOD S5.244. That request was **noted**. As there were no longer any countries listed, the footnote was **deleted**.

2.42 The **delegate of Côte d'Ivoire** asked for the deletion of his country's name from MOD S5.400 and the **delegate of Benin** made the same request with respect to MOD S5.464. Those requests were **noted**.

2.43 The **delegate of India** said that he wished to consult his Administration before taking a final position view on MOD S5.464. It was accordingly **agreed** to put that proposal in square brackets.

2.44 Document 225, as amended and subject to certain editorial amendments, was **approved**.

3 MSS and FSS issues (Documents 208+Corr.1)

3.1 The **delegates of Ecuador** and **Chile** asked for their countries' names to be added in ADD S5.390 in Corrigendum 1 to Document 208. That request was **noted**.

3.2 Corrigendum 1, as amended, was **approved**.

3.3 It was accordingly **agreed** to delete the square brackets around No. S5.389C in NOC Table 2 010 - 2 170 MHz in Document 208.

3.4 The **delegate of Brazil** drew attention to the fact that there ought to be a reference to ADD S5.390 in the table. That observation was **noted**.

3.5 The **Chairman** invited the Commission to take a decision on ADD S5.523C1, which appeared in square brackets.

3.6 The **delegate of the United States** reiterated his opinion to the effect that, in view of *decides* 3 of Resolution 120 (WRC-95), that additional footnote was unnecessary. The **delegate of France**, however, considered that in the light of that same provision it was for WRC-97 to adopt a new footnote clearly reflecting the new regulatory situation and bearing the date 21 November 1997.

3.7 There being no objection, ADD S5.523C1 was **approved**.

3.8 It was **agreed** to remove the square brackets around that number in MOD S5.523D and MOD S5.535A.

3.9 The **delegate of Luxembourg**, referring to MOD S5.523D, was concerned that in certain cases it might be difficult to know whether Resolution 46 (Rev.WRC-95) or No. S22.2 was applicable. The **Chairman** considered that it was clear that those provisions could not both apply at

the same time. The **delegate of Canada** also considered that the situation was clear from a regulatory point of view and that Nos. S5.523C and S5.523C1 clearly established the cases where No. S22.2 did not apply, while S5.523D established the cases in which Resolution 46 did apply. The **Chairman** proposed that SUP Resolution 120 (WRC-95) be kept in square brackets for the time being.

3.10 It was so **agreed**.

3.11 Documents 208 and Corrigendum 1, as amended and subject to certain editorial amendments, were **approved**.

4 Consideration of country footnotes (continued) (Documents 174+Corr.1, 195 and 196)

Documents 174+Corr. 1 (continued)

4.1 The **Chairman** said that the only remaining points at issue in Document 174 were those which the Democratic People's Republic of Korea and Japan were in disagreement. Discussions between the delegates of those two countries had led to the following result: the Democratic People's Republic of Korea would no longer be mentioned in MOD S5.91, MOD S5.140, MOD S5.152 and MOD S5.154. With respect to MOD S5.382, the allocation to the Democratic People's Republic of Korea raised no problem with respect to the fixed service on a primary basis, but did raise difficulties with respect to the mobile service on a primary basis. The note would be amended and revised in the light of the outcome of consultations between the Democratic People's Republic of Korea and Japan. Lastly, those two countries had agreed that the Democratic People's Republic of Korea should be listed in MOD S5.276.

4.2 On the basis of those comments, Document 174 was **approved**.

4.3 The **delegate of Lithuania** asked for the deletion of the name of his country from MOD S5.323 (Document 174(Corr.1)). That request was **noted**.

Document 195

4.4 Approved.

Document 196

4.5 The **delegate of Latvia** asked that his country should be added in MOD S5.275. That request was **noted**.

4.6 Document 196, as amended, was **approved**.

The meeting rose at 1230 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 275-E
18 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 4

(REGULATORY AND ASSOCIATED ISSUES)

Tuesday, 11 November 1997, at 1435 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		**Documents**
1	Summary records of the second and third meetings	139, 168
2	Progress reports from the Chairmen of the Working Groups and ad hoc Group 4-1	-
3	Second report of Working Group 4A	183
4	Third report of Working Group 4B	185 + Add.1
5	Fourth report of Working Group 4B	198
6	Fifth report of Working Group 4B	202
7	Report of the Chairman of Working Group 4B concerning the recommended future WRC agendas and the revision of resolutions and recommendations according to Resolution 94	220
8	Notes from the Chairman of Committee 5	216, 228

1 Summary records of the second and third meetings (Documents 139, 168)

1.1 The summary records of the second and third meetings (Documents 139 and 168) were **approved**.

2 Progress reports from the Chairmen of the Working Groups and ad hoc Group 4-1

2.1 The **Chairman of Working Group 4A** said that Sub-Working Group 4A3 had studied the provisions of Articles S13 and S14 and had put forward proposals for consideration by Working Group 4A at its next meeting. On the subject of incorporation by reference, Sub-Working Group 4A2 had prepared a draft revision of Resolution 27 (WRC-95) relating to references to ITU-R and ITU-T Recommendations in the Radio Regulations which would be discussed by Working Group 4A. Working Group PLEN-2 had forwarded information concerning Articles S9 and S11 in relation to Resolution 18 (Kyoto, 1994) and those Articles, together with Appendix S5, would be considered at the following two meetings of the Working Group. It was hoped that discussions on other issues, including publication of the Weekly Circular and Special Sections, would soon be completed.

2.2 The **Chairman of Working Group 4B** reported that the work of the Group had been completed. Four documents were submitted to the Committee for consideration (Documents 185 + Add.1, 198, 202 and 220); one further document remained to be issued, possibly within the next two days.

2.3 The **Chairman of Working Group 4C** said that the Group had met on several occasions and that its work had shown steady progress. Ad hoc Group 1 had completed its work, the outcome of which was a draft resolution relating to information relevant in the application of Article S12. Ad hoc Group 2 had also completed its work and had submitted a final report on possible amendments to the provisions of Article S12. Both of those issues would be considered by Working Group 4C at its next meeting. Wide-ranging debate had taken place in the Working Group on the early introduction of HF broadcasting in the WARC-92 extension bands and on the new opportunities relating to the development of digital modulation techniques for HF broadcasting. Ad hoc Group 3 was in the process of examining resolutions relating to the transition from DSB to SSB and digital emissions, and the need for statistics on SSB transmitters and receivers and new digital modulation systems. Ad hoc Group 4 had the difficult task of preparing a proposal on the early introduction of the WARC-92 extension bands. Despite the complexity of the work which had still to be accomplished, it was hoped that Working Group 4C would complete its work on schedule.

2.4 The **Chairman of Working Group 4D** said that ad hoc Group 4 had been set up to study non-GSO protection issues in relation to Appendices S30 and S30A. Ad hoc Group 5 would examine the technical parameters of the Plan in relation to Annex 5 to Appendix S30 and Annex 3 to Appendix S30A following the completion of work on approaches to planning and regulatory procedures in Sub-Working Group 4D1. The proposal to relocate the orbital position of Israel from 13° W to 4° W was a sensitive issue which raised many technical and regulatory difficulties. Informal discussions were being undertaken; in the meanwhile, the draft Plan would reflect Israel's current position.

2.5 The **Chairman of ad hoc Group 4-1** reported that the Group had met twice and had carried out a detailed examination of the draft resolution on replanning, but the work was far from complete. Determining the planning principles should not prove to be a contentious issue but some time would be needed to prepare terms of reference for the studies to be undertaken by BR and the proposed intersessional group of experts. As it would be difficult to achieve consensus on a

proposed date for a future conference, it was suggested that the date be left in square brackets so that it could be discussed further by Committee 4. The draft resolution on the operation of broadcasting satellites serving other countries remained to be discussed.

2.6 The **representative of BR** said that the draft resolution on replanning for Regions 1 and 3 would be based on the experiences obtained during the implementation of Resolution 531 (WRC-95). Recalling the difficulties encountered in reaching agreement on many unclear issues in that Resolution, he invited the Committee to draft the new Resolution as clearly as possible, so as to ensure that it could be implemented smoothly.

3 Second report of Working Group 4A (Document 183)

3.1 The **Chairman of Working Group 4A** said that Document 183 contained a review of the text of Article S19, in accordance with Resolution 71 (WRC-95), with a view to eliminating the ambiguities in the use of the terms "country", "member" and "administration". The proposed text also reflected the decisions of Committee 4 concerning Nos. S19.96 and S19.99. An additional provision, ADD S19.96A, was still under consideration in Working Group 4B.

3.2 The **Chairman** invited the Committee to consider Document 183 section by section.

Section I

3.3 **Approved**.

Section II

3.4 The **delegate of Spain** requested that the Spanish text of MOD S19.29 be aligned with the English and French versions.

3.5 Following comments by the **delegate of Hungary**, the **Chairman** confirmed that the reference to List II in MOD S19.38 would be deleted as the list no longer existed.

3.6 Section II, as amended, was **approved**.

Sections III and IV

3.7 **Approved**.

Section V

3.8 Responding to a request for clarification by the **delegate of Saudi Arabia**, the **Legal Adviser** said that the reference to ITU in MOD S19.96 should be replaced by a reference to the Radiocommunication Bureau. He would report to the Plenary on any further terms which required legal clarification.

3.9 Section V, as amended, was **approved**.

Section VI

3.10 The **Chairman** noted that in MOD S19.99 also, "ITU" should be replaced by "Radiocommunication Bureau".

3.11 Section VI, as amended, was **approved**.

Section VII

3.12 Approved.

3.13 Document 183 as a whole, as amended, was **approved**.

4 Third report of Working Group 4B (Document 185 + Add.1)

4.1 The **Chairman of Working Group 4B** said that the purpose of Document 185 was to introduce a reference to the International Convention for the Safety of Life at Sea (SOLAS) into the text of Articles S30, S31 and S32, to introduce the possibility of using additional channels for safety messages and to mandate ships participating in the Global Maritime Distress and Safety System (GMDSS) to maintain an automatic DSC watch on the appropriate distress channel while at sea. Additional information for search and rescue (SAR) databases was covered, administrations being required to ensure that arrangements were made for the assignment and registration of identification numbers and to make that information available to rescue authorities. The draft resolution in the Addendum to Document 185 concerned the inclusion of additional search and rescue information in the maritime services database and called for BR to commence consultations in order to incorporate that new information into the ITU maritime services database.

4.2 The **Chairman** invited the Committee to consider the amendments proposed in Document 185.

MOD S30.1, MOD S31.1, ADD 31.16, MOD S31.17, MOD S31.20, ADD S32.5A

4.3 Approved.

4.4 The **Chairman** invited the Committee to consider draft new Resolution [COM4-1] in the Addendum to Document 185.

4.5 Subject to drafting amendments proposed by the **delegates of the United Kingdom** and **Canada**, draft new Resolution [COM4-1] was **approved**.

5 Fourth report of Working Group 4B (Document 198)

5.1 The **Chairman of Working Group 4B** introduced Document 198 containing the Working Group's proposals in relation to Articles S5, S18, S47 and S48, Appendix S18, Recommendation 305 (WARC-79), Resolution 310 (Rev.Mob-87) and draft new Resolutions [COM4-2], [COM4-3], [COM4-4] and [COM4-5]. He read out a number of editorial amendments.

5.2 The **Chairman** invited the Committee to consider the proposals in Document 198 one by one.

MOD S5.287

5.3 Approved.

MOD Appendix S18

5.4 Following a request for clarification by the **Chairman**, the **Chairman of Working Group 4B** drew attention to an editorial correction to be made in the "Notes" column of the Table of Transmitting Frequencies (against channel 85).

5.5 The **delegate of Singapore** asked why the "Port Operations" column had been deleted, and also expressed considerable concern that channels 87 and 88 had been removed from public correspondence and designated for the automatic ship identification system (AIS). The **Chairman of Working Group 4B** said that, after some discussion, the Working Group had based its position

on the need for the Conference to select channels for a worldwide automatic ship identification and surveillance system, unless other frequencies were designated on a regional basis for that purpose, as reflected in Note l) to the Table. If other frequencies were agreed between administrations on a regional basis, that region could continue to use existing channels 87B and 88B for other purposes. Port operations, a matter which had been dealt with fully in the CPM Report, had been combined with ship movement services to achieve greater flexibility, and a number of duplex channels had been converted into simplex channels for that purpose. Consequential modifications might be required in due course with regard to the definition of port operations services.

5.6 The **delegate of Singapore**, reiterating his concern that channels 87 and 88 would no longer be available for public correspondence, asked if it would be possible for a transition period to be granted, or a footnote to be included in the Radio Regulations, to enable small countries like his own to make use of those channels until 1999 so as to allow sufficient time to conduct the necessary coordination with neighbouring countries. The **delegate of Brunei Darussalam**, supporting the delegate of Singapore, considered that it would have been preferable to confine the conversion to a single channel. The **delegate of the United Kingdom** said it should be borne in mind that the modifications to the Table included the provision of seven additional channels for public correspondence. The **Chairman** said that the new allocation of channels 87 and 88 reflected a pressing request for two AIS channels to be designated by the present Conference. However, as the Final Acts of WRC-97 would not come into force immediately, administrations would have a period of 18 months to two years to make the necessary changes in the use of channels and to coordinate with neighbouring countries.

5.7 The **delegate of the Netherlands** proposed editorial amendments to certain of the column headings in the Table and the related notes.

5.8 MOD Appendix S18, including the Table and corresponding notes, as amended, was **approved**.

SUP Recommendation 305, ADD draft new Resolution [COM4-2]

5.9 Approved.

ADD draft new Resolution [COM4-3]

5.10 Approved subject to a drafting amendment suggested by the **Chairman**.

MOD Resolution 310 (Rev. Mob-87)

5.11 Approved.

NOC S18.1, NOC S47.19, NOC S47.23, NOC S47.24, NOC Table S47-1, NOC S48.5, NOC S48.6, MOD S48.7

5.12 Approved.

ADD Draft new Resolution [COM4-4]

5.13 The **Legal Adviser** suggested replacing the word "*instructs*" by the word "*invites*" in the penultimate operative paragraph of the draft Resolution.

5.14 Draft new Resolution [COM4-4], as amended, was **approved** together with its Annex.

ADD Draft new Resolution [COM4-5]

5.15 The **Legal Adviser** suggested that the phrase "*resolves to invite the Director of the Radiocommunication Bureau*" should be replaced by "*instructs the Director of the Radiocommunication Bureau*" and that the word "*further*" should be deleted from the following paragraph.

5.16 Draft new Resolution [COM4-5], as amended, was **approved**.

5.17 Document 198 as a whole, as amended, was **approved**.

6 Fifth report of Working Group 4B (Document 202)

6.1 The **Chairman of Working Group 4B** introduced Document 202 which contained the Working Group's proposals concerning Articles S1, S31 and S32, Appendix S4, draft new Resolutions [COM4-7] and [COM4-8], MOD Resolution 331 (Mob-87) and SUP Resolution 200 (Rev.Mob-87). He read out a number of editorial amendments.

6.2 The **Chairman** invited the Committee to consider the proposals one by one.

ADD S1.109A, MOD Appendix S4, Annex 1A

6.3 Approved.

ADD draft Resolution [COM4-7]

6.4 The **delegate of Russia,** supported by the **delegate of Mexico**, proposed that in *resolves* 1(i) the word "preferably" should be deleted, as it gave an indirect right to make frequency assignments in bands other than those allocated to the fixed and mobile services.

6.5 Draft Resolution [COM4-7], as amended, was **approved**.

MOD Resolution 331 (Mob-87)

6.6 The **Chairman** drew attention to a drafting amendment in addition to those that had been read out by the Chairman of Working Group 4B.

6.7 In reply to a request for clarification by the **Chairman**, the **Chairman of Working Group 4B** said that the purpose of *resolves* 1 was to permit the continuation of routine voice calling on distress and safety traffic channels which until February 1999 would serve as distress calling channels without the use of digital selective calling.

6.8 MOD Resolution 331 (Mob-87), as amended, was **approved**.

Draft new Resolution [COM4-8], NOC S31.18, ADD S32.5B

6.9 Approved.

ADD S32.7A

6.10 The **Chairman** said that ADD S32.7A should be renumbered "ADD S32.10A" and that sub-paragraph b) should read "was not cancelled in accordance with Resolution [COM4-12];". He suggested that the square brackets round that sub-paragraph should be retained, pending the approval of draft Resolution [COM4-12].

6.11 On that understanding, ADD S32.10A was **approved**.

MOD S32.9, SUP Resolution 200 (Rev.Mob-87)

6.12 Approved.

6.13 Document 202 as a whole, as amended, was **approved**.

7 Report of the Chairman of Working Group 4B concerning the recommended future WRC agendas and the revision of resolutions and recommendations according to Resolution 94 (WARC-92) (Document 220)

7.1 The **Chairman of Working Group 4B**, introducing Document 220, said that Part 1 proposed action required by future WRCs on texts approved by Working Group 4B during the present Conference, whereas Part 2 proposed action required concerning relevant resolutions and recommendations included in the Radio Regulations.

Part I

7.2 In response to a suggestion by the **delegate of the Netherlands** to consolidate some of the items proposed for consideration by WRC-99, the **Chairman of Working Group 4B** explained that the document merely listed approved texts requiring action, which were grouped according to subject matter. The idea was that Working Group PLEN-1 should draw up suitable agenda items on the basis of that information.

7.3 The **Chairman** said that the Committee was in fact expected to prepare relevant WRC agenda items for approval by Working Group PLEN-1. He wondered, however, whether there was any point in preparing proposals for the agendas of WRCs after the year 2001. Was it intended that some of the resolutions and recommendations listed in the document under the heading of other future WRCs should be included in the agenda for WRC-01? The **Chairman of Working Group 4B** said that all the items listed for consideration were important and it was hoped that some of them might be taken up at WRC-01. However, in view of the current financial constraints and the fact that WRC-99 already had a rather full agenda, he acknowledged that many of the items listed for consideration might have to be deferred to a subsequent conference.

7.4 The **Chairman** suggested that the delegate of the Netherlands and the Chairman of Working Group 4B should consult together with a view to suggesting suitable agenda items for WRC-99 and WRC-01 only, on the basis of Document 220, for consideration at the Committee's next meeting.

7.5 It was so **agreed**.

Part 2

7.6 The **Chairman** said that the proposals referred to as "NOC/(MOD)" concerned editorial amendments such as the updating of references in connection with the simplification of the Radio Regulations. Since such amendments had not been entered systematically, he requested the Secretary to verify whether all references in the relevant resolutions and recommendations had in fact been updated. He also asked whether the resolutions and recommendations proposed for deletion or modification had been dealt with in any other document. The **Chairman of Working Group 4B** said that although there was no other document on the subject from his Working Group, all the proposals in question were based on those listed in Document DT/45.

7.7 The **delegate of Algeria** objected to the proposed deletion of Resolution 209 (Mob-87), given its usefulness to countries such as Algeria with large uninhabited or desert areas, and proposed that it should be retained. The **delegate of Saudi Arabia** endorsed that proposal. The **Chairman** asked whether, in that case, the Resolution should be included as one of the items requiring consideration

at a future WRC. The **Chairman of Working Group 4B** said that while he had no objection to that suggestion, he was not of the view that the Resolution warranted consideration at a future conference, since no contributions on the subject had been received since 1987. Furthermore, ITU-R Study Group 8 had recently deleted the relevant Question because the matter now came within the purview of the ITU-D Sector. The **delegate of Russia** pointed out that Resolution 209 (Mob-87) fell into the NOC/(MOD) category. The **Chairman** said that unless he heard any objection he would take it that the Committee was agreeable to the Algerian delegate's proposal. If so, the word "SUP" in the proposed action column would be replaced by "NOC/(MOD)".

7.8 It was so **agreed**.

7.9 The **delegate of Algeria** having objected to the proposed deletion of Recommendation 603 (Rev.Mob-87), the **Chairman of Working Group 4B** pointed out that the Recommendation was not applicable to many African countries since the frequency band in question was not suitable for operations in tropical areas.

7.10 The **representative of the International Chamber of Shipping** also questioned the relevance of the Recommendation, given that radio beacons for position-finding and radionavigation were being phased out and replaced by other equipment, in line with recommendations by the International Maritime Organization.

7.11 The **delegate of Algeria** withdrew his objection.

7.12 On the understanding that proposals for the agendas of WRC-99 and WRC-01 would be submitted to the Committee's next meeting, Document 220, as amended, was **approved**.

8 Notes from the Chairman of Committee 5 (Documents 216, 228)

Document 216

8.1 The **Chairman** introduced Document 216 containing a note from the Chairman of Committee 5 on a proposal to modify Article S18 that had been submitted to Working Group 5B for consideration but seemed to come within the purview of Committee 4. Not wishing to deal with the substance of the proposal at the present meeting, he suggested that the document, which raised regulatory issues, should be forwarded to Working Group 4A for further consideration.

8.2 The **delegate of the United Kingdom** having sought clarification from the Legal Adviser as to whether the provisions of No. S18.1 prohibited the mutual recognition of GMPCS licences by Member States, the **Legal Adviser** said that he was not in a position to provide such clarification at the present meeting but would, if required, do so in due course.

8.3 The **delegate of Algeria** said that, to his knowledge, the term GMPCS had not thus far been defined in the Radio Regulations. Furthermore, the type of station in question was not subject to national regulation and could not therefore be covered by provisions such as those of Article S18. Accordingly, and in view of the complexity of the issues at stake, the matter might more appropriately be discussed in meetings organized in connection with the Memorandum of Understanding on GMPCS.

8.4 The **delegate of Russia** said that he was not in favour of ADD S.18.2*bis* since it raised certain thorny legal issues which affected relations between States.

8.5 The **delegate of Canada** said that he would welcome clarification by the Legal Adviser on the implications of the proposed addition, which was based on a proposal by his country (CAN/35/146).

8.6 The **Chairman**, noting the comments made, said that ADD S18.2*bis* clearly raised complex issues. He therefore suggested that it should be taken up at the Committee's next meeting, by which time the Legal Adviser would no doubt be ready to provide the clarifications requested.

8.7 It was so **agreed**.

8.8 Further consideration of Document 216 was **deferred** on that understanding.

Document 228

8.9 The **Chairman** introduced Document 228, which contained a note by the Chairman of Committee 5 concerning the need for Committee 4 to include *resolves* 3 of Resolution 115 (WRC-95) as an additional item in Annexes 2A and 2B to Appendix S4 following the decision of Committee 5 to delete the remainder of the Resolution. After reading out the text of *resolves* 3, he suggested that the matter should be referred to Working Group 4A.

8.10 It was so **agreed**.

The meeting rose at 1730 hours.

The Secretary:
T. GAVRILOV

The Chairman:
E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 276-E
13 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

REPORT FROM WORKING GROUP 4D TO COMMITTEE 4

DRAFT RESOLUTION [COM4-15]

MEASURE TO SOLVE THE INCOMPATIBILITY BETWEEN BSS IN REGION 1 AND FSS IN REGION 3 IN THE FREQUENCY BAND 12.2 - 12.5 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the 12.2 - 12.5 GHz frequency band is allocated on a primary basis to the BSS in Region 1 and FSS in Region 3;

b) that both services should have equitable access to the orbit/spectrum resources;

c) that at present, the procedures of Appendix 30 applicable to the FSS in Region 3 in respect of the BSS Plan in Region 1 are such that only the Plan assignments are protected, so that it could lead to situations where an FSS system could receive interference from a BSS system, or the opposite, but for which currently there are no regulatory provisions which require any type of coordination procedure to be undertaken;

d) that several modifications to the Regions 1 and 3 BSS Plan, which have assignments in the 12.2 - 12.5 GHz frequency band, have entered into the Plan by successfully applying the current Article 4 procedure, or are still applying the current Article 4 modification procedure. Some of these assignments have already been brought into use;

e) that some Region 3 FSS systems are currently operating, or are under coordination, applying relevant Radio Regulatory provisions,

resolves

1 that the Radiocommunication Bureau shall apply the criteria of Annex 4 to Appendix 30 to identify:

– the assignments in the 12.2 - 12.5 GHz frequency band, submitted under paragraphs 4.1a) or 4.1b) of Article 4 of Appendix 30, for which complete Annex 2 information has been received by the Bureau before 27 October 1997 and those assignments which are affected by Region 3 FSS networks for which complete Appendix 3 or Appendix S4 information, submitted under paragraph 7.2.1 of Article 7 of the same Appendix, has been received by the Bureau after the date of receipt of the above-mentioned Annex 2 information for BSS and before these modifications/additions have been included into the Regions 1 and 3 BSS Plan, [or before the entry into force of the Final Acts of the WRC-97 Conference].

– The Radiocommunication Bureau shall also identify, the administrations which are affecting these BSS assignments in the 12.2 - 12.5 GHz frequency band;

2 that the Radiocommunication Bureau shall apply the criteria of Annex 1 to Appendix 30 and relevant Rules of Procedure to identify:

– the Region 3 FSS networks in the frequency band 12.2 - 12.5 GHz, and for which complete Appendix 3 or Appendix S4 information, submitted under paragraph 7.2.1 of Article 7 of Appendix 30, has been received by the Bureau before 27 October 1997 which are affected by BSS assignments in the 12.2 - 12.5 GHz frequency band, submitted under paragraphs 4.1a) or 4.1b) of Article 4 of the same Appendix, for which complete Annex 2 information has been received by the Bureau prior to the date of the receipt of the above-mentioned Appendix 3 or Appendix S4 information but for which the date of inclusion of these modifications/additions in the BSS Plan, is after the date of receipt of the above-mentioned Appendix 3 or Appendix S4 information [or before the entry into force of the Final Acts of the WRC-97 Conference].

– The Radiocommunication Bureau shall identify, the administrations which are affecting the above-mentioned Region 3 FSS networks in the 12.2 - 12.5 GHz frequency band;

3 the administrations which have been identified by the BR in *resolves* 1 and 2 above shall make all possible mutual efforts to solve the interference problems.

NOTE 1 - The implications of this Resolution on the workload of the Bureau has to be taken into account.

NOTE 2 - Any retroactive application of this Resolution shall in no way have any implications regarding the status of both the BSS or the FSS that may be identified by the Bureau.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 277-E
13 November 1997

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

B.5 **PLENARY MEETING**

FIFTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 5	244	**ARTICLE S5** – Number S5.369 – Table of allocations band 2 500 - 2 655 MHz – Number S5.403A – Table of allocations band 2 670 - 2 690 MHz – Number S5.420A **APPENDIX S5: ANNEX 1** – Paragraphs: 1 to 1.2.3.1 **RESOLUTION 215 (Rev.WRC-97)** **RESOLUTION 115 (WRC-95)** **RESOLUTION 716** **RESOLUTION 717** **RECOMMENDATION 717** **RECOMMENDATION 721**
COM 5	246	**ARTICLE S5** – Table of allocations band 1 980 - 2 025 MHz band 2 160 - 2 170 MHz – Number S5.389C – Number S5.390 – Table of allocations band 2 170 - 2 200 MHz band 15.4 - 15.7 GHz

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– Numbers S5.511A to S5.511D
– Table of allocations
  band 19.3 - 19.7 GHz
  band 29.1 - 29.5 GHz
– Numbers S5.523C to S5.523E
– Number S5.535A
– Number S5.541A

ARTICLE S21 - Table S21-4
RESOLUTION COM5-8 (WRC-97)
RESOLUTION 116 (WRC-95)
RESOLUTION 117 (WRC-95)

GTPLEN1 255 **RESOLUTION GTPLEN1-1 (WRC-97)**

A.-M. NEBES
Chairman of Committee 6

Annex: 21 pages

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ARTICLE S5

MOD **S5.369** *Different category of service:* in Angola, Australia, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia, the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

MOD

MHz
2 450 – 2 520

Allocation to Services		
Region 1	Region 2	Region 3
2 500 – 2 520 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.404 S5.407 S5.414	**2 500 – 2 520** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) S5.403 S5.404 S5.407 S5.414 S5.403A

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MOD

MHz
2 520 – 2 670

Allocation to Services		
Region 1	Region 2	Region 3
2 520 – 2 655 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	**2 520 – 2 655** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403	**2 520 – 2 535** FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.403 S5.403A **2 535 – 2 655** FIXED S5.409 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.418

ADD S5.403A *Additional allocation*: in Japan, subject to agreement obtained under No. **S9.21**, the band 2 515 - 2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within its national boundary from 1 January 2000.

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MOD

MHz
2 670 – 3 300

Allocation to Services		
Region 1	Region 2	Region 3
2 670 – 2 690 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	**2 670 – 2 690** FIXED S5.409 S5.411 FIXED-SATELLITE (Earth-to-space) S5.415 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420 S5.420A

ADD S5.420A *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2 670 - 2 690 MHz may also be used for the aeronautical mobile-satellite service (Earth-to-space) for operations limited to within its national boundary from 1 January 2000.

MOD ANNEX 1 TO APPENDIX S5 (Rev.WRC-97)

NOC 1. to 1.2.2.2

MOD 1.2.2.2.1 Characteristics of reference digital point-to-point systems

Three different digital systems are described in the following table:

– 64 kbit/s capacity used, for example, for outside plant (individual subscriber connection);

– 2 Mbit/s capacity used, for example, for business subscriber connections for the local part of the inside plant;

– 45 Mbit/s capacity used, for example, for trunk networks.

Capacity	64 kbit/s	2 Mbit/s	45 Mbit/s
Modulation	4-PSK	8-PSK	64-QAM
Antenna gain (dB)	33	33	33
Transmit power (dBW)	7	7	1
Feeder/multiplexer loss (dB)	2	2	2
e.i.r.p. (dBW)	38	38	32
Receiver IF bandwidth (MHz)	0.032	0.7	10
Receiver noise figure (dB)	4	4.5	4
Receiver input level for a BER of 10^{-3} (dBW)	–137	–120	–106

Antenna pattern:

$$G(\varphi) = G_{max} - 2.5 \times 10^{-3} \left(\frac{D\varphi}{\lambda} \right)^2 \qquad \text{for } 0 < \varphi < \varphi_m$$

$$G(j) = 39 - 5 \log (D / l) - 25 \log j \qquad \text{for } \varphi_m \leq \varphi < 48°$$

$$G(j) = -3 - 5 \log (D / l) \qquad \text{for } 48° \leq \varphi \leq 180°$$

where:

$G(\varphi)$: gain relative to an isotropic antenna (dBi)

φ: off-axis angle (degree)

D: antenna diameter

λ: wavelength expressed in the same unit as D

G_1: gain of the first side-lobe $= 2 + 15 \log (D/\lambda)$

(D/λ may be estimated from $20 \log D/\lambda \approx G_{max} - 7.7$)

G_{max}: main lobe antenna gain (dBi)

$\varphi_m = 20 (\lambda/D) \times \sqrt{(G_{max} - G_1)}$ (degrees)

It should be noted that the above antenna radiation pattern corresponds to the average side-lobe pattern and it is recognized that individual side-lobes may exceed it by up to 3 dB.

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MOD 1.2.2.2.2 Characteristics of reference analogue point-to-point systems

Reference circuit	12 hops with 50 km distance between stations
Antenna gain (dBi)	33
e.i.r.p. (dBW)	36
Feeder/multiplexer loss (dB)	3
Receiver noise figure (referred to input of receiver) (dB)	8
Maximum short- and long-term interference in the reference circuit • baseband interfering signal power level not to be exceeded for more than 20% of the time • baseband interfering signal power level not to be exceeded for more than 0.01% of the time	 240 pW0p 50 000 pW0p

Antenna pattern: Use antenna pattern of section 1.2.2.2.1.

MOD 1.2.2.2.3 Characteristics of reference point-to-multipoint systems

NOTE - In application of the standard computation program (SCP), the use of the point-to-multipoint reference FS system parameters for the 2 170 - 2 200 MHz band is not required.

Parameter	Central station	Outstation
Antenna type	Omni/Sectoral	Dish/Horn
Antenna gain (dBi)	10/13	20 (analogue) 27 (digital)
e.i.r.p. (max) (dBW) analogue digital	 12 24	 21 34
Noise figure (dB)	3.5	3.5
Feeder/multiplexer loss (dB)	2	2
IF bandwidth (MHz)	3.5	3.5

Antenna pattern:

For the outstation antenna pattern, the reference pattern described in section 1.2.2.2.1 is to be used.

The reference radiation pattern for omnidirectional or sectoral antennas is the following:

$$G(\theta) = G_0 - 12\,(\theta/\varphi_3)^2, \text{ dBi} \qquad 0 \le \theta < \varphi_3$$

$$G(\theta) = G_0 - 12 - 10 \log (\theta/\varphi_3), \text{ dBi} \qquad \varphi_3 \le \theta < 90°$$

where:

G_0 = maximum gain in the horizontal plane (dBi)

θ is the radiation angle above the horizontal plane (degrees)

φ_3 (degrees) is given by:

$$j_3 = \frac{1}{a^2 - 0.818} \text{ degrees}$$

where:

$$\alpha = \frac{10^{0.1G_0} + 172.4}{191}$$

NOC 1.2.3 Determination of the need for coordination between MSS space stations (space-to-Earth) and terrestrial stations

MOD 1.2.3.1 Method for the determination of the need for coordination between MSS space stations (space-to-Earth) and other terrestrial services sharing the same frequency band in the 1 to 3 GHz range

Coordination of assignments for transmitting space stations of the mobile-satellite service with respect to terrestrial services is not required if the power flux-density produced at the Earth's surface or the fractional degradation in performance (FDP) of a station in the fixed service does not exceed the threshold values shown in the following table.

Frequency band (MHz)	Terrestrial service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P	*r* dB/deg	*P*	*r* dB/deg	
1 492 - 1 525	analogue FS telephony (NOTE 5)	-146 dB(W/m^2) in 4 kHz and -128 dB(W/m^2) in 1 MHz	0.5	-146 dB(W/m^2) in 4 kHz and -128 dB(W/m^2) in 1 MHz	0.5	
	all other cases (NOTE 4)	-128 dB(W/m^2) in 1 MHz	0.5	-128 dB(W/m^2) in 1 MHz	0.5	25
1 525 - 1 530	analogue FS telephony (NOTE 5)	-146 dB(W/m^2) in 4 kHz and -128 dB(W/m^2) in 1 MHz	0.5	-146 dB(W/m^2) in 4 kHz and -128 dB(W/m^2) in 1 MHz	0.5	
	all other cases	-128 dB(W/m^2) in 1 MHz	0.5	-128 dB(W/m^2) in 1 MHz	0.5	25
2 160 - 2 2 00 (NOTE 3)	analogue FS telephony (NOTE 5)	-146 dB(W/m^2) in 4 kHz and -128 dB(W/m^2) in 1 MHz	0.5	-141 dB(W/m^2) in 4 kHz and -123 dB(W/m^2) in 1 MHz (NOTE 6)	0.5	
	all other cases	-128 dB(W/m^2) in 1 MHz	0.5	-123 dB(W/m^2) in 1 MHz (NOTE 6)	0.5	25

Frequency band (MHz)	Terrestrial service to be protected	Coordination threshold values				
		Geostationary space stations		Non-geostationary space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		P	*r* dB/deg	*P*	*r* dB/deg	
2 483.5 - 2 500	all other cases	-128 dB(W/m²) in 1 MHz and -146 dB(W/m²) in 4 kHz		-126 dB(W/m²) in 1 MHz and -144 dB(W/m²) in 4 kHz (NOTE 7)	0.65	
2 500 - 2 520	analogue FS telephony (NOTE 5)	-146 dB(W/m²) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	-146 dB(W/m²) in 4 kHz and -123 dB(W/m²) in 1 MHz	0.5	
	all other cases	-128 dB(W/m²) in 1 MHz	0.5	-128 dB(W/m²) in 1 MHz	0.5	25
2 520 - 2 535	analogue FS telephony (NOTE 5)	-154 dB(W/m²) in 4 kHz and -136 dB(W/m²) in 1 MHz	0.75	-146 dB(W/m²) in 4 kHz and -128 dB(W/m²) in 1 MHz	0.5	
	all other cases	-136 dB(W/m²) in 1 MHz	0.75	-128 dB(W/m²) in 1 MHz	0.5	25

NOTE 1 - The calculation of fractional degradation in performance (FDP) is contained in section 1.2.2.1, using the reference FS parameters contained in sections 1.2.2.2.1 and 1.2.2.2.3. The use of FDP threshold is limited to the case of digital FS systems.

NOTE 2 - The following formula should be used for deriving the coordination threshold in terms of power flux-density:

P	for	$0° \le \delta \le 5°$
$P + r(\delta - 5)$	for	$5° < \delta \le 25°$
$P + 20r$	for	$25° < \delta \le 90°$

where δ is the angle of arrival (degrees).

The threshold values are obtained under assumed free-space propagation conditions.

NOTE 3 - The coordination thresholds in the band 2 160 - 2 270 MHz (Region 2) and 2 170 - 2 200 MHz (all regions) to protect other terrestrial services do not apply to the International Mobile Telecommunication-2000 (IMT-2000), as the satellite and the terrestrial components are not intended to operate in the same area or on common frequencies within these bands.

NOTE 4 - Exceptions for the band 1 492 - 1 525 MHz are as follows:

4.1 For the land mobile service on the territory of Japan (No. **S5.348A**): -150 dB(W/m^2) in 4 kHz at all angles of arrival is applicable to all satellite space-to-Earth emissions.

4.2 For the aeronautical mobile service for telemetry (No. **S5.343**), the requirement for coordination is determined by frequency overlap (No. **S5.348**).

NOTE 5 - In all cases involving sharing with analogue systems for telephony in the fixed service, further coordination is only required when the power flux-density values are greater than or equal to the coordination threshold values in both reference bandwidths.

NOTE 6 - The power flux-density values specified for the band 2 160 - 2 200 MHz provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with a non-GSO MSS system employing narrow-band TDMA/FDMA techniques.

NOTE 7 - The power flux-density values specified for the band 2 483.5 - 2 500 MHz provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non-GSO MSS systems employing CDMA techniques. The power flux-density values specified will not provide full protection for existing digital fixed systems in all cases. However, these power flux-density values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high-power ISM equipment and possible low-power applications are expected to produce a relatively high interference environment.

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RESOLUTION 215 (Rev.WRC-97)

COORDINATION PROCESS AMONG MOBILE-SATELLITE SYSTEMS AND EFFICIENT USE OF THE ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE IN THE 1 - 3 GHz RANGE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that space-to-Earth transmissions of mobile-satellite systems are constrained to limit their power flux-density over areas where the frequency band is shared with terrestrial systems;

b) that a number of proposed mobile-satellite systems can provide a good service to users within the power flux-density limits given in Annex 2 of Resolution **46 (Rev.WRC-95)**/Annex 1 to Appendix **S5**;

c) that when maximum communication capacity is achieved by systems in the mobile-satellite service a major portion of the interference into each of these systems will come from the other mobile-satellite systems sharing the frequency band, and, consequently, if one system starts to transmit at higher power, all others need to do the same in order to overcome mutual interference;

d) that ITU-R is studying the efficient use of the radio spectrum and frequency sharing within the mobile-satellite service, that Recommendations ITU-R M.1186 and M.1187 are a basis for further study, and that additional preliminary texts are available or can be provided by administrations on this matter;

e) that, in a codirectional, co-frequency and co-coverage sharing environment, capacities of systems using spread-spectrum multiple-access techniques are affected by technical and operational characteristics of other mobile-satellite service systems using similar multiple-access techniques;

f) that in many parts of the world and in certain frequency bands in the 1 - 3 GHz range, significant congestion already exists due to use by other terrestrial and space services;

g) the need to make most efficient use of frequencies in the MSS allocations,

recognizing

that, as a means to ensure that the frequency bands allocated to the mobile-satellite service can be used in an efficient manner, there is an urgent demand for:

1. criteria to be established by ITU-R to be used in determining the need to coordinate between mobile-satellite systems; and

2. detailed methods of interference calculation to be used by administrations in the coordination process;

3. ITU-R studies which should not impede the timely deployment of any mobile-satellite service systems,

resolves to invite ITU-R

1. to continue its studies on this subject and develop, as a matter of urgency, criteria for determining the need to coordinate and calculation methods for determining levels of interference, as well as the required protection ratios between networks in the mobile-satellite service;

2. to study, as a matter of urgency, the use of technically and operationally feasible techniques to allow for improvements in spectrum efficiency in MSS systems,

further resolves

1. that ITU studies should be focused on the technical and operational characteristics of systems using spread-spectrum multiple-access techniques that can allow co-frequency, co-coverage, codirectional sharing but which involve cooperation among systems' operators to maximize the efficient use of spectrum by multiple mobile-satellite service systems using such access techniques;

2. that administrations responsible for the introduction of mobile-satellite systems are urged to implement, as practicable, the latest available technologies to improve spectrum efficiency consistent with the requirement to offer viable MSS services;

3. to recommend that administrations be encouraged to use the most advanced technology available when preparing to implement their global MSS systems in the 1 - 3 GHz range so that they may operate, if necessary, in different frequency bands in different regions, in accordance with the MSS allocations in the 1 - 3 GHz range decided by this Conference.

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SUP

RESOLUTION 115 (WRC-95)

NOC

RESOLUTION 716

SUP

RESOLUTION 717

SUP

RECOMMENDATION 717

SUP

RECOMMENDATION 721

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ARTICLE S5

NOC

MHz
1 700 – 2 010

Allocation to Services		
Region 1	Region 2	Region 3
1 980 – 2 010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 S5.389A S5.389B S5.389F	

MHz
2 010 – 2 170

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**2 010 – 2 025** FIXED MOBILE S5.388	**2 010 – 2 025** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.388 MOD S5.389C S5.389D S5.389E ADD S5.390	**2 010 – 2 025** FIXED MOBILE S5.388
	…		
MOD	**2 160 – 2 170** FIXED MOBILE S5.388 S5.392A	**2 160 – 2 170** FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 MOD S5.389C S5.389D S5.389E ADD S5.390	**2 160 – 2 170** FIXED MOBILE S5.388

MOD **S5.389C** The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January 2002 and is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

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ADD S5.390 In Argentina, Brazil, Chile, Colombia, Cuba, Ecuador and Suriname, the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite services shall not cause harmful interference to stations in the fixed and mobile services before 1 January 2005. After this date the use of these bands is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**.

NOC

MHz
2 170 – 2 450

Allocation to Services		
Region 1	Region 2	Region 3
2 170 – 2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.388 S5.389A S5.389F S5.392A	

MOD

GHz
14.8 – 17.3

Allocation to Services		
Region 1	Region 2	Region 3
15.4 – 15.43	AERONAUTICAL RADIONAVIGATION ADD S5.511D	
15.43 - 15.63	FIXED-SATELLITE (space-to-Earth) (Earth-to-space) MOD S5.511A AERONAUTICAL RADIONAVIGATION MOD S5.511C ADD S5.511D	
15.63 – 15.7	AERONAUTICAL RADIONAVIGATION ADD S5.511D	

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MOD S5.511A Use of the band 15.43 - 15.63 GHz by the fixed-satellite service (space-to-Earth) (see Resolution [**COM5-8**] **(WRC-97)**) and (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. Also in the space-to-Earth direction, harmful interference shall not be caused to stations of the radio astronomy service using the band 15.35 - 15.4 GHz. The threshold levels of interference and associated power flux-density limits which are detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769-1. Special measures will need to be employed to protect the radio astronomy service in the band 15.35 - 15.4 GHz.

SUP S5.511B

MOD S5.511C Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **S4.10** applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340.

ADD S5.511D Fixed-satellite service systems for which complete information for advance publication has been received by the Bureau by 21 November 1997 may operate in the bands 15.4 - 15.43 GHz and 15.63 - 15.7 GHz in the space-to-Earth direction and 15.63 - 15.65 GHz in the Earth-to-space direction. In the bands 15.4 - 15.43 GHz and 15.65 - 15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m^2/MHz) for all angles of arrival. In the band 15.63 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m^2/MHz) for any angle of arrival, it shall coordinate under Resolution **46 (Rev.WRC-95)**/No. **S9.11A** with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63 - 15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).

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MOD

GHz
18.6 – 20.2

Allocation to Services		
Region 1	Region 2	Region 3
19.3 – 19.7	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) S5.523B MOD S5.523C ADD S5.523E MOD S5.523D MOBILE	

MOD

GHz
27 – 29.9

Allocation to Services		
Region 1	Region 2	Region 3
29.1 – 29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOD S5.523C ADD S5.523E MOD S5.535A S5.539 MOD S5.541A MOBILE Earth Exploration-Satellite (Earth-to-space) S5.541 S5.540	

MOD S5.523C No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995.

MOD S5.523D The use of the band 19.3 - 19.7 GHz (space-to-Earth) by GSO/FSS systems and by feeder links for non-geostationary satellite systems in the MSS is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/** No. **S9.11A**, but not subject to the provisions of No. **S22.2**. The use of this band for other non-GSO/FSS systems, or for the cases indicated in No. **MOD S5.523C** and **ADD S5.523E**, is not subject to the provisions of Resolution **46 (Rev.WRC-95)/**No. **S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**.

ADD S5.523E No. **S22.2** of the Radio Regulations shall continue to apply in the bands 19.6 - 19.7 GHz and 29.4 - 29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **S4** coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997.

MOD S5.535A The use of the band 29.1 - 29.5 GHz (Earth-to-space) by the FSS is limited to GSO satellite systems and feeder links to non-GSO satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/**No. **S9.11A**, but not subject to the provisions of No. **S22.2**, except as indicated in No. **MOD S5.523C** and **ADD S5.523E** where such use is not subject to the provisions of Resolution **46 (Rev.WRC-95)**/No. **S9.11A** and shall continue to be subject to Articles **11/S9** (except No. **S9.11A**) and **13/S11** procedures, and to the provisions of No. **S22.2**.

MOD S5.541A Feeder links of non-GSO/MSS networks and GSO/FSS networks operating in the band 29.1 - 29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix **S4** coordination information is considered as having been received by the Bureau after 17 May 1996 and until it is changed by a future competent world radiocommunication conference. Administrations submitting Appendix **S4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by the ITU-R (see Resolution **121 (WRC-97)**).

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ARTICLE S21

MOD

TABLE S21-4

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
…					
15.43 - 15.63 GHz	Fixed-Satellite (S-E)	-127	5° - 20°: -127 20° - 25°: -127 + 0.56 (δ-20)^2	25° - 29°: -113 29° - 31°: -136.9 + 25 log (δ-20) 31° - 90°: -111	1 MHz
…					

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ADD

RESOLUTION COM5-8 (WRC-97)

FEASIBILITY OF IMPLEMENTING FEEDER LINKS OF NON-GEOSTATIONARY SATELLITE NETWORKS IN THE MOBILE-SATELLITE SERVICE IN THE BAND 15.43 - 15.63 GHz (SPACE-TO-EARTH) WHILE TAKING INTO ACCOUNT THE PROTECTION OF THE RADIO ASTRONOMY SERVICE, THE EARTH EXPLORATION-SATELLITE (PASSIVE) SERVICE AND THE SPACE RESEARCH (PASSIVE) SERVICE IN THE BAND 15.35 - 15.4 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 15.43 - 15.63 GHz (space-to-Earth) is allocated to the fixed-satellite service on a primary basis for use by feeder links to non-geostationary systems in the mobile-satellite service;

b) that this band is shared with aeronautical radionavigation services on a primary basis;

c) that No. **S4.10** of the Radio Regulations applies to the use of the band by aeronautical radionavigation services;

d) that, in accordance with No. **S5.511B (WRC-95)**, aircraft stations were not permitted to transmit in the band 15.45 - 15.65 GHz;

e) that WRC-97 recognized that airborne transmitters were operating in the aeronautical radionavigation service in the 15.43 - 15.63 GHz band;

f) that the feasibility of designing and operating feeder links in the space-to-Earth direction with the power flux-density limits in Table **S21-4** of Article **S21** has not been studied by ITU-R;

g) that the band 15.35 - 15.4 GHz is allocated on a co-primary basis for exclusively passive use by the radio astronomy service, the earth exploration-satellite service and the space research service and protection from harmful interference from space stations is needed;

h) that No. **S5.511A** provides that harmful interference shall not be caused to the radio astronomy service by feeder links for the mobile-satellite service operated in the band 15.43 - 15.63 GHz;

i) that out-of-band emissions from space stations in the mobile-satellite service in the band 15.43 - 15.63 GHz may cause interference to the radio astronomy service in the band 15.35 - 15.4 GHz;

j) that Recommendation ITU-R RA.769-1 specifies the levels of interference which are detrimental to the radio astronomy service which may not be easily met by non-GSO MSS feeder links operating in the space-to-Earth direction,

invites ITU-R

1 to study, as a matter of urgency, in preparation for [WRC-99], the feasibility of implementing non-GSO MSS feeder links in the band 15.43 - 15.63 GHz, taking into account the above *considerings*;

2 to study, as a matter of urgency, the interference potential of feeder links for NGSO satellites in the mobile-satellite service to the radio astronomy service in the 15 GHz band and develop recommendations to reduce the out-of-band interference,

resolves

that [WRC-99] should review the results of the above studies and take appropriate action, including possible adjustments in spectrum allocations.

SUP

RESOLUTION 116 (WRC-95)

SUP

RESOLUTION 117 (WRC-95)

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ADD

RESOLUTION GTPLEN1-1 (WRC-97)

GENERAL REVIEW OF THE RESOLUTIONS AND RECOMMENDATIONS OF WORLD ADMINISTRATIVE RADIO CONFERENCES AND WORLD RADIOCOMMUNICATION CONFERENCES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that it is important to keep the resolutions and recommendations of the past world administrative radio conferences and world radiocommunication conferences under constant review, in order to keep them up to date;

b) that the report of the Director of the Radiocommunication Bureau submitted to this Conference provided a useful basis for a general review of the resolutions and recommendations of past conferences which was conducted by this Conference,

invites future competent world radiocommunication conferences

to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation and to take appropriate action,

instructs the Director of the Radiocommunication Bureau

to conduct a general review of the resolutions and recommendations of previous conferences and, if necessary after consultation with the Radiocommunication Advisory Group and the Chairmen of the relevant radiocommunication study groups, to submit a report to future competent world radiocommunication conferences which indicates their current status, and what follow-up action may be advised.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 278-E
13 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 1 OF THE PLENARY

NOTE FROM THE CHAIRMAN OF COMMITTEE 4 TO THE CHAIRMAN OF WG PL1

RECOMMENDED AGENDA ITEMS FOR WRC-99 AND WRC-01

Committee 4 identified the following items, consequential to work on WRC-97 agenda item 1.6, for consideration by WG PL1, for inclusion in the agendas for WRC-99 and WRC-01:

Items for WRC-99 agenda[1]

MOD 1 - to consider the frequencies and channelling arrangements in the MF and HF bands allocated to the maritime mobile service with a view to meet the changing needs of this service (Resolution [**COM4-10**]) and in order to provide protection of HF distress and safety communications (Resolution [**COM4-9**])[2];

NOC 2 - review the use of the frequency band 415 - 526.5 kHz by the aeronautical radionavigation and maritime mobile services;

ADD 11 - to consider the use of new technology in the band 156 - 174 MHz and, if appropriate, make the consequential revision of Appendix **S18** to the Radio Regulations (Resolution [**COM4-3**]).

Items for WRC-01 agenda[1]

SUP 2 - (this agenda item is covered by WRC-99 agenda item 1, as proposed in this document);

MOD 10 - to consider Appendix **S13** and Resolution **331 (Rev.WRC-97**) with a view to their deletion and, if appropriate, consider related changes to Chapter SVII and other provisions of the Radio Regulations as necessary, taking into account the continued transition to the Global Maritime Distress and Safety System (GMDSS);

ADD11 - to consider the results of studies, and take necessary actions relating to:

11.1 the exhaustion of the maritime mobile service identity numbering resource (Resolution [**COM4-5**]); and

11.2 the shore-to-ship distress communication priorities (Resolution [**COM4-11**]).

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[1] The numbering and the proposed revisions refer to the proposals contained in Document DT/70 (Working Group 1 of the Plenary).

[2] As the aeronautical mobile service is not included in this proposal, WG PL1 may wish to include that service in a separate agenda item for WRC-99, or to combine with this proposal from Committee 4.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 279-E
13 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 6

THIRD SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

At its eighth meeting (13 November 1997), Committee 4 approved the following texts which are submitted to Committee 6 for consideration and for subsequent transmittal to the Plenary Meeting:

- Articles S5, S19, S33, S51 and S52 of the Simplified Radio Regulations (Attachment 1).
- Appendix S15 of the Simplified Radio Regulations (Attachment 2).
- Resolutions 210, 312 and 330 (Attachment 3).
- New Resolutions [COM4-9], [COM4-10], [COM4-11] and [COM4-12] (Attachment 4).
- Article S12 (Attachment 5).

All these texts were approved unanimously by Committee 4.

E. GEORGE
Chairman of Committee 4

ATTACHMENT 1

ARTICLE S5

MOD **S5.73** The band 285 - 325 kHz (283.5 - 325 kHz in Region 1), in the maritime radionavigation service~~, radiobeacon stations~~ may ~~also~~ be used to transmit supplementary navigational information using narrow-band techniques, on condition that ~~the prime function of the beacon is not significantly degraded~~no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

MOD **S5.81** The bands 490 - 495 kHz and 505 - 510 kHz shall be subject to the provisions of Appendix **S13** ~~until the entry into force of the reduced guardband in accordance with Resolution **210 (Mob-87)**~~paragraph 15(1), Part A2.

ARTICLE S19

ADD **S19.96A** Five-digit ship station selective call numbers are assigned to SSFC equipment (as described in Recommendation ITU-R M.257-3) for calling in the radiotelephony and for phasing of the NBDP equipment (as described in Recommendation ITU-R M.476-5). Within one administration the same five-digit number may be used:

– for identification of ship stations fitted with both SSFC and NBDP equipment;

– for identification of ship stations of two different ships fitted with either SSFC or NBDP equipment only.

ARTICLE S33

Operational Procedures for Urgency and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section V. Transmission of Maritime Safety Information[1]

NOC **S33.39** *A. General*

ADD **S33.39A** § 20A.(1) Messages from ship stations containing information concerning the presence of cyclones shall be transmitted, with the least possible delay, to other mobile stations in the vicinity and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

_____

ADD **S33.39.1** [1] Maritime Safety Information includes navigation and meteorological warnings, forecasts and other urgent messages pertaining to safety normally transmitted to/from ships, between ships and between ship and coast stations or coast earth stations.

ADD **S33.39B** (2) Messages from ship stations containing the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, shall be transmitted as soon as possible to other ships in the vicinity, and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

ADD **Section VIII. Medical Advice**

ADD **S33.54** § 29. (1) Mobile stations requiring medical advice may obtain it through any of the land stations shown in the List of Radiodetermination and Special Service Stations.

ADD **S33.55** (2) Communications concerning medical advice may be preceded by the urgency signal.

ARTICLE S51

Conditions to Be Observed in the Maritime Services

Section I. Maritime Mobile Service

D. Ship Stations Using Radiotelephony

MOD **S51.53** *a)* send class J3E ~~or H3E~~ emissions on a carrier frequency of 2 182 kHz and receive class J3E ~~or H3E~~ emissions on a carrier frequency of 2 182 kHz, except for such apparatus as is referred to in No. **S51.56** (see also Appendix **S13**);

ARTICLE S52

MOD **S52.3** (2) Where these provisions specify class F1B emission, class J2B emission and classes J1D and J2D emission shall be considered equivalent. However, these emissions shall not be used with the HF distress and safety frequencies listed in Appendix **S15**.

MOD **S52.7** ~~§ 1.~~ (2) ~~In~~From 1 February 1999, in the maritime mobile service, ~~after full implementation of the GMDSS,~~ the frequency 490 kHz ~~will be~~is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing telegraphy ~~(see Resolution **210 (Mob-87)**)~~.

MOD **S52.54** § 19. (1) Ship Morse radiotelegraph stations equipped to operate in the bands specified in Appendix **S17** Part B, Sections IV and V shall employ ~~only~~ the classes of emission mentioned in No. **S52.2** for Morse telegraphy at speeds not exceeding 40 bauds. Survival craft stations may use class A2A or H2A emissions in these bands (see Appendix **S13**)[6].

ADD **S52.54.1** [6] Additionally, use of classes J2B, J1D and J2D emissions are permitted on a non-interference basis to A1A Morse operations. However, these emissions shall not be used on the HF safety and distress frequencies listed in Appendix **S15**.

MOD **S52.55** (2) Except as provided for in Nos. **S52.222.1** and **S52.54.1**, coast Morse radiotelegraph stations operating in the bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz shall not use Type 2 emissions (see No. **S52.18**).

MOD **S52.189** § 87. (1) The frequency 2 182 kHz[1] is an international distress frequency for radiotelephony (see Appendix **S13** for details of its use for distress, urgency, safety and emergency position-indicating radiobeacon (EPIRB) purposes). ~~The class of emission to be used for radiotelephony on the frequency 2 182 kHz shall be J3E or H3E (see No. **S51.53**) except for such apparatus as is referred to in No. **S51.56**.~~

MOD **S52.217** § 96. (1) The class of emission to be used for analogue radiotelephony in the bands between 4 000 kHz and 27 500 kHz shall be J3E; for digital telecommunications in those bands the class of emission shall be J1D or J2D.

MOD **S52.219** (3) Coast ~~radiotelephone~~ stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 and 27 500 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

MOD **S52.220** (4) Ship ~~radiotelephone~~ stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 kHz and 27 500 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

ATTACHMENT 2

NOC

TABLE S15.1

Frequencies below 30 MHz

TABLE S15.2

Frequencies above 30 MHz (VHF/UHF)

	Frequency (in ~~kHz~~MHz)	Description of usage	Notes
NOC	*156.8	VHF-CH16	The frequency 156.8 MHz is used for distress and safety communications by radiotelephony (see also Appendix **S13**). Additionally, the frequency 156.8 MHz may be used by aircraft stations for safety purposes only.
MOD	1 530 - 1 544	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 530 - 1 544 MHz is used for distress and safety purposes in the space-to-Earth direction in the maritime mobile-satellite service. [GMDSS safety communications have priority in this band; see RR **S5.353A**].
MOD	1 626.5 - 1 645.5	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 626.5 - 1 645.5 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. [GMDSS safety communications have priority in this band for the maritime mobile-satellite service and where allocated to the mobile-satellite service by RR **S5.353A**].

ATTACHMENT 3

SUP

RESOLUTION No. 210 (Mob-87)

SUP

RESOLUTION No. 330 (Mob-87)

MOD

ANNEX TO RESOLUTION 312 (Rev.WRC-97)

Distribution plan for group channels HF A1A Morse coast stations by countries and areas[1]

Group 1		Group 2		Group 3		Group 4	
AGL	LBR	ALG	GRC	ALS	LTU	AFS	MLT
AZE	MAU	ATN	HKG	ARG	LVA	ALB	NZL
AZR	MDG	ARS W[4]	HNG	BRM	MDR	ARS E[8]	PNG
B	MRT	BEL	HOL	CAN CL[7]	MOZ	AUS	POR
BAH	NCG	BEN	I	CAN E[7]	MRA	BUL	PTC
BER	NCL	BRB	KOR	CAN NE[7]	MRC	CHN[9]	RUS AN
BGD	OCE	CBG	LBN	CHN	NIG	COD	RUS EO
BHR	OMA	CHR	MEX	DNK	NOR	E	RUS NW
CAN W[2]	PHL	CKH	MRT	EST	NRU	FJI	RUS SW
CAN NW[2]	PTR	CLM	NCL	FIN	PAK	GEO	RUS W
CHL	REU	CLN	OCE	GEO	RUS EO	GNE	SEN
CNR	ROU	CME	PNR	GHA	RUS NW	IND E	SEY
CTI	RUS AS	COG	POL	GNB	RUS SW	INS	SLM
DJI	SNG	CPV	PRG	GUI	RUS W	IRQ	SMA
EQA	STP	CTR	PRU	GUM	S	J	SRL
ERI	SUI	CUB	REU	GUY	SVN	JOR	SUR
ETH	TKM	CYP	RUS NW	HRV	TRD	KWT	SYR
F	UKR	CZE	RUS EO	HWA	TUR	LVA	TGO
G	USA E[3]	DOM	SDN	IRN	UKR	LTU	TUN
IND W	VUT	EGY	SVK	ISL	USA W	MAU	UKR
IRL		F	THA	JMC	VEN	MDA	URG
ISR		FLK	USA SO[6]	LBY	YUG	MLA	VTN
KEN		G[5]	VUT				YEM
KRE		GAB	YEM				
		GMB					

NOTES

1 The meaning of the symbols is given in Tables B1 and 4E1 of the Preface to the International Frequency List and the Weekly Circular.

2 Canada (West Coast and Western Arctic).

3 United States of America (East Coast).

4 Saudi Arabia (Kingdom of) (West).

5 22 MHz only.

6 United States of America (Gulf Coast).

7 Canada (East Coast and Eastern Arctic).

8 Saudi Arabia (Kingdom of) (East).

9 China (Province of Taiwan).

ATTACHMENT 4

ADD

RESOLUTION [~~EUR-2~~COM4-9]

PROTECTION OF DISTRESS AND SAFETY COMMUNICATIONS ON THE FREQUENCIES 12 290 kHz AND 16 420 kHz FROM HARMFUL INTERFERENCE CAUSED BY THESE FREQUENCIES BEING USED ALSO FOR NON-SAFETY CALLING

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the frequencies 4 125 kHz, 6 215 kHz, 12 290 kHz and 16 420 kHz are used for distress and safety communications as well as for non-safety calling by ships in radiotelephony in accordance with the provisions of Article **S31** and **S52.221** respectively;

b) that considerably worldwide interference to distress and safety communications is experienced especially on the frequencies 12 290 kHz and 16 420 kHz due to ships being unable to monitor these frequencies before calling,

noting further

a) that the recommended agenda for the 1999 World Radiocommunication Conference (WRC-99) includes an agenda item [2.4] for review of the channel arrangements in the HF bands for the maritime mobile service, taking into account the use of new digital technology;

b) that consideration of this item by WRC-99 may result in making the frequencies 12 290 kHz and 16 420 kHz exclusive for distress and safety communications,

recognizing

that it is of vital importance for the safety of life at sea that distress and safety communications can be carried out without being hampered by harmful interference,

resolves

1 to urge administrations:

a) to move, where relevant, their coast stations calling frequencies from the channels 1221 and 1621 to any other suitable HF channel;

b) to request ships under their jurisdiction to refrain from using the frequencies 12 290 kHz and 16 420 kHz for non-safety calling;

2 to recommend that WRC-99 consider this subject,

instructs the Secretary General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

ADD

RESOLUTION [~~IAP-8~~COM4-10]

USE OF DIGITAL TELECOMMUNICATION TECHNOLOGIES IN THE MF AND HF BANDS BY THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that amendments to Article **S52** of the Radio Regulations were adopted by WRC-97 to provide for the use of digital telecommunications technology in the maritime HF telephony and A1A Morse bands;

b) that there may be a need for consequential changes in Appendix **S17** to reflect provisions made at WRC-97 for the use of digital telecommunications in the maritime HF telephony bands,

considering further

a) that it would be desirable to extend the use of digital telecommunications technology to the maritime HF A1A Morse telegraphy bands as well;

b) that since these bands are significantly underutilized at present; and

c) that the requirement for use of new digital technologies in the maritime service is growing rapidly,

noting

a) that Resolution **720** of WRC-95 sets forth a preliminary agenda for WRC-99 that includes item 2.4 "Review of channel arrangements in HF bands for the maritime mobile service, taking into account the use of new digital technology";

b) that use of the maritime HF A1A Morse radiotelegraphy bands is steadily diminishing with the results that Administrations are commencing already to use these bands for digital telecommunications systems on a non-interference basis,

resolves

that WRC-99 undertake changes to Appendix **S17** and Article **S52** as needed~~.~~,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

ADD

RESOLUTION [~~IAP-7~~COM4-11]

RELATING TO STUDIES REQUIRED TO PROVIDE PRIORITY TO DISTRESS COMMUNICATIONS ORIGINATED BY SHORE-BASED SEARCH AND RESCUE AUTHORITIES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that Article **S53** provides priority for distress and safety communications which involves immediate access to the space segment;

b) that distress and safety communications from shore-based search and rescue authorities will also be given priority access to the space segment;

c) that when ships are communicating using their ship earth stations, these priority requests are not able to be completed without manual intervention using a manual procedure to clear all traffic to and from the ship,

considering

a) that ships in distress or involved with the distress case may desire to use their ship earth stations to notify friends, family and business associates on shore;

b) that this could cause priority requests from Rescue Authorities, to receive a busy signal; and

c) that unacceptable delays may be encountered to manually clear all traffic to and from the ships,

recognizing

a) that life and property may be lost if rapid access is not provided for distress related communications originated by the Rescue Authority;

b) that the International Maritime Organization (IMO) has considered this problem and decided that provisions are necessary for giving priority to shore originated distress communications;

c) that Inmarsat is currently studying how to provide such priority communications,

resolves to invite

1 the ITU-R to monitor the status of these studies and to develop suitable recommendations;

2 the IMO to develop requirements for priority communications for distress related communications originated by shore-based search and rescue authorities and to submit these requirements to the next competent WRC,

further invites the Council

to place this Resolution on the agenda of ~~the next~~a future competent world radiocommunication conference,

instructs the Secretary-General

to communicate this Resolution to IMO and the International Civil Aviation Organization (ICAO) for appropriate action and comment.

RESOLUTION [COM4-12] (WRC-97)

OPERATIONAL PROCEDURES FOR CANCELLING FALSE DISTRESS ALERTS IN THE GMDSS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the SOLAS 1974, as amended, prescribes that ships subject to this Convention shall be fitted with GMDSS equipment as appropriate;

b) that non-SOLAS vessels are also being equipped with GMDSS equipment;

c) that false distress alerts and relays are a significant problem within the GMDSS,

noting

that the International Maritime Organization (IMO) has developed similar operational procedures to cancel false distress alerts,

resolves

a) to urge administrations to take all necessary measures to avoid false distress alerts and to minimize the unnecessary burden on rescue organizations which occur;

b) to urge administrations to encourage the correct use of GMDSS equipment with particular attention to appropriate training;

c) to urge administrations to implement operational procedures contained in the Annex to this Resolution; and

d) that administrations should take any consequential appropriate action in this respect,

instructs the Secretary-General

~~to inform IMO of this Resolution~~to bring this Resolution to the attention of IMO.

ANNEX TO RESOLUTION [COM4-12]

CANCELLING OF FALSE DISTRESS ALERTS

If a distress alert is inadvertently transmitted, the following steps shall be taken to cancel the distress alert.

1. VHF Digital Selective Calling

1) Reset the equipment immediately;
2) Set to Channel 16, and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and Maritime Mobile Service Identity (MMSI), and cancel the false distress alert.

2. MF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony transmission on 2 182 kHz, and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert.

3. HF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony on the distress and safety frequency in each band in which a false distress alert was transmitted (see Appendix **S15**), and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert on the distress and safety frequency in each band in which the false distress alert was transmitted.

4. Inmarsat Ship Earth Station

Notify the appropriate rescue coordination centre that the alert is cancelled by sending a distress priority message by way of the same coast earth station through which the false distress alert was sent. Provide ship name, call sign, Inmarsat identity with the cancelled alert message.

5. Emergency Position Indicating Radiobeacon (EPIRB)

If for any reason an EPIRB is activated inadvertently, contact the appropriate rescue coordination centre through a coast station or land earth station and cancel the distress alert.

6. General

Notwithstanding the above, ships may use additional appropriate means available to them to inform the appropriate authorities that a false distress alert has been transmitted and should be cancelled.

ATTACHMENT 5

ADD

~~PROPOSED~~ ARTICLE S12

Seasonal planning of the HF bands allocated [exclusively] to the broadcasting service between 5 900 kHz and 26 100 kHz[1]

Section I. Introduction

S12.1 The use of the frequency bands allocated [exclusively] to the HFBC between 5 900 and 26 100 kHz shall be based on the principles given below and shall be in conformity with seasonal planning based on a coordination procedure between administrations (referred in this Article as the Procedure) described in **S12.2** to **S12.45**. An administration may authorize, ~~among others,~~ a broadcasting organization (referred to in this Article as a broadcaster) among others, to act on its behalf in this coordination.

Section II. Principles

S12.2 (1) The Procedure shall be based on the principle of equal rights of all countries, large or small, to equitable access to these bands. Attempts shall also be made to achieve efficient use of these frequency bands, account being taken of the technical and economic constraints that may exist in certain cases. On the basis of the foregoing, the following principles shall be applied.

S12.3 (2) All broadcasting requirements, formulated by administrations, shall be taken into account and treated on an equitable basis, so as to guarantee the equality of rights referred to in No. **S12.2**, and to enable each administration to provide a satisfactory service.

S12.4 (3) The Procedure shall be based solely on the broadcasting requirements expected to become operational during the schedule period. It shall furthermore be flexible in order to take into account new broadcasting requirements and modifications to the existing broadcasting requirements.

[1 Resolution 529 should be modified to take account of the application of this Procedure in the frequency band allocations to the HFBC service.]

S12.5 (4) All broadcasting requirements, national[2] and international, shall be treated on an equal basis, with due consideration of the differences between these two kinds of broadcasting requirements.

S12.6 (5) In the Procedure, an attempt shall be made to ensure, as far as practicable, continuity of use of a frequency or of a frequency band.

S12.7 (6) The Procedure shall be based on double-side band or single-side band emissions. Other modulation techniques recommended by ITU-R shall be permitted in place of double-sideband or single-sideband emissions, provided that the level of interference caused to existing emissions is not increased.

S12.8 (7) ~~For~~To promote efficient spectrum use, the number of frequencies used shall be the minimum necessary to provide a satisfactory quality of reception. Whenever practicable, only one frequency should be used.

S12.9 (8) The procedure shall include a technical analysis, as specified in the RRB Rules of Procedure.[3]

S12.10 (9) The Procedure should encourage administrations or broadcasters empowered to make changes, to pursue a continual coordination process to resolve incompatibilities at meetings (regional[4] or worldwide, bilateral, multilateral) or by correspondence.

S12.11 (10) Regional coordination groups[4], which will facilitate bilateral and multilateral coordination among the administrations and broadcasters in various regions of the world, shall ~~be identified~~identify themselves to the Bureau. Administrations and broadcasters shall be urged to participate in the relevant regional coordination groups. However, such participation would be on a voluntary basis.

S12.12 ~~(11) Action by the Bureau to coordinate requirements on behalf of administrations whose requirements do not exceed (a value to be defined by a WRC) is part of the seasonal planning and should be undertaken on request from those administrations.~~

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[2] An HF broadcasting requirement is considered as being for the purposes of national coverage when the transmitting station and its associated required service area are both located within the territory of the same country.

[3] ~~See action required in Section 2.6.2.~~Rules of Procedure will need to be established.]

[4] The word regional in this Article is not related to the ITU Regions.

~~4 Not related to ITU Regions.~~

(11) When an administration, in particular the administration of a developing country, requests assistance in the application of the Procedure, the Bureau shall take appropriate action, including, if need be, coordination of the requirements submitted by the requesting administration.

S12.13 (~~9~~12) The regional coordination groups should follow the coordination procedures prescribed in Section III. In the ~~first stage of the equitable application of a new planning procedure~~process of coordinating broadcasting requirements, an attempt ~~will~~shall be made to ~~include~~obtain agreement to the maximum number of submitted requirements ~~achieving the desired~~with the quality level acceptable to administrations or broadcasters.~~ The remaining requirements will be processed on the understanding that lower quality levels would be acceptable.~~

[S12.14 (13) The other primary services in the additional bands allocated by WARC-92 to the broadcasting service shall be protected until 1 April 2007, and assignments to these other primary services ~~should~~shall be taken into account in the Procedure of this Article.]

S12.15 (14) In order to ensure maximum success from the Procedure, administrations and broadcasters shall show the utmost goodwill and mutual cooperation, and give due consideration to all the relevant technical and operational factors involved.

Section III. The Procedure

S12.15A The process of the Procedure shall be facilitated and coordinated by the Bureau as defined elsewhere in this Article.

S12.16 Twice yearly administrations shall submit their projected seasonal broadcasting schedules in the relevant frequency bands to the Bureau. These schedules shall cover the following seasonal periods:

S12.17 Schedule A: Last Sunday in March to last Sunday in October

S12.18 Schedule B: Last Sunday in October to last Sunday in March

S12.19 Implementation of these schedules shall start at 0100 UTC

S12.20 If an administration considers it necessary to take account of propagation changes during the schedule period, it is recommended, for reasons of spectrum efficiency, that such requirements should be implemented on:

S12.21 First Sunday of May;

S12.22 First Sunday of September.

S12.23 Implementation of these changes shall start at 0100 UTC on these dates.

S12.24 Other start and stop dates within a schedule period may be used to ~~cater for~~accommodate requirements that have different schedule periods e.g. special events, clock changes on different dates not coincident with the schedule period etc.

S12.25 Administrations may include in their schedules assignments up to one year in advance of their use.

S12.26 In those cases where an administration does not indicate its ~~use of~~requirements for a new seasonal schedule, the Bureau shall use the assignments ~~for~~from the previous corresponding seasonal schedule for this administration ~~and this~~for the new schedule period. A note in the Schedule shall be used to identify such requirements. The Bureau shall follow this practice for two consecutive schedule periods.

S12.27 Following the action taken in No. **S12.26**, the Bureau shall notify the administration concerned that the Schedule will not include their broadcast requirements unless the administration advises otherwise.

S12.28 When an administration decides to cease its broadcasting service in the HF bands, it shall notify the Bureau of such decision.

S12.29 The frequencies in the schedules should be those that will be used during the season concerned, and ~~they~~ should be the minimum number required to provide satisfactory reception of the programmes in each of the areas and for each of the periods intended. In each schedule, ~~To~~to the maximum possible extent, ~~in each schedule~~ the frequencies to be used in each reception area should ~~be repeated~~remain unchanged from season to season.

S12.30 Administrations are encouraged to coordinate their schedules with other administrations as far as possible prior to submission. An administration may submit on behalf of a group of administrations their coordinated schedules the frequencies of which shall however have no priority for use over those submitted by other administrations.

S12.31 The closing dates for receipt by the Bureau of the schedules relating to the two seasons mentioned in No. **S12.17** and **S12.18** shall be established and published by the Bureau.

S12.32 The schedules shall be submitted with the relevant data ~~contained~~ as specified in Appendix **S4.**

S12.33 Upon receipt of the schedules the Bureau shall, in accordance with the Rules of Procedure, validate the data where necessary, perform a compatibility analysis, and prepare the Tentative High Frequency Broadcasting Schedule (the Tentative Schedule). This schedule shall include all assignments where administrations gave no alternatives, the selections made by the Bureau from any alternatives given, and the frequencies selected by the Bureau in cases where the need for its assistance was indicated by their intentional omission from the individual schedules.

S12.34 The Tentative Schedule shall be published at least two months before the start of each of the two schedule periods in Nos. **S12.17** and **S12.18**.

S12.35 Administrations should examine the Tentative Schedule and should coordinate their frequency schedules to resolve or to minimize, as far as possible, any incompatibilities identified by the compatibility analysis, or by the monitoring results of similar assignments, or by a combination of both.

S12.36 Coordination shall be achieved through bilateral or multilateral meetings of administrations or broadcasters or other means acceptable to the parties concerned.

S12.37 Administrations, either jointly or separately, shall inform the Bureau, as quickly as possible, but no later than two weeks prior to the start of the schedule period, of any changes to their requirements resulting from the coordination process. The Bureau shall prepare a new consolidated High Frequency Broadcasting Schedule (the Schedule), and shall perform a new compatibility analysis. The Bureau shall publish the Schedule and the results of the compatibility analysis at the start of the relevant broadcasting season.

S12.38 Administrations shall notify the Bureau of changes to their schedules as quickly as possible and the Bureau shall update and make available the Schedule on a monthly basis. The Bureau shall perform new compatibility analyses and publish the updated Schedule and the results of these analyses every two months during the season.

S12.39 To facilitate the coordination process, the Bureau shall also forward the ~~Tentative S~~schedules to the~~se~~ regional[5] coordination groups.

S12.40 Regional coordination groups should consider ~~interfacing~~communicating with administrations and broadcasters through the use of any appropriate, mutually agreeable means, for example, e-mail, news-groups, bulletin boards and other forms of electronic data transfer as appropriate.

S12.41 Each regional coordination group should consider appointing a Steering Committee to ensure smooth progress of the coordination process.

S12.42 During and after the coordination process, the regional coordination groups shall exchange schedule data among themselves with a view to further enhancing the efficacy of the coordination process.

S12.43 One month after the end of a season, the Bureau shall publish the Final High Frequency Broadcasting Schedule (the Final Schedule). If any changes have been notified to the Bureau since the previous consolidated schedule, the Bureau shall also perform a compatibility analysis and publish it with the Final Schedule.

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[5] ~~Not related to ITU Regions.~~

S12.44 The Bureau should, as and when required, convene joint meetings of the representatives of all the regional coordination groups to develop strategies for further reduction of incompatibilities and to discuss related matters. The outcome of these meetings shall be circulated among the regional groups and administrations.

S12.45 In a case of harmful interference, involving the application of the provisions of Article **S15**, administrations are urged to exercise the utmost goodwill and mutual cooperation taking into account all the relevant technical and operational factors of the case.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97

WORLD
RADIOCOMMUNICATION
CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 1
OF THE PLENARY

NOTE FROM THE CHAIRMAN OF COMMITTEE 5 TO THE CHAIRMAN OF WORKING GROUP 1 OF THE PLENARY

Committee 5 has approved a revision to Resolution 215 concerning the coordination process among mobile-satellite systems and efficient use of the allocations to the mobile-satellite service in the 1 - 3 GHz range. This revision calls for both urgent studies by ITU-R and for consideration of the results of these studies by WRC-99.

The relevant text can be found in Document 244.

This item is therefore referred to WG PL1 for consideration of its inclusion in the draft agenda for WRC-99.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

NINTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has completed its consideration of proposals relating to country footnotes that were not considered to fall under agenda item 1.1 of WRC-97. It has also completed its consideration of footnote S5.464. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

V. RAWAT
Chairman of Committee 5

Annex: 1

ADD S5.87A *Additional allocation:* in Uzbekistan, the band 526.5 - 1 606.5 kHz is also allocated to the radionavigation service on a primary basis.

MOD S5.99 *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq, The Former Yugoslav Republic of Macedonia, Libya, Uzbekistan, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.164 *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Côte d'Ivoire, Denmark, Spain, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, Syria, the United Kingdom, Senegal, Slovenia, Sweden, Switzerland, Swaziland, Togo, Tunisia, Turkey and Yugoslavia, the band 47 - 68 MHz ~~and~~, in Romania, the band 47 -58 MHz, and in the Czech Republic the band 66 - 68 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band.

MOD S5.259 *Additional allocation:* in Germany, Austria, ~~Belgium,~~ Cyprus, the Republic of Korea, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria, the United Kingdom, Sweden and Switzerland, the band 328.6 - 335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.

MOD S5.275 *Additional allocation:* in Bosnia and Herzegovina, Croatia, Estonia, Finland, The Former Yugoslav Republic of Macedonia, Libya, Lithuania, Slovenia and Yugoslavia, the bands 430 - 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

MOD S5.276 *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Liechtenstein, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430 - 440 MHz is also allocated to the fixed service on a

primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.

MOD **S5.277** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Cameroon, the Congo, Djibouti, ~~Estonia,~~ Gabon, Georgia, Hungary, Kazakstan, Latvia, Malawi, Mali, Moldova, Mongolia, Niger, Uzbekistan, Pakistan, Poland, Kyrgyzstan, Democratic People's Republic of Korea, Slovakia, the Czech Republic, Romania, Russia, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.

MOD **S5.314** *Additional allocation:* in Austria, Italy, Uzbekistan, the United Kingdom and Swaziland, the band 790 - 862 MHz is also allocated to the land mobile service on a secondary basis.

MOD **S5.316** *Additional allocation:* in Germany, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Israel, Kenya, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, Syria, Sweden, Switzerland and Yugoslavia, the band 790 - 830 MHz, and in these same countries and in Spain, France, Gabon~~,~~ and Malta ~~and Syria~~, the band 830 - 862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band.

MOD **S5.323** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, ~~Lithuania,~~ Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 862 - 960 MHz is also allocated to the aeronautical radionavigation service on a primary basis ~~until 1 January 1998. Up to this date, the aeronautical radionavigation service may use the band, subject to agreement obtained under No. **S9.21**. After this date, the aeronautical radionavigation service may continue to operate on a secondary basis~~. Such use is subject to agreement obtained under Article **14/S9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of its lifetime.

MOD **S5.393** *Additional allocation:* in the United States, ~~and~~ India and Mexico, the band 2 310 - 2 360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.

MOD **S5.382** *Different category of service:* in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Georgia, Guinea, Hungary, Iraq, Israel, Jordan, Kazakstan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690 - 1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**) and in the Democratic People's Republic of Korea, the allocation of the band 1 690 - 1 700 MHz to the fixed service is on a primary basis (see No. **S5.33**) and to the mobile, except aeronautical mobile, service is on a secondary basis.

MOD **S5.429** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the Republic of Korea, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Singapore and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

MOD **S5.432** *Different category of service:* in the Republic of Korea, Indonesia, Japan and Pakistan, the allocation of the band 3 400 - 3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).

MOD **S5.464** *Different category of service:* in Bangladesh, Benin, Burkina Faso, Cameroon, China, the Central African Republic, ~~Côte d'Ivoire,~~ Egypt, France, Guinea, ~~India,~~ the Islamic Republic of Iran, Italy, ~~Japan,~~ Libya, Mali, ~~Niger,~~ Pakistan, ~~Senegal,~~ Somalia, Sudan, ~~Sweden,~~ Tanzania, Zaire and Zambia, the allocation of the band 8 025 - 8 400 MHz to the Earth exploration-satellite service (space-to-Earth) is on a primary basis, subject to agreement obtained under No. **S9.21**.

MOD **S5.477** *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Democratic People's Republic of Korea, Singapore, Somalia, Sudan, Sweden, Thailand, Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

MOD **S5.480** *Additional allocation:* in Brazil, Costa Rica, Ecuador, Guatemala, ~~and~~ Honduras and Mexico, the band 10 - 10.45 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD **S5.524** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Somalia, Sudan, Tanzania, Chad, Thailand, Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

MOD **S5.542** *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Somalia, Sudan, Sri Lanka, Chad and Thailand, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

TENTH SERIES OF TEXTS SUBMITTED BY COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 is continuing its consideration of agenda item 1.9.1 with respect to MSS allocations below 1 GHz. It has also reviewed Resolution 711. As a result of these deliberations, it has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary.

With respect to the decision taken in respect of Table 1 in A2.3.2 of Annex 2 to Resolution 46, the revised values of 580 and 1 080 km for coordination distance should also be included in Table 2 of that same section of Annex 2 as well as in Table 1 and Table 2 of Section 3 of Appendix S5.

V. RAWAT
Chairman of Committee 5

Annex:1

ARTICLE S5

MOD **S5.208** The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/**No. **S9.11A**. ~~The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev. WRC-95)**/ Annex 1 of Appendix **S5** shall apply until such time as a competent world radiocommunication conference revises it. Additionally, until that time, the provisions of Resolution **714 (WRC-95)** apply.~~

MOD **S5.208A** In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. ~~For information, t~~The threshold levels of interference detrimental to the radio astronomy service ~~to be protected~~ are shown in Table 1 of Recommendation ITU-R RA.769-1.

NOC **S5.219** The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/** No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz.

MOD

MHz
148 – 156.8375

Allocation to Services		
Region 1	Region 2	Region 3
149.9 – 150.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ~~S5.224~~ ADD S5.224A RADIONAVIGATION-SATELLITE ADD S5.224B MOD S5.220 S5.222 S5.223	

MOD

MHz
322 – 400.15

Allocation to Services		
Region 1	Region 2	Region 3
399.9 – 400.05	~~LAND~~ MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ADD S5.224A RADIONAVIGATION-SATELLITE S5.222 S5.260 ADD S5.224B MOD S5.220 ~~S5.224~~	

MOD **S5.209** The use of the bands 137 - 138 MHz, 148 - ~~149.9~~150.05 MHz, 399.9 - 400.05 MHz, 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service ~~and the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the land mobile-satellite service~~ is limited to non-geostationary-satellite systems.

MOD **S5.220** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the ~~land~~ mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. The ~~land~~ mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.

SUP **S5.224**

ADD **S5.224A** The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015.

ADD **S5.224B** The allocation of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015.

Annex 2 to Resolution 46 (Rev.WRC-95), paragraph A2.3.2

….

MOD

TABLE 1

Earth stations operating at frequencies below 1 GHz

Frequency Sharing Situation		Coordination Distance (In sharing situations involving services allocated with equal rights)
Frequency band and earth station for which coordination area is determined	Other service or station ~~(station in terrestrial service)~~	
148.0 - 149.9 MHz ground-based (mobile)	ground-based stations	As determined using Equation (1) and Figure 1 of Recommendation ITU-R M.1185 In this case, the coordination distance is calculated by the administration of the terrestrial station using the parameters of its terrestrial stations and the most updated relevant parameters published by the Bureau for the earth station.
149.9 - 150.05 MHz ground-based (mobile) 399.9 - 400.05 MHz ground-based (mobile)	radionavigation-satellite service	The coordination distance is calculated by the administration of the mobile-satellite service earth station using the parameters of its earth stations and the most updated relevant parameters published by the Bureau for the radionavigation-satellite service earth station
400.15 - 401 MHz ground-based	meteorological aids (radiosonde)	~~582~~580 km
All bands below 1 GHz ground-based	mobile (aircraft)	500 km
All bands below 1 GHz aircraft (mobile)	ground-based stations	500 km
400.15 - 401 MHz aircraft (mobile)	meteorological aids (radiosonde)	~~1 082~~1 080 km
All bands below 1 GHz aircraft (mobile)	mobile (aircraft)	1 000 km
455 - 456 MHz 459 - 460 MHz ground-based	ground-based stations	500 km

ANNEX 2 TO RESOLUTION 46 (Rev.WRC-95)
(ANNEX 1 TO APPENDIX S5)

….

A2.1.1 *Below 1 GHz*[*]
(1.1)

~~In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the MSS (space-to-Earth) with respect to terrestrial services is required only if the power flux-density produced by the station exceeds -125 dB(W/m²/4 kHz) at the Earth's surface.~~

ADD **A2.1.1.1 (1.1.1)** In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to terrestrial services (except the aeronautical mobile (OR) service networks operating in those administrations listed in numbers **S5.204** and **S5.206** as of 1 November 1996) is required only if the power flux-density produced by this space station exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface.

ADD **A2.1.1.2 (1.1.2)** In the band 137 - 138 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to the aeronautical mobile (OR) service is required only if the power flux-density produced by this space station at the Earth's surface exceeds:

– -125 dB (W/m^2/4 kHz) for networks for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996.

– -140 dB (W/m^2/4 kHz) for networks for which complete Appendix **3**/Appendix **S4** coordination information has been received by the Bureau after 1 November 1996 in those administrations referred to in A2.1.1.1(1.1.1) above.

ADD **A2.1.1.3 (1.1.3)** In the band 137 - 138 MHz coordination is also required for a space station on a replacement satellite of a mobile-satellite service network for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996 and the power flux-density exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface in those administrations referred to in A2.1.1.1(1.1.1) above.

SUP

RESOLUTION 714 (WRC-95)

POWER FLUX-DENSITY LEVEL APPLICABLE IN THE FREQUENCY BAND 137 - 138 MHz SHARED BY THE MOBILE-SATELLITE SERVICE AND TERRESTRIAL SERVICES

[*] These provisions only apply to the mobile-satellite service.

MOD

RESOLUTION 715 (~~WRC-95~~Rev.WRC-97)

STUDIES CONCERNING SHARING BETWEEN THE RADIONAVIGATION-SATELLITE SERVICE AND THE MOBILE-SATELLITE SERVICE IN THE BANDS 149.9 - 150.05 MHz AND 399.9 - 400.05 MHz

The World Radiocommunication Conference (Geneva, 199~~5~~7),

considering,

a) that the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz are allocated to and used by radionavigation-satellite service (RNSS) on a primary basis;

~~*b) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) allocated the band 149.9 - 150.05 MHz (Earth-to-space) to the land mobile-satellite service on primary basis;*~~

~~*c*~~*b)* that this Conference ~~has~~ allocated the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (Earth-to-space) to the ~~land~~ mobile-satellite service on a primary basis;

~~*d*~~*c)* that requirements of the RNSS and the mobile-satellite service (MSS) should be met in these frequency bands;

~~*e) that the MSS requirements are not limited solely to use by the land mobile-satellite service;*~~

~~*f*~~*d)* that there may be difficulties in the sharing between the RNSS and the MSS, and studies are being carried out by ITU-R;

~~*g*~~*e)* that there is a need ~~to study~~for further studies of the operational and technical means to facilitate sharing between the RNSS and the MSS (in the Earth-to-space and space-to-Earth directions) in these bands,

recognizing

that No. **953/S4.10** of the Radio Regulations applies to the use of these bands by the RNSS,

resolves

to invite ITU-R, ~~as a matter of urgency, in preparation for the Conference Preparatory Meeting for the 1997 World Radiocommunication Conference (WRC-97)~~, to continue to carry out studies in order to finalize recommendations which identify the operational and technical measures necessary to facilitate sharing between the MSS and the RNSS,

~~*instructs the Secretary-General*~~

~~to bring this Resolution to the attention of the Council, at its next session, with a view to including this item in the agenda of WRC-97,~~

urges

~~1.~~ administrations to participate in such studies by submitting contributions to ITU-R relating to the above-mentioned studies as soon as possible~~;~~.

~~2. ITU-R to bring the results of these studies to the attention of WRC-97 and of preparatory meetings, in order to determine operational criteria for sharing between the RNSS and the MSS.~~

ADD

DRAFT RESOLUTION [COM5-14]

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS IN THE BROADCASTING BAND 470 - 862 MHz TO THE NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for the non-geostationary mobile-satellite services (non-GSO/MSS);

b) that the report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO/MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46", and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that CPM-97 considered the protection requirements for analogue television in the band 470 - 862 MHz against a narrow-band MSS signal in the most sensitive and least sensitive portions of an analogue TV channel and the protection requirements for a digital TV channel, based on existing ITU-R Recommendations (BT.655-4, BT.417-4 and IS.851-1);

d) that CPM-97 stated that the protection ratios for a narrow-band interfering signal in the least sensitive parts of an analogue TV channel, are to be verified by further studies;

e) that CPM-97 stated the region of lower protection requirements and commensurately higher permissible interfering power flux levels as being 100 kHz near the band edges of an analogue TV channel at least in some countries;

f) that CPM-97 stated that the interfering effects of a non-GSO/MSS transmission will depend on its specific characteristics (e.g. duty-cycle, duration, periodicity, etc.), that interference contributions from sources other than MSS (even those from other broadcasting stations have to be taken into account), that slightly lower values of field strength to be protected may need to be assumed in countries where television networks are relatively sparse, that studies on sharing are necessary;

g) that the permissible aggregate interfering power flux-density resulting from these protection requirements, in some portions of an analogue TV channel, may be useful in determining the feasibility of sharing with space-to-Earth links from non-GSO/MSS transmitters;

h) that these bands are also allocated in part to fixed and mobile terrestrial systems and radionavigation systems;

i) that in many countries, the channels assigned for analogue TV may also be used for digital TV, and that during the period of parallel operation of analogue and digital TV networks the usage of this band for television will increase,

noting

a) that on completion of studies, parts of the bands now allocated to the broadcasting service between 470 MHz and 862 MHz might be considered suitable for worldwide allocation to non-GSO/MSS space-to-Earth transmissions;

b) that the bandwidth required in these TV channels may be 1-2% of the total spectrum of 470 - 862 MHz to be shared with the parties noted above;

c) the need to protect the radio astronomy service in the band 608 - 614 MHz against interference from the MSS transmissions including unwanted emissions,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate co-frequency sharing between narrow-band non-GSO/MSS (space-to-Earth) transmissions and the services to which the band 470 - 862 MHz is allocated, including the bands where the broadcasting service is also allocated;

2 to invite a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, additional allocations on a worldwide basis for the non-GSO/MSS with service links operating below 1 GHz,

urges administrations

to participate actively in such studies with the involvement of interested parties.

ADD

RECOMMENDATION [COM5-A] (WRC-97)

USE OF THE FREQUENCY BANDS 2 025 - 2 110 MHz AND 2 200 - 2 290 MHz BY THE SPACE RESEARCH, SPACE OPERATION, EARTH EXPLORATION-SATELLITE, FIXED AND MOBILE SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz are allocated on a primary basis to the space research, space operation, earth exploration-satellite, fixed and mobile services;

b) that, in response to Resolutions from WARC-92, studies have resulted in a number of ITU-R Recommendations, which when adhered to by the services will result in a stable, long-term sharing environment, (Recommendations ITU-R SA.364, SA.1019, F.1098, F.1247, F.1248, SA.1154, SA.1273, SA.1274 and SA.1275);

c) that WRC-97 adopted RR **S5.391** which states that high-density mobile systems shall not be introduced into these frequency bands,

considering further

that enhancements in technology may enable the services mentioned in *considering* a) to minimize the total bandwidth requirement in these frequency bands,

noting

that WARC-92 considered that it is desirable to review the present and planned use of the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, with the intent, when practicable, of satisfying some space mission requirements in bands above 20 GHz,

recognizing

that this Conference noted increasing requirements for emerging communication systems that need to be satisfied in the frequency range below 3 GHz,

recommends

that administrations planning to introduce new systems in the space research, space operation, earth exploration-satellite, fixed or mobile services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz take into account the ITU-R Recommendations in *considering* b) above when making assignments to these services, and implement enhancements in technology as early as practicable with a view to minimizing the total bandwidth required by systems of each service.

SUP

RESOLUTION No. 711 (WARC-92)

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WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 283-E
14 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Moldova (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 1.9.1

Considering the course and process of making decisions on agenda item 1.9.1 of WRC-97, Moldova considers to promote additional proposals concerning Resolution **118** and general allocation of the MSS in the band 1 559 - 1 610 MHz.

MDA/283/1

Regarding the band 1 559 - 1 610 MHz, Moldova makes the following proposals:

- in the period until WRC-99 to make additional studies of the inclusion of the MSS in the band 1 559 - 1 567 MHz;
- at the present moment to limit the inclusion of the MSS exclusively in the specific parts of the spectrum in the band 1 559 - 1 567 MHz which would not interfere with existing services.

MDA/283/2

Regarding Resolution **118**, Moldova supports the principles of necessity to develop NGSO FSS in all previous allocated bands, including 18.8 - 19.3 GHz and 28.6 - 29.1 GHz.

However, at the same time, the protection of the existing and planned FS and GSO FSS shall be provided.

In case no compromise is achieved on that issue, Moldova proposes to establish provisional, mutually agreed power flux-density limits for the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz for NGSO FSS. Coordination shall be made under Resolution **46** and **S22.2** shall not be applied for these bands.

In the light of the above-mentioned, Moldova makes a presumption that the process of development of the NGSO FSS will not be slowed down and at the same time other services will be protected.

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COMMITTEE 4

REPORT BY THE CHAIRMAN OF GROUP 4 AD HOC 2

METHODOLOGY FOR THE TREATMENT OF PROCEDURAL AND REGULATORY QUESTIONS RELATED TO APPENDICES 30 AND 30A

Group 4 Ad Hoc 2 proposes the following methodology for the treatment of procedural and regulatory questions related to Appendices 30 and 30A.

- Keep the present structure of Appendices 30 and 30A.
- Include in all relevant appendices and Annexes all necessary amendments, if any, required for the implementation of WRC-97 decisions.
- Applicable procedures, such as Articles S9.8, S9.9, S9.19 and corresponding parts of Appendix S5 in relation to Appendices 30 and 30A frequency bands be suspended until WRC-99, these provisions being reviewed at WRC-99 with the view of a possible suppression of Articles 6 and 7 of Appendices 30 and 30A.
- Update Recommendation 35 (WRC-95) in order to consider the possibility of merging the corresponding procedures of Articles 4 and 5 of Appendices 30 and 30A for all three Regions into a single Article at WRC-99.
- Replace S13.1 to S13.4 by a text similar to the one given in section 4.3.20 of Appendix 30 in order to allow assistance to be provided to administrations by the Bureau without any conditions.

M. GHAZAL
Chairman, Group 4 Ad Hoc 2

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WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

THIRD REPORT OF WORKING GROUP 4C TO COMMITTEE 4

RESOLUTION [COM4-14]

SURVEY OF HFBC TRANSMITTER AND RECEIVER STATISTICS AS CALLED FOR IN RESOLUTION 517 (Rev.WRC-97)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Resolution **517** (Rev.WRC-97) provides for the replacement, by 31 December 2015, of double-sideband (DSB) emissions in the HF bands between 5 900 kHz and 26 100 kHz allocated to the broadcasting service;

b) that Resolution **517** (Rev.WRC-97) resolves that the date in *considering* a) shall be periodically reviewed by competent future world radiocommunication conferences in the light of the latest available complete statistics on the worldwide distribution of SSB and other spectrum-efficient modulation technique transmitters and receivers;

c) that ITU-R is working in response to Question ITU-R 217/10 "Digital Broadcasting in AM Bands" and to Question ITU-R 224/3 "The Prediction of System Performance and Reliability for Digital Modulation Techniques at HF",

noting

a) that Recommendation No. **515** (HFBC-87) recommended that new transmitters installed after 31 December 1990 be capable of operating in the SSB mode;

b) that Recommendation No. **515** (HFBC-87) invited administrations to encourage receiver manufacturers to begin producing low-cost receivers capable of receiving DSB and SSB broadcasting emissions by 31 December 1990,

recognizing

a) that insufficient information is known on the availability and use of HFBC SSB transmitters and receivers;

b) that broadcasters, unlike most users of other radiocommunication services, have no control over the receivers used by their listeners;

c) that activity is continuing on the development of digital modulation systems for recommendation by ITU-R,

resolves

that the first survey of transmitter and receiver statistics called for in Resolution **517** (Rev.WRC-97) should be conducted as a matter of urgency, such that its results will be available to [WRC-99] for consideration.

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WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

Democratic Republic of the Congo

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Administration of the Democratic Republic of the Congo wishes to submit the following proposals for the work of the Conference:

COD/286/1
MOD S5.68

Alternative allocation: in Angola, Botswana, Burundi, the Congo, Malawi, the Democratic Republic of the Congo, Rwanda, and South Africa ~~and Zaire~~, the band 160 - 200 kHz is allocated to the fixed service on a primary basis.

COD/286/2
MOD S5.70

Alternative allocation: in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, the Democratic Republic of the Congo, Rwanda, South Africa, Swaziland, Tanzania, Chad, ~~Zaire,~~ Zambia and Zimbabwe, the band 200 - 283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis.

COD/286/3
MOD S5.160

Additional allocation: in Botswana, Burundi, Lesotho, Malawi, Namibia, the Democratic Republic of the Congo, Rwanda, South Africa, and Swaziland ~~and Zaire~~, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

COD/286/4
MOD S5.169

Alternative allocation: in Botswana, Burundi, Lesotho, Malawi, Namibia, the Democratic Republic of the Congo, Rwanda, South Africa, Swaziland, ~~Zaire,~~ Zambia and Zimbabwe, the band 50 - 54 MHz is allocated to the amateur service on a primary basis.

COD/286/5

MOD S5.171 *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, the Democratic Republic of the Congo, Rwanda, South Africa, Swaziland~~, Zaire~~ and Zimbabwe, the band 54 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

COD/286/6

MOD S5.212 *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, the Democratic Republic of the Congo, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, ~~Zaire,~~ Zambia and Zimbabwe, the band 138 - 144 MHz is allocated to the fixed and mobile services on a primary basis.

COD/286/7

MOD S5.369 *Different category of service:* in Angola, Australia, Burundi, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, the Democratic Republic of the Congo, Senegal, Sudan, Swaziland, Togo~~, Zaire~~ and Zambia, the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.

COD/286/8

MOD S5.393 *Additional allocation:* in the United States and India, the band 2 310 - 2 360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**. In the Democratic Republic of the Congo, the band 2 290 - 2 490 MHz is also allocated to the broadcasting service on a primary basis.

COD/286/9

MOD S5.400 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo~~, Zaire~~ and Zambia, the allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision. In the Democratic Republic of the Congo, the band 2 490 - 2 500 MHz is allocated to the radiodetermination service on a primary basis.

COD/286/10

MOD S5.422 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, Lithuania, Malaysia, Malawi, Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, the Democratic Republic of the Congo, Kyrgyzstan, Romania, Russia, Singapore, Somalia, Tajikistan, Thailand, Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia~~, Zaire~~ and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

COD/286/11

MOD S5.464 *Different category of service:* in Bangladesh, Benin, Burkina Faso, Cameroon, China, the Central African Republic, Côte d'Ivoire, Egypt, France, Guinea, India, the Islamic Republic of Iran, Italy, Japan, Libya, Mali, Niger, Pakistan, the Democratic Republic of the Congo, Senegal, Somalia, Sudan, Sweden, Tanzania~~, Zaire~~ and Zambia, the allocation of the band 8 025 - 8 400 MHz to the Earth exploration-satellite service (space-to-Earth) is on a primary basis, subject to agreement obtained under No. **S9.21**.

COD/286/12

MOD S5.494 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Niger, Nigeria, Qatar, Syria, the Democratic Republic of the Congo, Senegal, Somalia, Sudan, Chad, Togo~~,~~ and Yemen ~~and Zaire~~, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

COD/286/13

MOD S5.524 *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic Republic of the Congo, Singapore, Somalia, Sudan, Tanzania, Chad, Thailand, Togo~~,~~ and Tunisia ~~and Zaire~~, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

COD/286/14

MOD S5.549 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Spain, Gabon, Guinea, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic Republic of the Congo, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Tanzania, Thailand, Togo, Tunisia, and Yemen ~~and Zaire~~, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.

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PINK PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

R.2 **PLENARY MEETING**

SECOND SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **second reading**:

Source	**Document**	**Title**
COM 6	266 (B.4)	**ARTICLE S19**
	229 (B.2)	**APPENDIX S3**
	266 (B.4)	**APPENDIX S18**
		RESOLUTION 310 (Rev.WRC-97)
		RESOLUTION 331 (Rev.WRC-97)
		RESOLUTION COM4-1 (WRC-97)
		RESOLUTION COM4-2 (WRC-97)
		RESOLUTION COM4-3 (WRC-97)
		RESOLUTION COM4-4 (WRC-97)
		RESOLUTION COM4-5 (WRC-97)
		RESOLUTION COM4-7 (WRC-97)
		RESOLUTION COM4-8 (WRC-97)
	229 (B.2)	**RESOLUTION COM5-3 (WRC-97)**
		RESOLUTION COM5-4 (WRC-97)
	265 (B.3)	**RESOLUTION COM5-5 (WRC-97)**
		RESOLUTION COM5-7 (WRC-97)
		RESOLUTION COM5-9 (WRC-97)
		RESOLUTION COM5-13 (WRC-97)
		RECOMMENDATION 66 (Rev.WRC-97)
		RESOLUTION 408 (Mob-87)
		RECOMMENDATION 621 (WARC-92)
		List of Resolutions and Recommendations approved for suppression

A.-M. NEBES
Chairman of Committee 6

Annex: 49 pages

PINK PAGES

ARTICLE S19

Identification of Stations

Section I. General Provisions

NOC **S19.1 to S19.27**

MOD **S19.28** § 11. Each Member State reserves the right to establish its own measures for identifying its stations used for national defence. However, it shall use, as far as possible, call signs recognizable as such, and containing the distinctive characters of its nationality.

Section II. Allocation of International Series and Assignment of Call Signs

ADD **S19.28A** § 11A.(1) For the purpose of the supply of identification signals, a "territory or geographical area" shall be understood to mean the territory within the limits of which the station is located. For mobile stations, it shall be understood to mean the territory within the limits of which the responsible administration is located. A territory which does not have full responsibility for its international relations shall also be considered as a geographical area for this purpose.

ADD **S19.28B** § 11A.(2) In all documents of the Union where the terms "***allocation of call sign series***" and "***assignment of call signs***" are to be used, they shall be used with the following meaning:

Identification means	Terms used in these Regulations
International series of call signs (including maritime identification digits (MID) and selective call numbers)	Allocation to the administration of a Member State (see definition in CS No. 1002)
Call signs (including maritime identification digits (MID) and selective call numbers)	Assignment by any administration to stations operating in a territory or geographical area (see S19.28A)

MOD **S19.29** § 12. (1) All stations open to international public correspondence, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of the territory or geographical area in which they are located, shall have call signs from the international series allocated to its administration as given in the Table of Allocation of International Call Sign Series in Appendix **S42**.

PINK PAGES

NOC **S19.30 to S19.33**

MOD **S19.34** § 15. The Secretary-General shall be responsible for allocating maritime identification digits to administrations and shall regularly publish information regarding allocated maritime identification digits (MID).

SUP **S19.34.1**

[MOD **S19.35** § 16. The Secretary-General shall be responsible for allocating additional maritime identification digits to administrations within the limits specified[3], provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations (see Resolution **27 (WRC-95)**).]

SUP **S19.35.1**

MOD **S19.35.2** [3] In no circumstances may an administration claim more MIDs than the total number of its ship stations shown in the ITU List of Ship Stations (List V) divided by 1000.

MOD **S19.36** § 17. A single MID has been allocated initially to each administration. A second MID should not be requested unless the MID first allocated is more than 80% exhausted in the basic category of three trailing zeros and the rate of assignments is such that 90% exhaustion is foreseen. The same criteria should be applied to subsequent requests for MIDs.

NOC **S19.37**

MOD **S19.38** § 19. (1) Each administration shall choose the call signs and, if the selective calling system used is in accordance with Recommendation ITU-R M.257-3, the ship station selective call numbers and the coast station identification numbers of its stations from the international series allocated or supplied to it; and shall notify this information to the Secretary-General together with the information which is to appear in Lists I, IV, V, VI and VIIIA. These notifications do not include call signs assigned to amateur and experimental stations.

MOD **S19.39** (2) Each administration shall choose the maritime mobile service identities of its stations from the maritime identification digits allocated to it and notify this information to the Secretary-General for inclusion in the relevant lists, as provided for in Article **S20**.

NOC **S19.40 to S19.44.1**

PINK PAGES

Section III. Formation of Call Signs

NOC **S19.45 to S19.71**

Section IV. Identification of Stations Using Radiotelephony

NOC **S19.72 to S19.82**

Section V. Selective Call Numbers in the Maritime Mobile Service

NOC **S19.83 to S19.95**

MOD **S19.96** (2) Each administration shall choose the selective call numbers to be assigned to its ship stations from the blocks of the series supplied to it. Administrations shall notify the Radiocommunication Bureau immediately in accordance with **S20.16** when assigning selective call numbers to ship stations.

NOC **S19.97**

Section VI. Maritime Mobile Service Identities in the Maritime Mobile Service and the Maritime Mobile-Satellite Service

NOC **S19.98**

A. General

[MOD **S19.99** § 39. When a station[1] in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Nos. **S19.100** to **S19.126**, in accordance with relevant ITU-R and ITU-T Recommendations (see Resolution **27 (WRC-95)**). In accordance with **S20.16,** administrations shall notify the Radiocommunication Bureau immediately when assigning maritime mobile service identities.]

NOC **S19.99.1**

NOC **S19.100 to S19.106**

SUP **S19.107**

PINK PAGES

NOC **S19.108** *B. Maritime Identification Digits (MID)*

NOC **S19.109**

NOC **S19.110** *C. Ship Station Identities*

NOC **S19.111 to S19.117**

NOC **S19.118** *D. Group Ship Station Call Identities*

NOC **S19.119**

MOD **S19.120** (2) The MID represents only the territory or geographical area of the administration assigning the group ship station call identity and does not therefore prevent group calls to fleets containing more than one ship nationality.

NOC **S19.121** *E. Coast Station Identities*

NOC **S19.122**

MOD **S19.123** (2) The MID reflects the territory or geographical area in which the coast station or coast earth station is located.

NOC **S19.124** *F. Group Coast Station Call Identities*

NOC **S19.125**

MOD **S19.126** (2) The MID represents only the territory or geographical area of the administration assigning the group coast station call identity. The identity may be assigned to stations of one administration which are located in only one geographical region as indicated in the relevant ITU-T Recommendation.

Section VII. Special Provisions

NOC **S19.127 to S19.131**

PINK PAGES

MOD APPENDIX S3

Table of Maximum Permitted Spurious Emission Power Levels

(See Article **S3**)

1. The following sections indicate the maximum permitted levels of spurious emissions, in terms of power as indicated in the tables, of any spurious component supplied by a transmitter to the antenna transmission line. Section 1 is applicable until 1 January 2012 to transmitters installed on or before 1 January 2003; Section 2 is applicable to transmitters installed after 1 January 2003 and to all transmitters after 1 January 2012. This Appendix does not cover out-of-band emissions. Out-of-band emissions are dealt with in No. S4.5 of the Radio Regulations.

2. Spurious emission from any part of the installation, other than the antenna and its transmission line, shall not have an effect greater than would occur if this antenna system were supplied with the maximum permitted power at that spurious emission frequency.

3. These levels shall not, however, apply to emergency position-indicating radiobeacon (EPIRB) stations, emergency locator transmitters, ships' emergency transmitters, lifeboat transmitters, survival craft stations or maritime transmitters when used in emergency situations.

4. For technical or operational reasons, more stringent levels than those specified may be applied to protect specific services in certain frequency bands. The levels applied to protect these services, such as safety and passive services, shall be those agreed upon by the appropriate world radiocommunication conference. More stringent levels may also be fixed by specific agreement between the administrations concerned. Additionally, special consideration of transmitter spurious emissions may be required for the protection of safety services, radio astronomy and space services using passive sensors. Information on the levels of interference detrimental to radio astronomy, earth exploration satellites and meteorological passive sensing is given in the most recent version of Recommendation ITU-R SM.329.

5. Spurious emission limits for combined radiocommunication and information technology equipment are those for the radiocommunication transmitters.

Section I. Spurious Emission Limits for Transmitters Installed on or Before 1 January 2003 (valid until 1 January 2012)

6. The measurement methods for radar systems should be guided by Recommendation ITU-R M.1177. For those radar systems for which acceptable methods of measurement do not exist, the lowest practicable power of spurious emission should be achieved.

PINK PAGES

TABLE I

Attenuation values and absolute mean power levels used to calculate maximum permitted spurious emission power levels for use with radio equipment

Frequency Band Containing the Assignment (lower limit exclusive, upper limit inclusive)	For any spurious component the attenuation (mean power within the necessary bandwidth relative to the mean power of the spurious component concerned) shall be at least that specified below and the absolute mean power levels given shall not be exceeded (Note 1)
9 kHz to 30 MHz	40 decibels 50 milliwatts (Notes 2, 3 and 4)
30 MHz to 235 MHz	
- mean power above 25 watts	60 decibels 1 milliwatts (Note 5)
- mean power 25 watts or less	40 decibels 25 microwatts
235 MHz to 960 MHz	
- mean power above 25 watts	60 decibels 20 milliwatts (Notes 6 and 7)
- mean power 25 watts or less	40 decibels 25 microwatts (Notes 6, 7)
960 MHz to 17.7 GHz	
- mean power above 10 watts	50 decibels 100 milliwatts (Notes 6, 7, 8 and 9)
- mean power 10 watts or less	100 microwatts (Notes 6, 7, 8 and 9)
Above 17.7 GHz	The lowest possible values achievable shall be employed (see Recommendation **66 (Rev.WRC-[97]**)).

PINK PAGES

Notes in Table I

[1] When checking compliance with the provisions of the table, it shall be verified that the bandwidth of the measuring equipment is sufficiently wide to accept all significant components of the spurious emission concerned.

[2] For mobile transmitters which operate below 30 MHz any spurious component shall have an attenuation of at least 40 decibels without exceeding the value of 200 milliwatts, but every effort should be made to comply with the level of 50 milliwatts wherever practicable.

[3] For transmitters of a mean power exceeding 50 kilowatts which can operate on two or more frequencies covering a frequency range approaching an octave or more, while a reduction below 50 milliwatts is not mandatory, a minimum attenuation of 60 decibels shall be provided.

[4] For hand-portable equipment of mean power less than 5 watts, the attenuation shall be 30 decibels, but every practicable effort should be made to attain 40 decibels attenuation.

[5] Administrations may adopt a level of 10 milliwatts provided that harmful interference is not caused.

[6] Where several transmitters feed a common antenna or closely spaced antennae on neighbouring frequencies, every practicable effort should be made to comply with the levels specified.

[7] Since these levels may not provide adequate protection for receiving stations in the radio astronomy and space services, more stringent levels might be considered in each individual case in the light of the geographical position of the stations concerned.

[8] These levels are not applicable to systems using digital modulation techniques, but may be used as a guide. Values for these systems may be provided by the relevant ITU-R Recommendations, when available (see Recommendation **66 (Rev.WRC-[97])**).

[9] These levels are not applicable to stations in the space services, but the levels of their spurious emissions should be reduced to the lowest possible values compatible with the technical and economic constraints to which the equipment is subject. Values for these systems may be provided by the relevant ITU-R Recommendations, when available (see Recommendation **66 (Rev.WRC-[97])**).

PINK PAGES

ADD

Section II. Spurious Emission Limits for Transmitters Installed After 1 January 2003 and for All Transmitters After 1 January 2012

Application of these Limits

7. The frequency range of the measurement of spurious emissions is from 9 kHz to 110 GHz or the second harmonic if higher.

8. Guidance regarding the methods of measuring spurious emissions is given in the most recent version of Recommendation ITU-R SM.329. The e.i.r.p. method specified in that Recommendation should be used when it is not possible to measure the power supplied to the antenna transmission line. Additionally, the e.i.r.p. method may need some modification for special cases, e.g. beam-forming radars.

9. Guidance regarding the methods of measuring spurious emissions from radar systems is given in the most recent version of Recommendation ITU-R M.1177. The reference bandwidths required for proper measurement of radar spurious emissions should be calculated for each particular radar system. Thus, for the three general types of radar pulse modulation utilized for radionavigation, radiolocation, acquisition, tracking and other radiodetermination functions, the reference bandwidth values should be:

– for fixed-frequency, non-pulse-coded radar, one divided by the radar pulse length, in seconds (e.g. if the radar pulse length is 1 microsecond, then the reference bandwidth is 1/1μs = 1 MHz);

– for fixed-frequency, phase coded pulsed radar, one divided by the phase chip length, in seconds (e.g. if the phase coded chip is 2 microseconds long, then the reference bandwidth is 1/2μs = 500 kHz);

– for frequency modulated (FM) or chirped radar, the square root of the quantity obtained by dividing the radar bandwidth in MHz by the pulse length, in seconds (e.g. if the FM is from 1 250 to 1 280 MHz or 30 MHz during the pulse of 10 microseconds, then the reference bandwidth is $(30 \text{ MHz}/10\mu\text{s})^{1/2}$ = 1.73 MHz).

For those radar systems for which acceptable methods of measurement do not exist, the lowest practicable power of spurious emission should be achieved.

10. The spurious emission levels are specified in the following reference bandwidths:

–	1 kHz	between	9 and 150 kHz
–	10 kHz	between	150 kHz and 30 MHz
–	100 kHz	between	30 MHz and 1 GHz
–	1 MHz	above	1 GHz

As a special case, the reference bandwidth of all space service spurious emissions should be 4 kHz.

PINK PAGES

11. For the purpose of setting limits, all emissions, including harmonic emissions, intermodulation products, frequency conversion products and parasitic emissions, which fall at frequencies separated from the centre frequency of the emission by ±250%, or more, of the necessary bandwidth of the emission will generally be considered as spurious emissions. However, this frequency separation may be dependent on the type of modulation used, the maximum bit rate in the case of digital modulation, the type of transmitter and frequency coordination factors. For example, in the case of digital (including digital broadcasting) modulation systems, broadband systems, pulsed modulation systems and narrow-band high power transmitters, the frequency separation may need to differ from the ±250% factor. For multichannel or multicarrier transmitters/transponders, where several carriers may be transmitted simultaneously from a final output amplifier or an active antenna, the centre frequency of the emission is taken to be the centre of the -3 dB bandwidth of the transmitter or transponder and the necessary bandwidth is taken to be the transmitter or transponder bandwidth.

12. Examples of applying 43 + 10log(P) to calculate attenuation requirements

Where specified in relation to mean power, spurious emissions are to be at least x dB below the total mean power P, i.e. -x dBc. The power P (in watts) is to be measured in a bandwidth wide enough to include the total mean power. The spurious emissions are to be measured in the reference bandwidths given in the Recommendation. The measurement of the spurious emission power is independent of the value of necessary bandwidth. Because the absolute emission power limit, derived from 43 + 10log(P), can become too stringent for high power transmitters, alternative relative powers are also provided in Table II.

Example 1

A land mobile transmitter, with any value of necessary bandwidth, must meet a spurious emission attenuation of 43 + 10log(P), or 70 dBc, whichever is less stringent. To measure spurious emissions in the frequency range between 30 and 1 000 MHz, Recommendation ITU-R SM.329-7 *recommends* 4.1 indicates the use of a reference bandwidth of 100 kHz. For other frequency ranges, the measurement must use the appropriate reference bandwidths given in *recommends* 4.1.

With a measured total mean power of 10 watts:

– Attenuation relative to total mean power = 43 + 10log(10) = 53 dBc.

– The 53 dBc is less stringent than 70 dBc, so the 53 dBc value is used.

– Therefore: Spurious emissions must not exceed 53 dBc in a 100 kHz bandwidth, or converting to an absolute level, spurious emissions must not exceed 10 dBW - 53 dBc = -43 dBW in a 100 kHz reference bandwidth.

PINK PAGES

With a measured total mean power of 1 000 watts:

– Attenuation relative to total mean power = 43 + 10log(1 000) = 73 dBc.

– The 73 dBc is more stringent than 70 dBc limit, so the 70 dBc value is used.

– Therefore: Spurious emissions must not exceed 70 dBc in a 100 kHz bandwidth, or converting to an absolute level, spurious emissions must not exceed 30 dBW - 70 dBc = -40 dBW in a 100 kHz reference bandwidth.

Example 2

A space service transmitter with any value of necessary bandwidth, must meet a spurious emission attenuation of 43 + 10log(P), or 60 dBc, whichever is less stringent. To measure spurious emissions at any frequency, Note 1 of Table II indicates using a reference bandwidth of 4 kHz.

With a measured total mean power of 20 watts:

– Attenuation relative to total mean power = 43 + 10log(20) = 56 dBc.

– The 56 dBc is less stringent than the 60 dBc limit, so the 56 dBc value is used.

– Therefore: Spurious emissions must not exceed 56 dBc in a 4 kHz reference bandwidth, or converting to an absolute level, spurious emissions must not exceed
13 dBW - 56 dBc = -43 dBW in a 4 kHz reference bandwidth.

PINK PAGES

TABLE II

Attenuation values used to calculate maximum permitted spurious emission power levels for use with radio equipment

Service category in accordance with Article **S1**, or equipment type (Note 15)	Attenuation (dB) below the power supplied to the antenna transmission line
All services except those services quoted below:	43 + 10 log(P), or 70 dBc, whichever is less stringent
Space services (earth stations) (Notes 10 and 14)	43 + 10 log(P), or 60 dBc, whichever is less stringent
Space services (space stations) (Notes 10 and 14)	43 + 10 log(P), or 60 dBc, whichever is less stringent
Radiodetermination	43 + 10 log(PEP), or 60 dB, whichever is less stringent
Broadcast television (Note 11)	46 + 10 log(P), or 60 dBc, whichever is less stringent, without exceeding the absolute mean power level of 1 mW for VHF stations or 12 mW for UHF stations. However, greater attenuation may be necessary on a case by case basis.
Broadcast FM	46 + 10 log(P), or 70 dBc, whichever is less stringent; the absolute mean power level of 1 mW should not be exceeded
Broadcasting at MF/HF	50 dBc; the absolute mean power level of 50 mW should not be exceeded
SSB from mobile stations (Note 12)	43 dB below PEP
Amateur services operating below 30 MHz (including with SSB) (Note 12)	43 + 10 log(PEP), or 50 dB, whichever is less stringent

Service category in accordance with Article **S1**, or equipment type (Note 15)	Attenuation (dB) below the power supplied to the antenna transmission line
Services operating below 30 MHz, except space, radiodetermination, broadcast, those using SSB from mobile stations, and amateur (Note 12)	43 + 10 log(X), or 60 dBc, whichever is less stringent, where X = PEP for SSB modulation, and X = P for other modulation
Low-power device radio equipment (Note 13)	56 + 10 log(P), or 40 dBc, whichever is less stringent
Emergency position-indicating radio beacon Emergency locator transmitter Personal location beacon Search and rescue transponder Ship emergency, lifeboat and survival craft transmitters Land, aeronautical or maritime transmitters when used in emergency	No limit

P: mean power in watts supplied to the antenna transmission line, in accordance with No. **S1.158**. When burst transmission is used, the mean power P and the mean power of any spurious emissions are measured using power averaging over the burst duration.

PEP: peak envelope power in watts supplied to the antenna transmission line, in accordance with No. **S1.157**.

dBc: decibels relative to the unmodulated carrier power of the emission. In the cases which do not have a carrier, for example in some digital modulation schemes where the carrier is not accessible for measurement, the reference level equivalent to dBc is decibels relative to the mean power P.

PINK PAGES

Notes in Table II

[10] Spurious emission limits for all space services is stated in a 4 kHz reference bandwidth.

[11] For analogue television transmissions, the mean power level is defined with a specified video signal modulation. This video signal has to be chosen in such a way that the maximum mean power level (e.g., at the video signal blanking level for negatively modulated television systems) is supplied to the antenna transmission line.

[12] All classes of emission using SSB are included in the category "SSB".

[13] Low-power radio devices having a maximum output power of less then 100 mW and intended for short-range communication or control purposes; such equipment is in general exempt from individual licensing.

[14] These values are "design objectives". This note will not be applicable after WRC-99.

[15] In some cases of digital modulation (including digital broadcasting), broadband systems, pulsed modulation and narrow-band high power transmitters for all categories of services, there may be difficulties in meeting limits close to ±250% of the necessary bandwidth.

PINK PAGES

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APPENDIX S18

Table of Transmitting Frequencies in the VHF Maritime Mobile Band

(see Article **S52**)

Note: For assistance in understanding the Table, see notes *a)* to *n)* below.

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port operations and ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
60		156.025	160.625			x	x
01		156.050	160.650			x	x
61		156.075	160.675			x	x
02		156.100	160.700			x	x
62		156.125	160.725			x	x
03		156.150	160.750			x	x
63		156.175	160.775			x	x
04		156.200	160.800			x	x
64		156.225	160.825			x	x
05		156.250	160.850			x	x
65		156.275	160.875			x	x
06	*f)*	156.300		x			
66		156.325	160.925			x	x
07		156.350	160.950			x	x
67	*h)*	156.375	156.375	x	x		
08		156.400		x			
68		156.425	156.425		x		
09	*i)*	156.450	156.450	x	x		
69		156.475	156.475	x	x		
10	*h)*	156.500	156.500	x	x		
70	*j)*	156.525	156.525	Digital selective calling for distress, safety and calling			
11		156.550	156.550		x		

PINK PAGES

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port operations and ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
71		156.575	156.575		x		
12		156.600	156.600		x		
72	*i)*	156.625		x			
13	*k)*	156.650	156.650	x	x		
73	*i)*	156.675	156.675	x	x		
14		156.700	156.700		x		
74		156.725	156.725		x		
15	*g)*	156.750	156.750	x	x		
75	*n)*	156.775			x		
16		156.800	156.800	DISTRESS, SAFETY AND CALLING			
76	*n)*	156.825			x		
17	*g)*	156.850	156.850	x	x		
77		156.875		x			
18	*m)*	156.900	161.500		x	x	x
78		156.925	161.525			x	x
19		156.950	161.550			x	x
79		156.975	161.575			x	x
20		157.000	161.600			x	x
80		157.025	161.625			x	x
21		157.050	161.650			x	x
81		157.075	161.675			x	x
22		157.100	161.700			x	x
82	*m)*	157.125	161.725		x	x	x
23		157.150	161.750			x	x
83	*m)*	157.175	161.775		x	x	x
24		157.200	161.800			x	x
84	*m)*	157.225	161.825		x	x	x
25		157.250	161.850			x	x

Channel designator	Notes	Transmitting frequencies (MHz)		Intership	Port operations and ship movement		Public corres-pondence
		Ship Stations	Coast stations		Single frequency	Two frequency	
85	*m)*	157.275	161.875		x	x	x
26		157.300	161.900			x	x
86	*m)*	157.325	161.925		x	x	x
27		157.350	161.950			x	x
87		157.375			x		
28		157.400	162.000			x	x
88		157.425			x		
AIS 1	*l)*	161.975	161.975				
AIS 2	*l)*	162.025	162.025				

NOTES REFERRING TO THE TABLE

General notes

a) Administrations may designate frequencies in the intership, port operations and ship movement services for use by light aircraft and helicopters to communicate with ships or participating coast stations in predominantly maritime support operations under the conditions specified in Nos. **S51.69**, **S51.73**, **S51.74**, **S51.75**, **S51.76**, **S51.77** and **S51.78**. However, the use of the channels which are shared with public correspondence shall be subject to prior agreement between interested and affected administrations.

b) The channels of the present Appendix, with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may also be used for highspeed data and facsimile transmissions, subject to special arrangement between interested and affected administrations.

c) The channels of the present Appendix, but preferably channel 28 and with the exception of channels 06, 13, 15, 16, 17, 70, 75 and 76, may be used for direct-printing telegraphy and data transmission, subject to special arrangement between interested and affected administrations.

d) The frequencies in this table may also be used for radiocommunications on inland waterways in accordance with the conditions specified in No. **S5.226**.

PINK PAGES

e) Administrations having an urgent need to reduce local congestion may apply 12.5 kHz channel interleaving on a non-interference basis to 25 kHz channels, provided:

1) Recommendation ITU-R M.1084-2 shall be taken into account when changing to 12.5 kHz channels;

2) it shall not affect the 25 kHz channels of the Appendix **S18** maritime mobile distress and safety frequencies, especially the channels 6, 13, 15, 16, 17, and 70, nor the technical characteristics mentioned in Recommendation ITU-R M.489-2 for these channels;

3) implementation of 12.5 kHz channel interleaving and consequential national requirements shall be subject to prior agreement between the implementing administrations and administrations whose ship stations or services may be affected.

Specific notes

f) The frequency 156.300 MHz (channel 06) (see Appendix **S13**, Appendix **S15** and **S51.79**) may also be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. Ship stations shall avoid harmful interference to such communications on channel 06 as well as to communications between aircraft stations, ice-breakers and assisted ships during ice seasons.

g) Channels 15 and 17 may also be used for on-board communications provided the effective radiated power does not exceed 1 W, and subject to the national regulations of the administration concerned when these channels are used in its territorial waters.

h) Within the European Maritime Area and in Canada these frequencies (channels 10, 67, 73) may also be used, if so required, by the individual administrations concerned, for communication between ship stations, aircraft stations and participating land stations engaged in coordinated search and rescue and anti-pollution operations in local areas, under the conditions specified in Nos. **S51.69, S51.73, S51.74, S51.75, S51.76, S51.77** and **S51.78**.

i) The preferred first three frequencies for the purpose indicated in note *a)* are 156.450 MHz (channel 09), 156.625 MHz (channel 72) and 156.675 MHz (channel 73).

j) Channel 70 is to be used exclusively for digital selective calling for distress, safety and calling.

k) Channel 13 is designated for use on a world-wide basis as a navigation safety communication channel, primarily for intership navigation safety communications. It may also be used for the ship movement and port operations service subject to the national regulations of the administrations concerned.

PINK PAGES

l) These channels (AIS 1 and AIS 2) will be used for an automatic ship identification and surveillance system capable of providing worldwide operation on high seas, unless other frequencies are designated on a regional basis for this purpose.

m) These channels (18 and 82 to 86) may be operated as single frequency channels, subject to special arrangement between interested or affected administrations.

n) The use of these channels (75 and 76) should be restricted to navigation-related communications only and all precautions should be taken to avoid harmful interference to channel 16, e.g. by limiting the output power to 1 W or by means geographical separation.

PINK PAGES

RESOLUTION No. 310 (Rev.WRC-97)

FREQUENCY PROVISIONS FOR DEVELOPMENT AND FUTURE IMPLEMENTATION OF SHIP MOVEMENT TELEMETRY, TELECOMMAND AND DATA EXCHANGE SYSTEMS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) the need to specify radio frequencies which may be used by the maritime mobile service on a world-wide basis for ship movement requirements including transmission of electronic nautical chart data corrections, using digital automated data exchange, telemetry and telecommand techniques;

b) the developments now in progress in different portions of the frequency spectrum which will require common frequency bands in the future for efficient frequency utilization;

c) the importance of these systems in the safe and efficient operations of ships;

d) the advantages to port authorities for safe and efficient port management and operations;

noting

a) that ITU-R is considering this matter particularly within its Question 55/8;

b) that further operational and technical information is needed in deciding the most effective frequency utilization and sharing criteria;

c) that the International Maritime Organization (IMO) has identified a need for data exchange, using digital transmission techniques, between shore and ship for ship's position and movement data, correction data of radionavigation systems and electronic nautical charts;

resolves

that a future competent world radiocommunication conference should review possible frequency provisions in the light of additional studies;

PINK PAGES

requests administrations

to review the requirements relating to future ship movement telemetry, telecommand and data exchange systems and submit relevant results to ITU-R,

invites ITU-R

to examine and advise on modulation techniques such as spread spectrum, frequency bands, bandwidths and data formats in coordination with administrations developing and testing these digital transmission systems;

invites the Council

to include this Resolution in the agenda of a forthcoming competent world radiocommunication conference;

instructs the Secretary-General

to communicate this Resolution to IMO and the International Hydrographic Organization (IHO).

PINK PAGES

RESOLUTION No. 331 (Rev.WRC-97)

TRANSITION TO THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) AND CONTINUATION OF THE DISTRESS AND SAFETY PROVISIONS IN APPENDIX S13

The World Radiocommunication Conference (Geneva, 1997),

noting

that the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, prescribes that all ships subject to this Convention shall be fitted for the GMDSS by 1 February 1999,

noting further

a) that a number of administrations have taken steps to implement the GMDSS also for classes of vessels not subject to SOLAS, 1974 as amended;

b) that an increasing number of vessels not subject to SOLAS, 1974 as amended, are making use of the techniques and frequencies of the GMDSS prescribed in Chapter **SVII**;

c) that some administrations and vessels, not subject to SOLAS, 1974, as amended, may wish to continue to use provisions of Appendix **S13** for distress and safety communications for some time after 1 February 1999;

d) that it would be costly for administrations to maintain in parallel for an excessive period of time shore-based facilities necessary to support both the old and new distress and safety systems;

e) that there may be a need to continue existing shore-based distress and safety services for a certain period after 1 February 1999 so that vessels not subject to the 1974 SOLAS Convention and not yet using the techniques and frequencies of the GMDSS will be able to obtain assistance from these services until such time as they are able to participate in the GMDSS;

f) that separate provisions of the existing Radio Regulations designate VHF channel 16 and the frequency 2 182 kHz as the international channels for general calling by radiotelephony;

g) that IMO has already decided for GMDSS vessels that:

– listening watches on 2 182 kHz will no longer be mandatory after 1 February 1999;

– listening watches on VHF channel 16 will be continued and that a final date for the cessation of mandatory watchkeeping on channel 16 is yet to be determined;

PINK PAGES

h) that the Radio Regulations require GMDSS ships to keep watch on the appropriate DSC distress frequencies;

i) that the Radio Regulations establish that ship stations should, when practicable keep watch on VHF channel 13;

j) that several administrations have established Vessel Traffic Service (VTS) systems and require their ships to keep watch on local VTS channels;

k) that ships that are required by SOLAS to carry a radio station are being equipped with DSC, but the majority of vessels that carry a radio station on a voluntary basis might not have DSC equipment;

l) that similarly, many administrations have established distress and safety service based on DSC watchkeeping, but the majority of port stations, pilot stations and other operational coast stations have not been equipped with DSC facilities;

m) that for the reasons listed above, it will remain necessary for some stations in the maritime mobile service to call each other by radiotelephony in certain situations,

considering

a) that the operation of the GMDSS described in Chapter **SVII** and the present distress and safety system described in Appendix **S13** differ in many crucial aspects, such as means and methods of alerting, communication facilities available, announcement and transmission of maritime safety information, etc.;

b) that operation of the two systems in parallel for a long period would cause ever-increasing difficulties and incompatibilities between ships operating in the two different systems and may thus seriously degrade safety at sea in general;

c) that the GMDSS overcomes the deficiencies of the aural watchkeeping on maritime distress and calling frequencies on which the distress and safety system described in Appendix **S13** relies, by replacing these watches by automatic watch, i.e. digital selective calling and satellite communication systems,

resolves

1 that, until such time as voice calling has become obsolete, VHF channel 16 and the frequency 2 182 kHz may be used as voice-calling channels;

2 to urge all administrations to assist in enhancing safety at sea by:

– encouraging all ships to make use of the GMDSS as soon as possible;

– encouraging, where appropriate, establishment of suitable shore-based facilities for GMDSS, either on an individual basis or in cooperation with other relevant parties in the area;

PINK PAGES

3 that administrations may, taking account of all aspects involved, such as:

– decisions by IMO on aural watch on 2 182 kHz and VHF channel 16;

– the GMDSS radio systems available in the area concerned;

– the compatibility problems mentioned in *considering a)* and *b)* above;

– the density and classes of ships normally in the area;

– the geographical nature of the area and general navigational conditions within the area;

– other adequate measures taken to ensure safety communications for ships sailing in the area,

at a time after 1 February 1999, when the development on transition to the GMDSS and the prevailing conditions in the area makes it reasonable to do so, release their ship stations and coast stations within the area concerned from the obligations described in Appendix **S13** on listening watch on 2 182 kHz or VHF channel 16 or both;

when doing so, administrations should:

– inform IMO of their decisions and submit to IMO details on the area concerned;

– inform the Secretary-General on the necessary details for inclusion in the List of Coast Stations,

resolves further

that the Secretary-General should ensure that such arrangements and details regarding the area concerned be indicated in relevant maritime publications,

invites the next world radiocommunication conference

to include the review of this Resolution, Appendix **S13** and Chapter **SVII** on the agenda of the 2001 World Radiocommunication Conference,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO),

invites ITU-R Study Group 8

to review the operational and procedural incompatibilities between the old and new systems with a view to presenting the information to WRC-01.

PINK PAGES

RESOLUTION COM4-1 (WRC-97)

RELATING TO THE NEED FOR ADDITIONAL SEARCH AND RESCUE INFORMATION IN DATABASES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the provisions of No. **S20.16** of Article **S20** of the simplified Radio Regulations require administrations to notify the Radiocommunication Bureau of ship station characteristics contained in the List of Ship Stations (List V), which currently includes:

name of ship, call sign, selective call number, country, auxiliary installations, class of ship, nature of service, hours of service, telegraph transmission frequency bands, telephone transmission frequency bands, accounting authority, and remarks (e.g. Inmarsat terminal number, MMSI);

b) that the provisions of No. **S20.15**, however, give the Bureau authority to change the content and form of this information in consultation with administrations; and

c) that administrations and IMO have expressed a need for additional information to be included in search and rescue databases, including:

– vessel identification number (IMO number or national registration number);
– name, address and telephone number and, if applicable, telefax number of emergency contact person ashore;
– alternative 24-hour emergency telephone number;
– capacity for persons on board (passengers and crew),

resolves

to instruct the Director of the Radiocommunication Bureau to begin consultations with administrations with a view to incorporating the information contained in the Annex into the ITU maritime services database,

invites

administrations to consider also the incorporation of that information in their national databases,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

PINK PAGES

ANNEX TO RESOLUTION COM4-1 (WRC-97)

REGISTRATION DATABASE FOR THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

(See Article **S32**)

1 All identities used by the GMDSS for identifying vessels in distress shall be registered in accordance with this Annex. Administrations or organizations responsible for assigning these identities shall make suitable arrangements for ensuring registrations of these identities are made and maintained. Administrations shall notify this information to the Radiocommunication Bureau in accordance with No. **S20.16**.

2 Means shall be provided by the Radiocommunication Bureau and administrations maintaining national databases to allow rescue coordination centres immediate access to this database on a 24-hour per day, 7-day per week basis.

3 Each registration database should include the following information:

1) vessel name;

2) Maritime Mobile Service Identity (MMSI);

3) radio call sign;

4) EPIRB identification code (if applicable);

5) country (vessel flag state; may be derived from MMSI and call sign);

6) vessel identification number (IMO number or national registration number);

7) brief ship description (type);

8) name, address, telephone and (if applicable) telefax number of emergency contact person ashore;

9) alternative 24-hour emergency telephone number;

10) capacity for persons on board (passengers and crew);

11) ship's radio installation (Inmarsat A, B, C, M, VHF DSC, etc.); and

12) Inmarsat ship earth station identities (if applicable).

PINK PAGES

RESOLUTION COM4-2 (WRC-97)

UHF FREQUENCIES USED IN THE MARITIME MOBILE SERVICE FOR ON-BOARD COMMUNICATION

The World Radiocommunication Conference (Geneva, 1997),

considering

that this Conference has adopted the introduction of channel spacing of 12.5 kHz for maritime UHF on-board communications to be used on a voluntary basis,

noting

that Recommendation ITU-R M.1174 contains the characteristics of equipment used for on-board communications in the bands between 450 and 470 MHz,

resolves to invite ITU-R

to modify this Recommendation by including also the characteristics of the equipment using the new 12.5 kHz channel spacing,

urges administrations

to submit contributions to ITU-R,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

PINK PAGES

RESOLUTION COM4-3 (WRC-97)

REVIEW OF NEW TECHNOLOGY TO PROVIDE IMPROVED EFFICIENCY IN THE USE OF THE BAND 156 - 174 MHz BY STATIONS IN THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included the consideration of the use of Appendix **S18** to the Radio Regulations in respect of maritime mobile communications and the use of new technology for maritime radiotelephony channels;

b) Recommendation **318 (Mob-87)**;

c) that Appendix **S18** identifies frequencies to be used for distress and safety communications on an international basis;

d) that the introduction of new technology in the maritime mobile service shall not disrupt the distress and safety communications in the VHF band including those established by the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended;

e) that the ITU Radiocommunication Sector is conducting studies on improving efficiency in the use of this band, and that these studies are still ongoing;

f) that changes made in Appendix **S18** should not prejudice the future use of these frequencies or the capabilities of systems or new applications required for use by the maritime mobile service;

g) that the congestion on Appendix **S18** frequencies calls for the implementation of efficient new technologies;

h) that the use of new technology on maritime VHF frequencies will make it possible to better respond to the emerging demand for new services,

noting

that some administrations are considering adopting some of the above changes to their operations within the Appendix **S18** frequencies,

resolves

that WRC-99 should consider the use of new technology in the band 156 - 174 MHz and consequential revision of Appendix **S18**,

PINK PAGES

invites ITU-R

to continue studies on the following with a view to providing a report to the WRC-99:

i) to identify the future requirements of the maritime mobile service;

ii) to identify suitable technical characteristics of the system or interoperable systems to replace existing technology;

iii) to identify necessary modifications to the frequency plan contained within Appendix **S18**;

iv) to recommend a timetable for the introduction of new technology and the necessary changes;

v) to study and recommend how new technology can be introduced without harming the distress and safety requirements,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

PINK PAGES

RESOLUTION COM4-4 (WRC-97)

MARITIME CERTIFICATION FOR PERSONNEL OF SHIP STATIONS AND SHIP EARTH STATIONS FOR WHICH A RADIO INSTALLATION IS NOT COMPULSORY

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that this Conference has considered the question of certification for personnel of ship stations and ship earth stations within the GMDSS;

b) that GMDSS will be fully implemented on 1 February 1999 by ships subject to an international agreement;

c) that ships not subject to international agreement have begun to adopt GMDSS systems and techniques;

d) that use of GMDSS equipment should be accompanied by appropriate training and certification;

e) that the Radio Regulations stipulate that the service of every ship radio station working on frequencies assigned for international use shall be performed by operators holding a certificate;

f) that the present certificates described in Article **S47** of the Radio Regulations may be too demanding for radio operators of ship stations and ship earth stations on board ships for which a radio installation is not compulsory,

noting

that a number of administrations currently issue radio operator certificates specially designed for the non-compulsory sector,

resolves

that administrations wishing to implement special certification for the non-compulsory sector should implement the certificates contained in the Annex to this Resolution,

invites ITU-R

to develop a Recommendation describing these certificates,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization.

PINK PAGES

ANNEX TO RESOLUTION COM4-4 (WRC-97)

EXAMINATION SYLLABUS FOR RADIO OPERATOR'S CERTIFICATES APPROPRIATE TO VESSELS USING THE FREQUENCIES AND TECHNIQUES OF THE GMDSS ON A NON-COMPULSORY BASIS

Introduction

The introduction of the Global Maritime Distress and Safety System (GMDSS) in February 1992 made it necessary to harmonize the examination requirements for certificates for professional radio personnel. Harmonized examination procedures for the General Operator's Certificate and Restricted Operator's Certificate, based on the syllabi described in Article **S47** of the Radio Regulations, have already been introduced for maritime radio operators performing radiocommunication duties on board vessels subject to the International Convention for the Safety of Life at Sea (1974), as amended (SOLAS). The GMDSS will be fully implemented on 1 February 1999 for vessels subject to SOLAS.

For vessels not subject to SOLAS, and which install radiocommunication equipment on a voluntary basis, there are significant advantages to also using the GMDSS. However, it was foreseen by some administrations that such vessels would use some, but not all, of the frequencies and techniques of the GMDSS and that radio personnel on board such vessels would not need the same level of certification as radio personnel on board vessels which use all of the frequencies and techniques of the GMDSS on a compulsory basis. A syllabus has been developed which provides the flexibility for a depth of study, level of knowledge, and length of course appropriate to meet the certification requirements of radio personnel on board vessels which use some of the frequencies and techniques of the GMDSS on a non-compulsory basis. The syllabus also provides for certification in the use of satellite equipment where appropriate.

This Annex describes the syllabus developed to meet the certification requirements described above, and which are implemented in a number of countries under the title "Long Range Certificate" and "Short Range Certificate". The Short Range Certificate should at least contain those elements of the syllabus which are relevant to sea area A1.

Examination syllabus

The examination should consist of theoretical and practical tests and should include at least:

A GENERAL KNOWLEDGE OF RADIOCOMMUNICATIONS IN THE MARITIME MOBILE SERVICE

A1 The general principles and basic features of the maritime mobile service.

PINK PAGES

B DETAILED PRACTICAL KNOWLEDGE AND ABILITY TO USE RADIO EQUIPMENT

B1 The VHF radio installation. Use of VHF equipment in practice.

B2 The MF/HF radio installation. Use of MF/HF equipment in practice.

B3 Purpose and use of Digital Selective Calling (DSC) facilities and techniques.

C OPERATIONAL PROCEDURES OF THE GMDSS AND DETAILED PRACTICAL OPERATION OF GMDSS SUBSYSTEMS AND EQUIPMENT

C1 Basic introduction to Global Maritime Distress and Safety System (GMDSS) procedures.

C2 Distress, urgency and safety communication procedures in the GMDSS.

C3 Distress, urgency and safety communication procedures by radiotelephony in the old distress and safety system.

C4 Protection of distress frequencies.

C5 Maritime Safety Information (MSI) systems in the GMDSS.

C6 Alerting and Locating Signals in the GMDSS.

D OPERATIONAL PROCEDURES AND REGULATIONS FOR RADIOTELEPHONE COMMUNICATIONS

D1 Ability to exchange communications relevant to the safety of life at sea.

D2 Regulations, obligatory procedures and practices.

D3 Practical and theoretical knowledge of radiotelephone procedures.

D4 Use of the international phonetic alphabet and, where appropriate, parts of the IMO Standard Marine Communication Phrases.

E OPTIONAL EXAMINATION MODULE FOR THE MARITIME MOBILE-SATELLITE SERVICE FOR VESSELS NOT SUBJECT TO A COMPULSORY FIT

E1 The general principles and basic features of the maritime mobile-satellite service.

E2 Operational procedures and detailed practical operation of ship earth stations in the GMDSS.

PINK PAGES

RESOLUTION COM4-5 (WRC-97)

RELATING TO THE EXHAUSTION OF THE MARITIME MOBILE SERVICE IDENTITY NUMBERING RESOURCE

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required to carry GMDSS equipment may do so, for safety purposes;

b) that Digital Selective Calling Equipment on such ships for VHF radio, and/or Inmarsat ship earth station equipment requires the assignment of a unique Maritime Mobile Service Identity (MMSI);

c) that not all administrations assign these identities to users of digital selective calling-equipped VHF radios on such ships, from the numbers intended for use by vessels sailing and communicating only with domestic coast stations,

considering

a) that VHF digital selective calling distress alerts require valid identities for use by search and rescue authorities;

b) that Recommendation ITU-R M.585 contains guidance for the assignment of MMSIs, including to non-compulsory ships which communicate only with domestic radio stations; and

c) that Recommendation ITU-R M.585 was derived from ITU-T Recommendation E.210,

recognizing

a) that even domestic ships which install Inmarsat will require the assignment of MMSI numbers from those numbers reserved for ships communicating worldwide, further depleting the resource; and

b) that future growth of Inmarsat B, C and M mobile earth station use by non-compulsory ships is not, however, expected to deplete the resource, however;

c) that growth projections of Inmarsat systems by non-compulsory ships could change,

PINK PAGES

noting further

that ITU-R can monitor the status of the MMSI resource by monitoring the available spare Maritime Identification Digits (first three digits of the MMSI),

instructs the Director of the Radiocommunication Bureau

to monitor the status of the MMSI resource, and to report to each WRC as to the anticipated reserve capacity and expected exhaustion of the resource,

resolves to invite ITU-T and ITU-R

1 to keep under review the Recommendations for assigning Maritime Mobile Service Identities, with a view to identifying alternative resources before the resources are exhausted;

2 to consult each other when addressing changes to any of the Recommendations affecting the MMSI numbering resources; and

3 to complete studies on an urgent basis when a future WRC identifies the impending exhaustion of the MMSI resource,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization.

PINK PAGES

RESOLUTION COM4-7 (WRC-97)

USE OF FREQUENCY ADAPTIVE SYSTEMS IN THE MF/HF BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the efficiency of spectrum use will be improved by the use of frequency adaptive systems in the MF and HF bands shared by the fixed and the mobile services;

b) that trials of frequency adaptive systems which have been undertaken during the past 20 years have demonstrated the feasibility of such systems and their improved spectrum efficiency;

c) that such improved efficiency is attained through:

– shorter call set-up and improved transmission quality by selection of the most suitable assigned channels;

– reduced channel occupancy, permitting the same channels to be used by different networks, yet decreasing the probability of harmful interference;

– minimization of the transmitter power required for each transmission;

– continued optimization of the emissions owing to the sophistication of the systems;

– simple operation by the use of intelligent peripheral equipment;

– reduced need for skilled radio operators;

d) that following Resolution **23 (WRC-95)**, the Bureau no longer undertakes examination with respect to the probability of harmful interference caused by new assignments recorded in the MIFR in the non-planned bands below 28 MHz;

e) that frequency adaptive systems will actively contribute to the avoidance of interference since, when other signals are observed on the channel, the frequency adaptive system will move to another frequency,

resolves

1 that, in authorizing the operation of frequency adaptive systems in the MF/HF bands, administrations shall:

i) make assignments in the bands allocated to the fixed and mobile services;

ii) not make assignments in the bands:

– allocated exclusively to the maritime or aeronautical mobile (R) services;

– shared on a co-primary basis with the broadcasting service, radiodetermination service or the amateur services;

– allocated to radio astronomy;

PINK PAGES

iii) avoid use which may affect frequency assignments involving safety services made in accordance with Nos. **S5.155**, **S5.155A** and **S5.155B**;

iv) take into account any footnotes applicable to the proposed bands and the implications regarding compatibility;

2 that frequency adaptive systems shall automatically limit simultaneous use of frequencies to the minimum necessary for communication requirements;

3 that, with a view to avoiding harmful interference, the system should evaluate the channel occupancy prior to and during operation;

4 that frequency adaptive systems shall be notified to the Bureau in accordance with the provisions of Article **S11**,

invites ITU-R

1 to pursue its studies on the subject (see, for example, Questions ITU-R 204-1/1, 147/9, 205/9 or 214/9) with a view to achieving optimum operational performance and compatibility;

2 to report on the results of these studies to a future WRC,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements, as soon as practicable, for the notification of frequency assignments to adaptive systems and for their recording in the Master International Frequency Register, taking into account the studies already undertaken.

PINK PAGES

RESOLUTION COM4-8 (WRC-97)

OPERATION OF GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM EQUIPMENT ON AND ASSIGNMENT OF MARITIME MOBILE SERVICE IDENTITIES (MMSI) TO NON-COMPULSORY FITTED VESSELS

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that ships not required by international agreement to carry GMDSS equipment could elect to do so for safety purposes;

b) that such vessels may only carry VHF Digital Selective Calling (DSC) equipment;

c) that some administrations may not require operators on such vessels to have appropriate training, certification or licence;

d) that not all administrations assign and register identities to users of VHF DSC on such ships,

considering

that VHF DSC false distress alerts are a problem for rescue coordination centres, particularly when incorrect identities are used, or when the radio is operated by persons untrained in its use,

recognizing

that administrations have different training requirements for users of VHF DSC equipment,

resolves

1 to invite the ITU-R to consider digital selective calling standards and operating procedures in order to simplify operation of this equipment;

2 to invite the ITU-T and ITU-R to review the process for assigning maritime mobile service identities for simplifying the process, taking into account cases of new installation, sale of the vessel or transfer of the equipment to a new ship;

3 to invite the ITU-T and ITU-R to undertake studies to ensure the registration and continuous accessibility and availability of identities to rescue authorities,

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO) for consideration and comments.

PINK PAGES

RESOLUTION COM5-3 (WRC-97)

USE OF THE FREQUENCY BAND 5 250 - 5 350 MHz BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the frequency band 5 250 - 5 350 MHz is allocated to the radiolocation service on a primary basis;

b) that the frequency band 5 250 - 5 350 MHz is also allocated to the earth exploration-satellite (active) and the space research (active) services on a primary basis;

c) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that terrestrial radars would not cause unacceptable interference to synthetic aperture radars, scatterometers or altimeters, and that active spaceborne sensors and radiolocation systems are compatible provided that spaceborne-synthetic aperture radar and scatterometer design parameters are appropriately selected to ensure compatibility with radiolocation systems;

d) that guidelines for the appropriate selection of these parameters are contained in Recommendation ITU-R SA.1280;

e) that spaceborne sensors have operated in this frequency band since 1991 with no known reports of interference;

f) that many administrations have radiolocation systems operating in this band,

resolves

1 to invite ITU-R to study, as a matter of urgency, specific sharing criteria and emission characteristics for spaceborne active sensors operating in this frequency band, which may be added to Recommendation ITU-R SA.1280;

2 that when developing spaceborne active sensors operating in this frequency band, administrations should take into account the guidelines for the design of spaceborne active sensors found in Recommendation ITU-R SA.1280.

PINK PAGES

RESOLUTION COM5-4 (WRC-97)

USE OF THE FREQUENCY BAND 5 350 - 5 460 MHz BY SPACEBORNE ACTIVE SENSORS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the frequency band 5 350 - 5 460 MHz is allocated to the aeronautical radionavigation service on a primary basis;

b) that the frequency band 5 350 - 5 460 MHz is also allocated to the earth exploration-satellite (active) service on a primary basis;

c) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that spaceborne altimeters and aeronautical radionavigation systems are compatible in this frequency band;

d) that the Report of the Conference Preparatory Meeting to WRC-97 concluded that spaceborne synthetic aperture radars and airborne weather radars operating in the aeronautical radionavigation service are compatible in this frequency band;

e) that guidelines for the appropriate selection of design parameters of active spaceborne sensors are contained in Recommendation ITU-R SA.1280,

resolves

to invite ITU-R to study specific sharing criteria and emission characteristics for spaceborne active sensors operating in the frequency band 5 350 - 5 460 MHz, with a view to providing further guidance on the matter of compatibility with aeronautical radionavigation systems which will assist in the design of spaceborne active sensors and may add to Recommendation ITU-R SA.1280.

PINK PAGES

RESOLUTION COM5-5 (WRC-97)

IMPLEMENTATION OF WIND PROFILER RADARS

The World Radiocommunication Conference (Geneva, 1997),

having noted

a request to ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars,

considering

a) that wind profiler radars are vertically-directed Doppler radars exhibiting characteristics similar to radiolocation systems;

b) that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;

c) that it is necessary to use frequencies in different ranges in order to have options for different performance and technical characteristics;

d) that, in order to conduct measurements up to a height of 30 km, it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km);

e) that some administrations have either already deployed, or plan to expand their use of, wind profiler radars in operational networks for studies of the atmosphere and to support weather monitoring, forecasting and warning programmes;

f) that the ITU radiocommunication study groups have studied the technical and sharing considerations between wind profiler radars and other services allocated in bands near 50 MHz, 400 MHz and 1 000 MHz,

considering further

a) that some administrations have addressed this matter nationally by assigning frequencies for use by wind profiler radars in existing radiolocation bands or on a non-interference basis in other bands;

b) the work of the Voluntary Group of Experts on the Allocation and Improved Use of the Radio Frequency Spectrum and Simplification of the Radio Regulations supports increased flexibility in the allocation of frequency spectrum,

PINK PAGES

noting in particular

a) that wind profilers radars operating in the meteorological aids service in the band 400.15 - 406.0 MHz interfere with satellite emergency position-indicating radio beacons operating in the mobile-satellite service in the band 406.0 - 406.1 MHz under No. **S5.266**;

b) that in accordance with No. **S5.267**, any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited,

resolves

1 to urge administrations to implement wind profiler radars as radiolocation service systems in the following bands, having due regard to the potential for incompatibility with other services and assignments to stations in these services, thereby taking due account of the principle of geographical separation, in particular with regard to neighbouring countries, and keeping in mind the category of service of each of these services:

46 - 68 MHz in accordance with No. **S5.162A**

440 - 450 MHz

470 - 494 MHz in accordance with No. **S5.291A**

904 - 928 MHz in Region 2 only

1 270 - 1 295 MHz

1 300 - 1 375 MHz;

2 that, in case compatibility between wind profiler radars and other radio applications operating in the band 440 - 450 MHz or 470 - 494 MHz cannot be achieved, the bands 420 - 435 MHz or 438 - 440 MHz could be considered for use;

3 to urge administrations to implement wind profiler radars in accordance with Recommendations ITU-R M.1226, ITU-R M.1085-1 and ITU-R M.1227 for the frequency bands around 50 MHz, 400 MHz and 1 000 MHz, respectively;

4 to urge administrations not to implement wind profiler radars in the band 400.15 - 406 MHz; and

5 to urge administrations currently operating wind profiler radars in the band 400.15 - 406.0 MHz to discontinue them as soon as possible,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO, IMO and WMO.

PINK PAGES

RESOLUTION COM5-7 (WRC-97)

USE OF THE BANDS 47.2 - 47.5 GHz AND 47.9 - 48.2 GHz BY HIGH ALTITUDE PLATFORM STATIONS IN THE FIXED SERVICE AND BY OTHER SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the band 47.2 - 50.2 GHz is allocated to the fixed, mobile and fixed-satellite services on a co-primary basis;

b) that WRC-97 has made provision for operation of high altitude platform stations, also known as stratospheric repeaters, within the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz;

c) that ITU has among its purposes "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. 6 of the Constitution of the ITU (Geneva, 1992));

d) that systems based on new technologies using high altitude platforms will be able to provide high-capacity, competitive services to urban and rural areas;

e) that high altitude platform systems are in an advanced stage of development and some countries have notified such systems to ITU;

f) that the Radio Regulations Board issued a provisional rule of procedure concerning notification periods in No. **S11.24** (RR 1228) in February 1997, pending a final decision by WRC-97;

g) that in spite of the urgency attached to the development of such systems, technical, sharing and regulatory issues should be studied in order to achieve the most efficient use of the spectrum available for these systems;

h) that technical studies are required in order to ascertain the extent to which sharing of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is feasible between systems using high altitude platforms in the fixed service and systems in the fixed, fixed-satellite and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;

i) that the radio astronomy service has primary allocations in the bands 42.5 - 43.5 GHz and 48.94 - 49.04 GHz;

j) that ITU-R studies are already under way on the preferred characteristics of systems using high altitude platforms and the feasibility of sharing between these systems and systems of other services and between these systems and other systems in the fixed service (Questions ITU-R 212/9, ITU-R 218/9 and ITU-R 251/4);

k) that No. **S5.552** urges administrations to reserve fixed-satellite service use of the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service, and that preliminary ITU-R studies indicate that high altitude platform stations in the fixed service may share with broadcasting-satellite feeder links;

l) that the development of services using high altitude platform stations in these bands requires major investment and that manufacturers and operators should be given the confidence to make the necessary investment in these applications,

resolves

1 to urge administrations to facilitate coordination between high altitude platform stations in the fixed service operating in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz and other co-primary services in their territory and adjacent territories;

2 that, on a provisional basis, the procedures of Article **S9** shall be used for coordination between satellite systems and high altitude platform systems;

3 to request ITU-R to carry out urgently studies on the appropriate technical sharing criteria for the situations referred to in *considering* h), with priority given to the sharing with other systems in the fixed and fixed-satellite services, in particular the determination of the appropriate geographical separation from feeder links in the broadcasting-satellite service;

4 that [WRC-99] should review the results of these studies and consider refinement of the regulatory provisions that might facilitate a broader application of these high altitude platform technologies,

instructs the Director of the Radiocommunication Bureau

1 that notices concerning high altitude platform stations that were received by the Bureau prior to 22 November 1997, and provisionally recorded in the ITU Master International Frequency Register in accordance with the provisional rule of procedure issued by the Radio Regulations Board, shall be maintained;

2 that from 22 November 1997, and pending review of the sharing studies in *considering* h) and review of the notification process by [WRC-99], the Bureau shall accept notices in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz only for high altitude platform stations in the fixed service and for feeder links for the broadcasting-satellite service, shall continue to process notices for FSS networks (except for feeder links for the broadcasting-satellite service) for which complete information for advance publication has been received prior to 27 October 1997, and shall inform the notifying administrations accordingly.

PINK PAGES

RESOLUTION COM5-9 (WRC-97)

PROTECTION OF THE FIXED SERVICE IN THE FREQUENCY BAND 8 025 - 8 400 MHz SHARING WITH GEOSTATIONARY-SATELLITE SYSTEMS OF THE EARTH EXPLORATION-SATELLITE SERVICE (SPACE-TO-EARTH)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that prior to WRC-97, the band 8 025 - 8 400 MHz was allocated to the earth exploration-satellite service (space-to-Earth) on a secondary basis in Regions 1 and 3, except for those countries listed in No. **S5.464** of the Radio Regulations;

b) that the power flux-density limits given in Table S21.4 of the Radio Regulations apply to emissions from space stations of the earth exploration-satellite service (space-to-Earth);

c) that, for those administrations where the secondary allocation applied before WRC-97, geostationary orbital avoidance was not required for the fixed service and, therefore, the power flux-density limits given in Table S21.4 of the Radio Regulations may give rise to excessive interference to the fixed service;

d) that the administrations identified by No. **S5.462A** of the Radio Regulations have adopted provisional power flux-density limits lower than those shown in Table S21.4 to protect the fixed service;

e) that no studies have been conducted in this frequency band by ITU-R on the power flux-density values to apply to space stations of geostationary-satellite systems in the earth exploration-satellite service where geostationary orbital avoidance has not been implemented by stations of the fixed service,

considering further

that the band 8 025 - 8 400 MHz is used extensively by the fixed service in accordance with ITU-R channel arrangements for the 8 GHz band (see Recommendation ITU-R F.386) and is also used by some countries for television outside broadcast applications,

resolves

to invite ITU-R to study, as matter of urgency, the required power flux-density limits to be applied to space stations of geostationary-satellite systems in the earth exploration-satellite service (space-to-Earth) in the frequency band 8 025 - 8 400 MHz where orbital avoidance has not been implemented by the fixed service sharing the band,

urges administrations

to provide ITU-R with the necessary technical parameters of fixed-service links requiring protection in this frequency band.

PINK PAGES

RESOLUTION COM5-13 (WRC-97)

USE OF THE FREQUENCY BAND 420 - 470 MHz BY THE EARTH EXPLORATION-SATELLITE (ACTIVE) SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, 1992) identified an urgent need for assessment and systematic observations of forest cover and rate of forest degradation in tropical and temperate regions;

b) that during this Conference, many countries agreed to the principle that ITU should take action in response to the need identified by UNCED;

c) that frequencies around 450 MHz have been identified as having the unique capability to penetrate the canopy of forests and to determine the ground-trunk interaction;

d) that a bandwidth of about 6 MHz is considered necessary to provide the required resolution,

recognizing

a) that this Conference considered a proposal for a secondary allocation for the earth exploration-satellite (active) service within the frequency band 432 - 438 MHz;

b) that the Report of the Conference Preparatory Meeting (CPM-97) stated that WRC-97 may deem it appropriate to defer consideration of this agenda item to WRC-[99], by which time all relevant studies should be completed;

c) that CPM-97 concluded that spaceborne sensors cannot be considered technically compatible with terrestrial tracking radars without restriction on the spaceborne sensors;

d) that measures may be needed to minimize interference to fixed, mobile, mobile-satellite, amateur, amateur-satellite and space operation services,

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resolves

1 to invite ITU-R to study, as a matter of urgency, emission criteria, specific sharing criteria and operational characteristics for spaceborne sensors in the frequency band 420 - 470 MHz, and develop a relevant Recommendation;

2 to invite ITU-R to develop an ITU-R Report by the date of CPM-99 on the specific emission and operational characteristics used by the earth exploration-satellite (active) service in order to minimize the potential interference to existing services, and in order to support the selection of a frequency band having the optimal sharing scenarios;

3 that, on the basis of proposals from administrations, and taking into account the results of the ITU-R studies, the ITU-R Report mentioned in *resolves* 2, and the CPM-99 Report, [WRC-99] should consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite (active) service in the frequency band 420 - 470 MHz.

PINK PAGES

RECOMMENDATION No. 66 (Rev.WRC-97)

STUDIES OF THE MAXIMUM PERMITTED LEVELS OF UNWANTED EMISSIONS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that Appendix **S3** to the Radio Regulations [Rev.WRC-97] specifies the maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line;

b) that the principal objective of Appendix **S3** is to specify the maximum permitted levels of spurious emissions that, while being achievable, provide protection against harmful interference;

c) that excessive levels of unwanted emissions may give rise to harmful interference;

d) that while out-of-band emissions can also give rise to harmful interference, the Radio Regulations do not provide general limits for these emissions;

e) that while Appendix **S3** applies generally to the mean power of a transmitter and its spurious emissions, it also takes account of the variety of emissions where interpretation of the term "mean power", and thus its measurement, would be difficult, particularly in the cases of digital modulation broadband systems, pulsed modulation and narrow-band high-power transmitters;

f) that while Appendix **S3** covers spurious emissions for all radio services, those listed for space services are included only as design objectives;

g) that unwanted emissions from transmitters operating in space stations may cause harmful interference, particularly emissions from wideband amplifiers which cannot be adjusted after launch;

h) that unwanted emissions may cause harmful interference to safety services and radio astronomy and space services using passive sensors;

i) that, for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect specific services, such as safety services and passive services in specific bands;

j) that broadband digital modulation may cause unwanted emissions at frequencies far from the carrier frequency,

noting

a) that safety services and passive services have in many cases been allocated frequencies adjacent or close to those of services employing high-power transmitters;

PINK PAGES

b) that some administrations have adopted more stringent limits for spurious emissions than those specified in Appendix **S3**,

recommends that ITU-R

1. study, as a matter of urgency, the question of spurious emissions resulting from space service transmissions, and, on the basis of those studies, develop Recommendations for maximum permitted levels of spurious emissions in terms of mean power of spurious components supplied by the transmitter to the antenna transmission line;

2. submit a report to [WRC-99] on the results of its studies with a view to reviewing and including spurious emission limits for space services in Appendix **S3** of the Radio Regulations;

3. continue the study of spurious emission levels in all frequency bands, emphasizing the study of those frequency bands, services and modulation techniques not presently covered by Appendix **S3**;

4. study the question of unwanted emissions resulting from transmitters of all services and all modulation methods, and, on the basis of those studies, develop a Recommendation or Recommendations for maximum permitted levels of spurious emissions and out-of-band emissions;

5. establish appropriate measurement techniques for unwanted emissions, where those techniques do not currently exist, including the determination of reference levels for wideband transmissions as well as the applicability of reference measurement bandwidths;

6. study the reasonable boundary of spurious emissions and out-of-band emissions with a view to defining such a boundary in Article **S1** of the Radio Regulations;

7. study those frequency bands and instances where, for technical or operational reasons, more stringent spurious emission limits than the general limits in Appendix **S3** may be required to protect safety services and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

8. study those frequency bands and instances where, for technical or operational reasons, out-of-band limits may be required to protect safety services and passive services such as radio astronomy, and the impact on all concerned services of implementing or not implementing such limits;

9. report to a future competent conference the results of studies under *recommends* 3, 4 and 5 above, with a view to recommending whether or not it is appropriate to include general limits for out-of-band emissions in the Radio Regulations;

10. report the results of studies under *recommends* 6, 7 and 8 above to a competent conference(s).

PINK PAGES

SUP RESOLUTION 408 (Mob-87)

SUP RECOMMENDATION 621 (WARC-92)

PINK PAGES

List of Resolutions and Recommendations approved for suppression (seventh meeting of Committee 4 on 11 November 1997)

Resolution No.	Subject	Proposed action
39 (Mob-83)	Use of monitoring facilities in applying decisions of WARCs	SUP
200 (Rev.Mob-87)	Class of emission on 2 182 kHz	SUP
210 (Mob-87)	Reducing the guardband around 500 kHz	SUP
314 (Rev.Mob-87)	Collection of data for oceanography	SUP
315	Abolition of mobile station charges	SUP
316 (Rev.Mob-87)	Technical cooperation in maritime telecommunications	SUP
319 (Rev.Mob-87)	General review in 4/8 MHz (MMS/FX)	SUP
322 (Rev.Mob-87)	Watch keeping on GMDSS frequencies	SUP
323 (Mob-87)	Use of 156.525 MHz for DSC	SUP
330 (Mob-87)	Frequencies for RTF calling around 3 MHz	SUP
333 (Mob-87)	Use of HF for MSI	SUP
335 (Mob-87)	Non-paired frequencies, NBDP, ships	SUP
336 (Mob-87)	DSC on maritime HF	SUP
338 (WARC-92)	Provisional application of Art. 56	SUP
601 (Rev.Mob-87)	Standards for EPIRBs on 121.5 MHz/243 MHz	SUP

Recommendation No.	Subject	Proposed action
4	National and international circuits in HF	SUP
5	Reducing the congestion in HF	SUP
302 (Rev.Mob-87)	Improved use of HF in MMS	SUP
303 (Rev.Mob-87)	Use of 4 125 kHz and 6 215 kHz for distress and safety	SUP
304	Frequencies in Appendix 16, Section B	SUP
305	Use of CH15 and CH17 of AP18	SUP
306	Watch on 156.8 MHz	SUP
310	Automated UHF MM	SUP
312 (Rev.Mob-87)	Interconnection of MM in PSTN	SUP
317 (Rev.Mob-87)	Priority Indicator Signal (MMS)	SUP
603 (Rev.Mob-87)	Technical provisions for maritime radiobeacon in the African area	SUP

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 288-E
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

B.6 **PLENARY MEETING**

SIXTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 4	279	**ARTICLE S5** – Number S5.73 – Number S5.81 **ARTICLE S12** – Numbers S12.1 to S12.45 **ARTICLE S19** – Number S19.96A **ARTICLE S33** – Numbers S33.39 to S33.39B – Numbers S33.54 and S33.55 **ARTICLE S51** – Number S51.53 **ARTICLE S52** – Numbers: S52.3, S52.7, S52.54, S52.54.1, S52.55, S52.189, S52.217, S52.219, S52.220 **APPENDIX S15** – Tables S15.1 and S15.2 **RESOLUTION 210 (Mob-87)** **RESOLUTION 330 (Mob-87)** **ANNEX TO RESOLUTION 312 (Rev.WRC-97)** **RESOLUTION COM4-9 (WRC-97)** **RESOLUTION COM4-10 (WRC-97)** **RESOLUTION COM4-11 (WRC-97)** **RESOLUTION COM4-12 (WRC-97)**

BLUE PAGES

COM 5 282

ARTICLE S5
- Numbers S5.208, S5.208A, S5.219
- Table of allocations
  band 149.9 - 150.05 MHz
  band 399.9 - 400.05 MHz
- Numbers S5.209, S5.220, S5.224 to S5.224B

ANNEX 2 TO RESOLUTION 46 (Rev.WRC-95)
- paragraph A2.3.2 and Table 1
- paragraphs A2.1.1 to A2.1.1.3

RESOLUTION 715 (Rev.WRC-97)
RESOLUTION COM5-14 (WRC-97)
RECOMMENDATION COM5-A (WRC-97)
RESOLUTION 711 (WARC-92)
RESOLUTION 714 (WRC-95)

A.-M. NEBES
Chairman of Committee 6

Annex: 29 pages

BLUE PAGES

ARTICLE S5

MOD **S5.73** The band 285 - 325 kHz (283.5 - 325 kHz in Region 1), in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

MOD **S5.81** The bands 490 - 495 kHz and 505 - 510 kHz shall be subject to the provisions of Appendix **S13,** paragraph 15(1), Part A2.

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ADD

ARTICLE S12

Seasonal Planning of the HF Bands Allocated [Exclusively] to the Broadcasting Service Between 5 900 kHz and 26 100 kHz[1]

Section I. Introduction

S12.1 The use of the frequency bands allocated [exclusively] to the high-frequency broadcasting (HFBC) between 5 900 and 26 100 kHz shall be based on the principles given below and shall be in conformity with seasonal planning based on a coordination procedure between administrations (referred in this Article as the Procedure) described in **S12.2** to **S12.45**. An administration may authorize, a broadcasting organization (referred to in this Article as a broadcaster), among others, to act on its behalf in this coordination.

Section II. Principles

S12.2 (1) The Procedure shall be based on the principle of equal rights of all countries, large or small, to equitable access to these bands. Attempts shall also be made to achieve efficient use of these frequency bands, account being taken of the technical and economic constraints that may exist in certain cases. On the basis of the foregoing, the following principles shall be applied.

S12.3 (2) All broadcasting requirements, formulated by administrations, shall be taken into account and treated on an equitable basis, so as to guarantee the equality of rights referred to in No. **S12.2**, and to enable each administration to provide a satisfactory service.

S12.4 (3) The Procedure shall be based solely on the broadcasting requirements expected to become operational during the schedule period. It shall furthermore be flexible in order to take into account new broadcasting requirements and modifications to the existing broadcasting requirements.

[1 Resolution 529 should be modified to take account of the application of this Procedure in the frequency band allocations to the HFBC service.]

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S12.5 (4) All broadcasting requirements, national[2] and international, shall be treated on an equal basis, with due consideration of the differences between these two kinds of broadcasting requirements.

S12.6 (5) In the Procedure, an attempt shall be made to ensure, as far as practicable, continuity of use of a frequency or of a frequency band.

S12.7 (6) The Procedure shall be based on double-sideband or single-sideband emissions. Other modulation techniques recommended by ITU-R shall be permitted in place of double-sideband or single-sideband emissions, provided that the level of interference caused to existing emissions is not increased.

S12.8 (7) To promote efficient spectrum use, the number of frequencies used shall be the minimum necessary to provide a satisfactory quality of reception. Whenever practicable, only one frequency should be used.

S12.9 (8) The Procedure shall include a technical analysis, as specified in the RRB Rules of Procedure.[3]

S12.10 (9) The Procedure should encourage administrations or broadcasters empowered to make changes to pursue a continual coordination process to resolve incompatibilities, at meetings (regional[4] or worldwide, bilateral or multilateral) or by correspondence.

S12.11 (10) Regional coordination groups, which will facilitate bilateral and multilateral coordination among administrations and broadcasters in various regions of the world, shall identify themselves to the Bureau. Administrations and broadcasters shall be urged to participate in the relevant regional coordination groups. However, such participation would be on a voluntary basis.

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[2] An HF broadcasting requirement is considered as being for the purposes of national coverage when the transmitting station and its associated required service area are both located within the territory of the same country.

[3] Rules of Procedure will need to be established.]

[4] The word regional in this Article is not related to the ITU Regions.

S12.12 (11) When an administration, in particular the administration of a developing country, requests assistance in the application of the Procedure, the Bureau shall take appropriate action, including, if need be, coordination of the requirements submitted by the requesting administration.

S12.13 (12) The regional coordination groups should follow the coordination procedures prescribed in Section III. In the process of coordinating broadcasting requirements, an attempt shall be made to obtain agreement to the maximum number of submitted requirements with the quality level acceptable to administrations or broadcasters.

[S12.14 (13) The other primary services in the additional bands allocated by WARC-92 to the broadcasting service shall be protected until 1 April 2007, and assignments to these other primary services shall be taken into account in the Procedure of this Article.]

S12.15 (14) In order to ensure maximum success from the Procedure, administrations and broadcasters shall show the utmost goodwill and mutual cooperation, and give due consideration to all the relevant technical and operational factors involved.

Section III. The Procedure

S12.15A The application of the Procedure shall be facilitated and coordinated by the Bureau as defined elsewhere in this Article.

S12.16 Twice yearly, administrations shall submit their projected seasonal broadcasting schedules in the relevant frequency bands to the Bureau. These schedules shall cover the following seasonal periods:

S12.17 Schedule A: Last Sunday in March to last Sunday in October

S12.18 Schedule B: Last Sunday in October to last Sunday in March

S12.19 Implementation of these schedules shall start at 0100 UTC

S12.20 If an administration considers it necessary to take account of propagation changes during the schedule period, it is recommended, for reasons of spectrum efficiency, that such requirements should be implemented on the following dates:

S12.21 First Sunday in May;

S12.22 First Sunday in September.

S12.23 Implementation of these changes shall start at 0100 UTC on these dates.

S12.24 Other start and stop dates within a schedule period may be used to accommodate requirements that have different schedule periods, e.g. special events, clock changes on different dates not coincident with the schedule period, etc.

S12.25 Administrations may include assignments in their schedules up to one year in advance of their use.

S12.26 In those cases where an administration does not indicate its requirements for a new seasonal schedule, the Bureau shall use the assignments from the previous corresponding seasonal schedule for this administration for the new schedule period. A note in the schedule shall be used to identify such requirements. The Bureau shall follow this practice for two consecutive schedule periods.

S12.27 Following the action taken in No. **S12.26**, the Bureau shall notify the administration concerned that the schedule will not include their broadcasting requirements unless the administration advises otherwise.

S12.28 When an administration decides to cease its broadcasting service in the HF bands, it shall notify the Bureau of such decision.

S12.29 The frequencies in the schedules should be those that will be used during the season concerned, and should be the minimum number required to provide satisfactory reception of the programmes in each of the areas and for each of the periods intended. In each schedule, to the maximum possible extent, the frequencies to be used in each reception area should remain unchanged from season to season.

S12.30 Administrations are encouraged to coordinate their schedules with other administrations as far as possible prior to submission. An administration may, on behalf of a group of administrations, submit their coordinated schedules, the frequencies of which shall however have no priority for use over those submitted by other administrations.

S12.31 The closing dates for receipt by the Bureau of the schedules relating to the two seasons referred to in No. **S12.17** and **S12.18** shall be established and published by the Bureau.

S12.32 The schedules shall be submitted with the relevant data as specified in Appendix **S4.**

S12.33 Upon receipt of the schedules, the Bureau shall, in accordance with the Rules of Procedure, validate the data where necessary, perform a compatibility analysis and prepare the tentative high-frequency broadcasting schedule (the Tentative Schedule). This schedule shall include all assignments where administrations gave no alternatives, the selections made by the Bureau from any alternatives given, and the frequencies selected by the Bureau in cases where the need for its assistance was indicated by their intentional omission from the individual schedules.

S12.34 The Tentative Schedule shall be published at least two months before the start of each of the two schedule periods in Nos. **S12.17** and **S12.18**.

S12.35 Administrations should examine the Tentative Schedule and should coordinate their frequency schedules to resolve or to minimize, as far as possible, any incompatibilities identified by the compatibility analysis, or by the monitoring results of similar assignments, or by a combination of both.

S12.36 Coordination shall be achieved through bilateral or multilateral meetings of administrations or broadcasters or other means acceptable to the parties concerned.

S12.37 Administrations, either jointly or separately, shall inform the Bureau, as quickly as possible, but no later than two weeks prior to the start of the schedule period, of any changes to their requirements resulting from the coordination process. The Bureau shall prepare a new consolidated high-frequency broadcasting schedule (the Schedule), and shall perform a new compatibility analysis. The Bureau shall publish the Schedule and the results of the compatibility analysis at the start of the relevant broadcasting season.

S12.38 Administrations shall notify the Bureau of changes to their schedules as quickly as possible and the Bureau shall update and make available the Schedule on a monthly basis. The Bureau shall perform new compatibility analyses and publish the updated Schedule and the results of these analyses every two months during the season.

S12.39 To facilitate the coordination process, the Bureau shall also forward the schedules to the regional coordination groups.

S12.40 Regional coordination groups should consider communicating with administrations and broadcasters through the use of any appropriate, mutually agreeable means, such as e-mail, news-groups, bulletin boards and other forms of electronic data transfer.

S12.41 Each regional coordination group should consider appointing a steering committee to ensure smooth progress of the coordination process.

S12.42 During and after the coordination process, the regional coordination groups shall exchange schedule data among themselves with a view to further enhancing the efficacy of the coordination process.

S12.43 One month after the end of a season, the Bureau shall publish the final high-frequency broadcasting schedule (the Final Schedule). If any changes have been notified to the Bureau since the previous consolidated schedule, the Bureau shall also perform a compatibility analysis and publish it with the Final Schedule.

S12.44 The Bureau should, as and when required, convene joint meetings of the representatives of all the regional coordination groups to develop strategies for further reduction of incompatibilities and to discuss related matters. The outcome of these meetings shall be circulated among the regional groups and administrations.

S12.45 In a case of harmful interference, involving the application of the provisions of Article **S15**, administrations are urged to exercise the utmost goodwill and mutual cooperation, taking into account all the relevant technical and operational factors of the case.

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ARTICLE S19

ADD **S19.96A** Five-digit ship station selective call numbers are assigned to SSFC equipment (as described in Recommendation ITU-R M.257-3) for calling in radiotelephony and for the phasing in of NBDP equipment (as described in Recommendation ITU-R M.476-5). Within one administration the same five-digit number may be used:

– for identification of ship stations fitted with both SSFC and NBDP equipment;

– for identification of ship stations of two different ships fitted with either SSFC or NBDP equipment only.

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ARTICLE S33

Operational Procedures for Urgency and Safety Communications in the Global Maritime Distress and Safety System (GMDSS)

Section V. Transmission of Maritime Safety Information[1]

NOC **S33.39** *A. General*

ADD **S33.39A** § 20A.(1) Messages from ship stations containing information concerning the presence of cyclones shall be transmitted, with the least possible delay, to other mobile stations in the vicinity and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

ADD **S33.39.1** [1] Maritime safety information includes navigation and meteorological warnings, meteorological forecasts and other urgent messages pertaining to safety normally transmitted to or from ships, between ships and between ship and coast stations or coast earth stations.

ADD **S33.39B** (2) Messages from ship stations containing information on the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, shall be transmitted as soon as possible to other ships in the vicinity, and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

ADD **Section VIII. Medical Advice**

ADD **S33.54** § 29. (1) Mobile stations requiring medical advice may obtain it through any of the land stations shown in the List of Radiodetermination and Special Service Stations.

ADD **S33.55** (2) Communications concerning medical advice may be preceded by the urgency signal.

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ARTICLE S51

Conditions to Be Observed in the Maritime Services

Section I. Maritime Mobile Service

D. Ship Stations Using Radiotelephony

MOD **S51.53** *a)* send class J3E emissions on a carrier frequency of 2 182 kHz and receive class J3E emissions on a carrier frequency of 2 182 kHz, except for such apparatus as is referred to in No. **S51.56** (see also Appendix **S13**);

ARTICLE S52

MOD **S52.3** (2) Where these provisions specify class F1B emission, class J2B emission and classes J1D and J2D emission shall be considered equivalent. However, classes J1D and J2D emission shall not be used with the HF distress and safety frequencies listed in Appendix **S15**.

MOD **S52.7** (2) From 1 February 1999, in the maritime mobile service, the frequency 490 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing telegraphy.

MOD **S52.54** § 19. (1) Ship Morse radiotelegraph stations equipped to operate in the bands specified in Appendix **S17,** Part B, Sections IV and V, shall employ the classes of emission mentioned in No. **S52.2** for Morse telegraphy at speeds not exceeding 40 bauds. Survival craft stations may use class A2A or H2A emissions in these bands (see Appendix **S13**)[6].

ADD **S52.54.1** [6] Additionally, use of classes J2B, J1D and J2D emissions are permitted on a non-interference basis to A1A Morse operations. However, these emissions shall not be used on the HF safety and distress frequencies listed in Appendix **S15**.

MOD **S52.55** (2) Except as provided for in Nos. **S52.222.1** and **S52.54.1**, coast Morse radiotelegraph stations operating in the bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz shall not use Type 2 emissions (see No. **S52.18**).

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MOD S52.189 § 87. (1) The frequency 2 182 kHz[1] is an international distress frequency for radiotelephony (see Appendix **S13** for details of its use for distress, urgency, safety and emergency position-indicating radiobeacon (EPIRB) purposes).

MOD S52.217 § 96. (1) The class of emission to be used for analogue radiotelephony in the bands between 4 000 and 27 500 kHz shall be J3E; for digital telecommunications in those bands, the class of emission shall be J1D or J2D.

MOD S52.219 (3) Coast stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 and 27 500 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

MOD S52.220 (4) Ship stations employing class J3E, J1D or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 and 27 500 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

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APPENDIX S15

NOC

TABLE S15.1

Frequencies below 30 MHz

TABLE S15.2

Frequencies above 30 MHz (VHF/UHF)

	Frequency (in MHz)	Description of usage	Notes
NOC	*156.8	VHF-CH16	The frequency 156.8 MHz is used for distress and safety communications by radiotelephony (see also Appendix **S13**). Additionally, the frequency 156.8 MHz may be used by aircraft stations for safety purposes only.
MOD	1 530 - 1 544	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 530 - 1 544 MHz is used for distress and safety purposes in the space-to-Earth direction in the maritime mobile-satellite service. [GMDSS safety communications have priority in this band; see No. **S5.353A**].
MOD	1 626.5 - 1 645.5	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 626.5 - 1 645.5 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. [GMDSS safety communications have priority in this band for the maritime mobile-satellite service and where allocated to the mobile-satellite service under No. **S5.353A**].

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SUP RESOLUTION No. 210 (Mob-87)

SUP RESOLUTION No. 330 (Mob-87)

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MOD

ANNEX TO RESOLUTION 312 (Rev.WRC-97)

DISTRIBUTION PLAN FOR GROUP CHANNELS HF A1A MORSE COAST STATIONS BY COUNTRIES AND AREAS[1]

Group 1		Group 2		Group 3		Group 4	
AGL	LBR	ALG	GRC	ALS	LTU	AFS	MLT
AZE	MAU	ATN	HKG	ARG	LVA	ALB	NZL
AZR	MDG	ARS W[4]	HNG	BRM	MDR	ARS E[8]	PNG
B	MRT	BEL	HOL	CAN CL[7]	MOZ	AUS	POR
BAH	NCG	BEN	I	CAN E[7]	MRA	BUL	PTC
BER	NCL	BRB	KOR	CAN NE[7]	MRC	CHN[9]	RUS AN
BGD	OCE	CBG	LBN	CHN	NIG	COD	RUS EO
BHR	OMA	CHR	MEX	DNK	NOR	E	RUS NW
CAN W[2]	PHL	CKH	MRT	EST	NRU	FJI	RUS SW
CAN NW[2]	PTR	CLM	NCL	FIN	PAK	GEO	RUS W
CHL	REU	CLN	OCE	GEO	RUS EO	GNE	SEN
CNR	ROU	CME	PNR	GHA	RUS NW	IND E	SEY
CTI	RUS AS	COG	POL	GNB	RUS SW	INS	SLM
DJI	SNG	CPV	PRG	GUI	RUS W	IRQ	SMA
EQA	STP	CTR	PRU	GUM	S	J	SRL
ERI	SUI	CUB	REU	GUY	SVN	JOR	SUR
ETH	TKM	CYP	RUS NW	HRV	TRD	KWT	SYR
F	UKR	CZE	RUS EO	HWA	TUR	LVA	TGO
G	USA E[3]	DOM	SDN	IRN	UKR	LTU	TUN
IND W	VUT	EGY	SVK	ISL	USA W	MAU	UKR
IRL		F	THA	JMC	VEN	MDA	URG
ISR		FLK	USA SO[6]	LBY	YUG	MLA	VTN
KEN		G[5]	VUT				YEM
KRE		GAB	YEM				
		GMB					

NOTES

1 The meaning of the symbols is given in Tables B1 and 4E1 of the Preface to the International Frequency List and the Weekly Circular.

2 Canada (West Coast and Western Arctic).

3 United States (East Coast).

4 Saudi Arabia (West).

5 22 MHz only.

6 United States (Gulf of Mexico Coast).

7 Canada (East Coast and Eastern Arctic).

8 Saudi Arabia (East).

9 China (Province of Taiwan).

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RESOLUTION COM4-9 (WRC-97)

PROTECTION OF DISTRESS AND SAFETY COMMUNICATIONS ON THE FREQUENCIES 12 290 kHz AND 16 420 kHz FROM HARMFUL INTERFERENCE CAUSED BY THESE FREQUENCIES IF ALSO USED FOR NON-SAFETY CALLING

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that the frequencies 4 125 kHz, 6 215 kHz, 12 290 kHz and 16 420 kHz are used for distress and safety communications as well as for non-safety calling by ships in radiotelephony in accordance with the provisions of Article **S31** and **S52.221** respectively;

b) that considerable worldwide interference to distress and safety communications is experienced, especially on the frequencies 12 290 kHz and 16 420 kHz, due to ships being unable to monitor these frequencies before calling,

noting further

a) that the recommended agenda for the 1999 World Radiocommunication Conference (WRC-[99]) includes an agenda item 2.4 for review of the channel arrangements in the HF bands for the maritime mobile service, taking into account the use of new digital technology;

b) that consideration of this item by WRC-[99] may result in making the frequencies 12 290 kHz and 16 420 kHz exclusive for distress and safety communications,

recognizing

that it is of vital importance for the safety of life at sea that distress and safety communications can be carried out without being hampered by harmful interference,

resolves

1 to urge administrations:

a) to move, where appropriate, their coast station calling frequencies from the channels 1221 and 1621 to any other suitable HF channel;

b) to request ships under their jurisdiction to refrain from using the frequencies 12 290 kHz and 16 420 kHz for non-safety calling;

2 to recommend that WRC-[99] consider this subject,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

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RESOLUTION COM4-10 (WRC-97)

USE OF DIGITAL TELECOMMUNICATION TECHNOLOGIES IN THE MF AND HF BANDS BY THE MARITIME MOBILE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that amendments to Article **S52** of the Radio Regulations have been adopted by this Conference to provide for the use of digital telecommunication technology in the maritime HF telephony and A1A Morse bands;

b) that there may be a need for consequential changes in Appendix **S17** to reflect provisions made at this Conference for the use of digital telecommunications in the maritime HF telephony bands,

considering further

a) that it would be desirable to extend the use of digital telecommunication technology to the maritime HF A1A Morse telegraphy bands as well;

b) that these bands are significantly underutilized at present;

c) that the requirement for use of new digital technologies in the maritime mobile service is growing rapidly,

noting

a) that Resolution **720** of WRC-95 sets forth a preliminary agenda for WRC-[99] that includes item 2.4 "Review of channel arrangements in HF bands for the maritime mobile service, taking into account the use of new digital technology";

b) that use of the maritime HF A1A Morse radiotelegraphy bands is steadily diminishing with the result that administrations are already beginning to use these bands for digital telecommunication systems on a non-interference basis,

resolves

to recommend that WRC-[99] make changes to Appendix **S17** and Article **S52,** as needed,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization (IMO).

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RESOLUTION COM4-11 (WRC-97)

STUDIES REQUIRED TO PROVIDE PRIORITY TO DISTRESS COMMUNICATIONS ORIGINATED BY SHORE-BASED SEARCH AND RESCUE AUTHORITIES

The World Radiocommunication Conference (Geneva, 1997),

noting

a) that Article **S53** provides priority for distress and safety communications which involves immediate access to the space segment;

b) that distress and safety communications from shore-based search and rescue authorities will also be given priority access to the space segment;

c) that when ships are communicating using their ship earth stations, these priority requests are not able to be completed without manual intervention using a manual procedure to clear all traffic to and from the ship,

considering

a) that persons on board ships in distress or involved with a distress case may wish to use the ship earth station to notify friends, family and business associates on shore;

b) that this could cause priority requests from rescue authorities to receive a busy signal;

c) that unacceptable delays may be encountered in clearing all traffic to and from the ships manually,

recognizing

a) that life and property may be lost if rapid access is not provided for distress related communications originated by the rescue authority;

b) that the International Maritime Organization (IMO) has considered this problem and decided that provisions are necessary for giving priority to shore-originated distress communications;

c) that Inmarsat is currently studying how to provide such priority communications,

resolves to invite

1 ITU-R to monitor the status of these studies and to develop suitable Recommendations;

2 IMO to develop requirements for priority communications for distress-related communications originated by shore-based search and rescue authorities and to submit these requirements to the next competent WRC,

further invites the Council

to place this Resolution on the agenda of a future competent world radiocommunication conference,

instructs the Secretary-General

to communicate this Resolution to IMO and the International Civil Aviation Organization (ICAO) for appropriate action and comment.

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RESOLUTION COM4-12 (WRC-97)

OPERATIONAL PROCEDURES FOR CANCELLING FALSE DISTRESS ALERTS IN THE GMDSS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the SOLAS 1974 Convention, as amended, prescribes that ships subject to this Convention shall be fitted with GMDSS equipment as appropriate;

b) that non-SOLAS vessels are also being equipped with GMDSS equipment;

c) that the transmission and relay of false distress alerts is a significant problem within the GMDSS,

noting

that the International Maritime Organization (IMO) has developed similar operational procedures to cancel false distress alerts,

resolves

1 to urge administrations to take all necessary measures to avoid false distress alerts and to minimize the unnecessary burden on rescue organizations which occurs;

2 to urge administrations to encourage the correct use of GMDSS equipment, with particular attention to appropriate training;

3 to urge administrations to implement the operational procedures contained in the Annex to this Resolution;

4 that administrations should take any consequential appropriate action in this respect,

instructs the Secretary-General

to bring this Resolution to the attention of IMO.

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ANNEX TO RESOLUTION COM4-12 (WRC-97)

CANCELLING OF FALSE DISTRESS ALERTS

If a distress alert is inadvertently transmitted, the following steps shall be taken to cancel the distress alert.

1. VHF Digital Selective Calling

1) Reset the equipment immediately;
2) Set to Channel 16; and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and maritime mobile service identity (MMSI), and cancel the false distress alert.

2. MF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony transmission on 2 182 kHz; and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert.

3. HF Digital Selective Calling

1) Reset the equipment immediately;
2) Tune for radiotelephony on the distress and safety frequency in each band in which a false distress alert was transmitted (see Appendix **S15**); and
3) Transmit a broadcast message to "All Stations" giving the ship's name, call sign and MMSI, and cancel the false alert on the distress and safety frequency in each band in which the false distress alert was transmitted.

4. Inmarsat Ship Earth Station

Notify the appropriate rescue coordination centre that the alert is cancelled by sending a distress priority message by way of the same coast earth station through which the false distress alert was sent. Provide ship name, call sign and Inmarsat identity with the cancelled alert message.

5. Emergency Position Indicating Radiobeacon (EPIRB)

If for any reason an EPIRB is activated inadvertently, contact the appropriate rescue coordination centre through a coast station or land earth station and cancel the distress alert.

6. General

Notwithstanding the above, ships may use additional appropriate means available to them to inform the appropriate authorities that a false distress alert has been transmitted and should be cancelled.

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ARTICLE S5

MOD **S5.208** The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/**No. **S9.11A**.

MOD **S5.208A** In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in Table 1 of Recommendation ITU-R RA.769-1.

NOC **S5.219** The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/** No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz.

MOD

MHz
148 – 156.8375

Allocation to Services		
Region 1	Region 2	Region 3
149.9 – 150.05	MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ADD S5.224A RADIONAVIGATION-SATELLITE ADD S5.224B MOD S5.220 S5.222 S5.223	

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MOD

MHz
322 – 400.15

Allocation to Services		
Region 1	Region 2	Region 3
399.9 – 400.05	MOBILE-SATELLITE (Earth-to-space) MOD S5.209 ADD S5.224A RADIONAVIGATION-SATELLITE S5.222 S5.260 ADD S5.224B MOD S5.220	

MOD S5.209 The use of the bands 137 - 138 MHz, 148 - 150.05 MHz, 399.9 - 400.05 MHz, 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems.

MOD S5.220 The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.

SUP S5.224

ADD S5.224A The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015.

ADD S5.224B The allocation of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015.

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Annex 2 to Resolution 46 (Rev.WRC-95), paragraph A2.3.2

….

MOD

TABLE 1

Earth stations operating at frequencies below 1 GHz

Frequency Sharing Situation		Coordination Distance (In sharing situations involving services allocated with equal rights)
Frequency band and earth station for which coordination area is determined	Other service or station	
148.0 - 149.9 MHz ground-based (mobile)	ground-based stations	As determined using Equation (1) and Figure 1 of Recommendation ITU-R M.1185 In this case, the coordination distance is calculated by the administration of the terrestrial station using the parameters of its terrestrial stations and the most up-to-date relevant parameters published by the Bureau for the earth station.
149.9 - 150.05 MHz ground-based (mobile) 399.9 - 400.05 MHz ground-based (mobile)	radionavigation-satellite service	The coordination distance is calculated by the administration of the mobile-satellite service earth station using the parameters of its earth stations and the most up-to-date relevant parameters published by the Bureau for the radionavigation-satellite service earth station
400.15 - 401 MHz ground-based	meteorological aids (radiosonde)	580 km
All bands below 1 GHz ground-based	mobile (aircraft)	500 km
All bands below 1 GHz aircraft (mobile)	ground-based stations	500 km
400.15 - 401 MHz aircraft (mobile)	meteorological aids (radiosonde)	1 080 km
All bands below 1 GHz aircraft (mobile)	mobile (aircraft)	1 000 km
455 - 456 MHz 459 - 460 MHz ground-based	ground-based stations	500 km

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ANNEX 2 TO RESOLUTION 46 (Rev.WRC-95)
(ANNEX 1 TO APPENDIX S5)

….

A2.1.1 *Below 1 GHz*[*]
(1.1)

ADD **A2.1.1.1 (1.1.1)** In the bands 137 - 138 MHz and 400.15 - 401 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to terrestrial services (except aeronautical mobile (OR) service networks operated by the administrations listed in numbers **S5.204** and **S5.206** as of 1 November 1996) is required only if the power flux-density produced by this space station exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface.

ADD **A2.1.1.2 (1.1.2)** In the band 137 - 138 MHz, coordination of a space station of the mobile-satellite service (space-to-Earth) with respect to the aeronautical mobile (OR) service is required only if the power flux-density produced by this space station at the Earth's surface exceeds:

– -125 dB (W/m^2/4 kHz) for networks for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996.

– -140 dB (W/m^2/4 kHz) for networks for which complete Appendix **3**/Appendix **S4** coordination information has been received by the Bureau after 1 November 1996 for the administrations referred to in A2.1.1.1(1.1.1) above.

ADD **A2.1.1.3 (1.1.3)** In the band 137 - 138 MHz, coordination is also required for a space station on a replacement satellite of a mobile-satellite service network for which complete Appendix **3** coordination information has been received by the Bureau prior to 1 November 1996 and the power flux-density exceeds -125 dB (W/m^2/4 kHz) at the Earth's surface for the administrations referred to in A2.1.1.1(1.1.1) above.

[*] These provisions apply only to the mobile-satellite service.

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RESOLUTION 715 (Rev.WRC-97)

STUDIES CONCERNING SHARING BETWEEN THE RADIONAVIGATION-SATELLITE SERVICE AND THE MOBILE-SATELLITE SERVICE IN THE BANDS 149.9 - 150.05 MHz AND 399.9 - 400.05 MHz

The World Radiocommunication Conference (Geneva, 1997),

considering,

a) that the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz are allocated to and used by radionavigation-satellite service (RNSS) on a primary basis;

b) that this Conference allocated the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz (Earth-to-space) to the mobile-satellite service on a primary basis;

c) that requirements of the radionavigation-satellite service (RNSS) and the mobile-satellite service (MSS) should be met in these frequency bands;

d) that there may be difficulties in the sharing between the RNSS and the MSS, and studies are being carried out by ITU-R;

e) that there is a need for further study of the operational and technical means to facilitate sharing between the RNSS and the MSS (in the Earth-to-space and space-to-Earth directions) in these bands,

recognizing

that No. **953/S4.10** of the Radio Regulations applies to the use of these bands by the RNSS,

resolves

to invite ITU-R to continue to carry out studies in order to finalize Recommendations which identify the operational and technical measures necessary to facilitate sharing between the MSS and the RNSS,

urges administrations

to participate in such studies by submitting contributions to ITU-R relating to the above-mentioned studies as soon as possible.

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DRAFT RESOLUTION COM5-14 (WRC-97)

STUDIES RELATING TO CONSIDERATION OF ALLOCATIONS IN THE BROADCASTING BAND 470 - 862 MHz TO NON-GEOSTATIONARY MOBILE-SATELLITE SERVICES WITH SERVICE LINKS OPERATING BELOW 1 GHz

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the agenda of this Conference included consideration of the adoption of additional allocations for non-geostationary mobile-satellite services (non-GSO MSS);

b) that the Report of the 1997 Conference Preparatory Meeting (CPM-97) stated that "The Radiocommunication Bureau has identified at least 23 non-GSO MSS networks at frequencies below 1 GHz, at some state of coordination under Resolution 46", and that "many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum";

c) that CPM-97 considered the protection requirements for analogue television in the band 470 - 862 MHz against a narrow-band MSS signal in the most sensitive and least sensitive portions of an analogue television channel and the protection requirements for a digital television channel, based on existing ITU-R Recommendations (BT.655-4, BT.417-4 and IS.851-1);

d) that CPM-97 stated that the protection ratios for a narrow-band interfering signal in the least sensitive parts of an analogue television channel are to be verified by further studies;

e) that CPM-97 stated the region of lower protection requirements and commensurately higher permissible interfering power flux-density levels as being 100 kHz from the band edges of an analogue television channel, at least in some countries;

f) that CPM-97 stated that the interfering effects of a non-GSO MSS transmission will depend on its specific characteristics (e.g. duty-cycle, duration, periodicity, etc.), that interference contributions from sources other than MSS (even those from other broadcasting stations) have to be taken into account, that slightly lower values of field strength to be protected may need to be assumed in countries where television networks are relatively sparse, and that studies on sharing are necessary;

g) that the permissible aggregate interfering power flux-density resulting from these protection requirements, in some portions of an analogue television channel, may be useful in determining the feasibility of sharing with non-GSO MSS transmitter space-to-Earth links;

h) that these bands are also allocated in part to fixed and mobile terrestrial systems and radionavigation systems;

i) that, in many countries, the channels assigned for analogue television may also be used for digital television, and that during the period of parallel operation of analogue and digital television networks the usage of this band for television will increase,

noting

a) that on completion of studies, parts of the bands now allocated to the broadcasting service between 470 MHz and 862 MHz might be considered suitable for worldwide allocation to non-GSO MSS space-to-Earth transmissions;

b) that the bandwidth required in these television channels may be 1-2% of the total band 470 - 862 MHz to be shared with the above systems;

c) the need to protect the radio astronomy service in the band 608 - 614 MHz against interference from MSS transmissions, including unwanted emissions,

resolves

1 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate co-frequency sharing between narrow-band non-GSO MSS (space-to-Earth) transmissions and the services to which the band 470 - 862 MHz is allocated, including the bands where the broadcasting service is also allocated;

2 to invite a future competent conference to consider, on the basis of the results of the studies referred to in *resolves* 1, additional allocations on a worldwide basis for non-GSO MSS with service links operating below 1 GHz,

urges administrations

to participate actively in such studies, with the involvement of interested parties.

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RECOMMENDATION COM5-A (WRC-97)

USE OF THE FREQUENCY BANDS 2 025 - 2 110 MHz AND 2 200 - 2 290 MHz BY THE SPACE RESEARCH, SPACE OPERATION, EARTH EXPLORATION-SATELLITE, FIXED AND MOBILE SERVICES

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz are allocated on a primary basis to the space research, space operation, earth exploration-satellite, fixed and mobile services;

b) that, in response to resolutions from WARC-92, studies have resulted in a number of ITU-R Recommendations, which, when adhered to by the services, will result in a stable, long-term sharing environment (Recommendations ITU-R SA.364, SA.1019, F.1098, F.1247, F.1248, SA.1154, SA.1273, SA.1274 and SA.1275);

c) that this Conference adopted RR **S5.391**, which states that high-density mobile systems shall not be introduced in these frequency bands,

considering further

that enhancements in technology may enable the services mentioned in *considering* a) to minimize the total bandwidth requirement in these frequency bands,

noting

that WARC-92 considered that it is desirable to review the present and planned use of the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, with the intent, where practicable, of satisfying some space mission requirements in bands above 20 GHz,

recognizing

that there are increasing requirements for emerging communication systems which need to be satisfied in the frequency range below 3 GHz,

recommends

that administrations planning to introduce new systems in the space research, space operation, earth exploration-satellite, fixed or mobile services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz take into account the ITU-R Recommendations referred to in *considering* b) above when making assignments to these services, and implement enhancements in technology as early as practicable with a view to minimizing the total bandwidth required by systems of each service.

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SUP RESOLUTION No. 711 (WARC-92)

SUP RESOLUTION No. 714 (WRC-95)

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 289-E
27 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 5

(ALLOCATIONS AND ASSOCIATED ISSUES)

Thursday, 13 November 1997, at 0935 hours

Chairman: Mrs V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Approval of the summary records of the second and third meetings	181, 204
2	Fifth report by Working Group 5B261	
3	Sixth report by Working Group 5B	262
4	Report by Group 5 ad hoc 1	-
5	Report by Group 5 ad hoc 2	240, 264
6	Report by Group 5 ad hoc 3	247, 251, 257, 260
7	MSS and FSS issues	208
8	Consideration of country footnotes (continued)	174

1 Approval of the summary records of the second and third meetings (Documents 181, 204)

1.1 The summary record of the second meeting of Committee 5 (Document 181) was **approved**.

1.2 With regard to the summary record of the third meeting (Document 204), the **delegate of Uzbekistan** pointed out that in §2.9 "MOD S.177A" should be replaced by "MOD S5.175A".

1.3 With that correction, the summary record of the third meeting (Document 204) was **approved**.

2 Fifth report by Working Group 5B (Document 261)

2.1 The **Chairman of Working Group 5B**, introducing Document 261, said that in Section 1, concerning the frequency range 137- 138 MHz, the Working Group had approved the principle of applying different power flux-density values according to whether the Bureau had received Appendix 3 coordination information prior to 1 November 1996 (-125 dB(W/m^2/4 GHz)) or Appendix 3/Appendix S4 coordination information after 1 November 1996. Since the Working Group had approved Section 1 unanimously, Resolution 714 (WRC-95) could be deleted. With respect to Section 2, concerning the frequency range 148- 149.9 MHz, two different views had been expressed on whether or not reference should be made to ITU-R Recommendations. One view was that it would be premature to refer to them, while others thought that such a reference would be appropriate. The point was still under discussion. With respect to Section 3, concerning the frequency ranges 149.9 - 150.05 MHz and 399.9 - 400.05 MHz, the Working Group had reached agreement on the date of 1 January 2005 and the amendments to be made to Resolution 715 (WRC-95). On Section 4, concerning the frequency range 401- 406 MHz, no consensus had been reached on the proposals to allocate portions of the band to non-GSO MSS systems, the majority of participants holding the view that sharing studies with regard to terrestrial services were incomplete and that the 5 MHz in question were needed by the meteorological aids service. It had thus been decided that interested parties would continue to seek agreement on the subject. Similar conclusions had been reached concerning Section 5, on the frequency range 450 - 470 MHz. In Section 6, concerning Resolution 214 (WRC-95), *resolves* 2 and *resolves* 5 remained in square brackets pending the outcome of discussions between the United States delegation and the CEPT countries. *Invites ITU-R* 2*bis* was also under discussion. Section 7, containing draft Resolution [COM5-14] on sharing studies in the band 470- 862 MHz, had been unanimously approved, as had Section 8, containing draft Resolution [COM5-15] on non-GSO MSS feeder links below 1 GHz.

2.2 The **Chairman** invited comments on Document 261, starting with Section 1 (Frequency range 137 - 138 MHz).

MOD S5.208, MOD S5.208A, Annex 2 to Resolution 46 (Rev.WRC-95), A2.1.1, ADD A2.1.1.1, ADD A2.1.1.2, ADD A2.1.1.3

2.3 **Approved**.

2.4 The **delegate of the United States** said that his delegation still had one point to go into with the Radiocommunication Bureau and hoped to be able to return to the matter if, following those discussions, it felt that to be necessary.

2.5 The **delegate of the United Kingdom** endorsed those comments.

2.6 Following a request for clarification from the **delegate of Yemen**, the **Chairman** said that the power flux-density values in question were thresholds and, as stated in the footnote, only applied to MSS systems.

SUP Resolution 714 (WRC-95)

2.7 Approved.

2.8 The **Chairman** invited comments on Section 2 (Frequency range 148 - 149.9 MHz).

MOD S5.219

2.9 The **delegate of Canada** said that her delegation would prefer the text in square brackets to be retained, but would not object if it were deleted.

2.10 The **Chairman** suggested that the text in square brackets be deleted.

2.11 The **delegate of the United States** said that the question of possible sharing of the band between the MSS and existing services had been discussed at length by ITU-R, CPM and the Conference itself. Since the Recommendations referred to in the text in square brackets provided valuable information on available techniques, which would also be extremely useful for anyone reading the Radio Regulations, he was in favour of retaining the text in question.

2.12 The **delegate of Germany** said he was in favour of deleting the text in square brackets. The **delegate of Cuba** shared that view, pointing out that VGE had endeavoured to make the Radio Regulations more concise. The **delegate of Australia** said that satellite system operators were fully aware of interference attenuation techniques and that the text in square brackets could thus be deleted.

2.13 It was **agreed** to delete the portion of MOD S5.219 in square brackets.

2.14 The **Chairman** invited comments on Section 3 (Frequency ranges 149.9 - 150.05 MHz and 399.9 - 400.05 MHz).

MOD Table 148 - 156.8375 MHz

2.15 Approved.

MOD Table 322 - 400.15 MHz

2.16 Approved.

MOD S5.209, MOD S5.220, SUP S5.224, ADD S5.224A, ADD S5.224B

2.17 Approved.

MOD Table 1 (Annex 2 to Resolution 46 (Rev.WRC-95), § A2.3.2

2.18 The **delegate of India** said that, for technical reasons, the coordination distances for the band 400.15 - 401 MHz should be reduced from 582 km to 580 km (ground-based) and from 1 080 km to 1 082 km (mobile (aircraft)).

2.19 It was so **agreed**.

2.20 The **representative of BR** pointed out that the same coordination distance values for the band 400.15 - 401 MHz as had just been approved for Table 1 should also be used in Table 2 of Annex 1 to Appendix S5.

2.21 It was **agreed** to entrust BR with the task of aligning the coordination distances in Appendix S5, Tables 1 and 2.

MOD Resolution 715 (WRC-95)

2.22 **Approved.**

2.23 The **Chairman** invited comments on Sections 4 (Frequency range 401 - 406 MHz) and 5 (Frequency range 450 - 470 MHz).

2.24 The **delegate of Canada** proposed that consideration of Sections 4 and 5 be deferred to the following meeting, when a document on the subject would be available. The proposal was supported by the **delegates of Brazil** and **the United States** and by the **delegate of India**, who pointed out with regard to Section 4 that agreement had already been reached concerning the range 401 - 403 MHz.

2.25 The **Chairman** said that the two sections would be considered at the following meeting of the Committee, since they were still under discussion in Working Group 5B. She invited comments on Section 6, concerning Resolution 214.

MOD Resolution 214 (WRC-95)

2.26 The **delegate of the United States** having requested that the Resolution be considered at a later stage, it was **agreed** to defer consideration of Section 6 on Resolution 214 to the following meeting of the Committee.

2.27 The **Chairman** invited comments on Section 7 (Resolution on sharing studies in the band 470 - 862 MHz).

ADD draft Resolution [COM5-14]

2.28 The **delegate of Spain**, referring to the reservation that his country's delegation had entered concerning the use of the band in question, made the following statement:

"Spain hereby makes a general reservation to draft Resolution [COM5-14], on the following grounds:

– this Resolution, while not an allocation, is the first step towards making one at some unspecified future time;

– while the administrations consulted may see no reason to oppose carrying out studies, in Spain's case, with a network of analogue television stations, with an average of 200 stations in each channel in the UHF band, and also in the near future terrestrial digital television stations, we are sceptical about the results of such studies;

– given such scepticism, it is unreasonable to devote resources to co-channel sharing studies which are unlikely to yield favourable results."

2.29 The **delegates of Greece, Singapore, Bulgaria, China**, **United Arab Emirates**, **Islamic Republic of Iran**, **Turkey**, **Viet Nam**, **Syria**, **Jordan**, **Republic of Korea**, **Qatar**, **Guatemala**, **Malaysia**, **Paraguay**, **Philippines**, **Egypt**, **Brunei Darussalam** and **Hungary** associated themselves with the reservation expressed by the delegate of Spain.

2.30 The **delegate of Ecuador** said that in his country there were secondary allocations to the fixed service and the mobile-satellite service in the band in question and requested that his country be included in footnote S5.293, so as to make those allocations primary. His country's concerns with regard to that band were explained in Document 272.

2.31 The **Chairman** suggested that the delegation of Ecuador might wish to come back to the Resolution once Document 272 had been distributed.

2.32 The **delegate of Papua New Guinea**, supported by the **delegate of Indonesia**, said that while the Spanish delegate's concerns were legitimate with regard to terrestrial television systems in Spain's region, the situation was different elsewhere. He made the following statement:

"While appreciating the concern of countries where the 470- 862 MHz band is heavily used for TV broadcasting, it must also be recognized that there are geographical areas where only a part of this band is currently used for that purpose. Also there are areas where this band is not likely to ever be used."

2.33 *Considering* a) to h) of draft Resolution [COM5-14] were **approved**.

2.34 The **delegate of Greece** proposed that *considering* i) be amended to read: "and that during the period of parallel operation of analogue and digital TV networks, the usage of this band will be increased".

2.35 It was so **agreed**.

2.36 Following an observation by the **delegate of Turkey**, the **Chairman** said that any necessary amendments of a purely editorial nature would be made later.

2.37 *Noting* a, b) and c) were **approved**.

2.38 The **delegate of India** said that the problems encountered by some countries, including India, with television and other services in the frequency band in question showed that the introduction of new technologies should be accompanied by adequate protection for existing operations based on somewhat older technologies. While the compatibility studies provided for in the draft Resolution were of course useful, they would have to have reached an advanced enough stage and there would have to be sufficient assurance of compatibility between new and existing services before there could be any question of referring them to a conference for consideration as called for in *resolves* 2. The **Chairman** said that that comment should be added to the input to work on preparation of the agendas for future conferences being carried out in Working Group PLEN-1.

2.39 *Decides* 1 and 2 and *urges administrations* were **approved.**

2.40 Draft Resolution [COM5-14], with the amendment put forward by the delegate of Greece, was **approved**.

2.41 The **Chairman** invited comments on Section 8 (Resolution on non-GSO MSS feeder links below 1 GHz).

ADD draft Resolution [COM5-15]

2.42 *considering* a) to f) and *recognizing* were **approved**.

2.43 The **Chairman** said that *noting* a) contained a reference to Resolution 214 (Rev.WRC-97) and should thus be placed in square brackets pending consideration of that Resolution at the following meeting.

2.44 It was so **agreed**.

2.45 The **representative of BR** having pointed out that *noting* b) contained a reference to Resolution 719 (WRC-95), which was in principle to be deleted at the recommendation of Working Group PLEN-1, the **delegate of the United States** said that the practice in such cases was to refer simply to "a former Resolution".

2.46 With that amendment, *noting* b) was **approved**.

2.47 *Noting* c) and d) and *resolves* 1 to 3 were **approved**.

2.48 The **delegate of Germany** proposed that the phrase "a future competent conference" also be placed in square brackets in *resolves* 4.

2.49 With that amendment, *resolves* 4 was **approved**.

2.50 *Urges administrations* was **approved.**

2.51 Draft Resolution [COM5-15], as amended, was **approved**.

3 Sixth report by Working Group 5B (Document 262)

3.1 The **delegate of the Unites States** said that the issues raised in Document 262 were controversial and proposed that they be considered at a subsequent meeting of the Committee so that they could be gone into in more detail. In reply to a question by the **Chairman**, he suggested that the generic mobile-satellite service allocation in the 1.5 and 1.6 GHz range and the statement by the observer for IMO should be considered at the present meeting.

3.2 The above course of action was supported by the **delegates of Jordan, Mexico, Canada, Uganda, Israel** and **Fiji**. The **delegate of France** thought it would be more efficient if discussions on the issues which were being deferred took place in an ad hoc Group. She was supported by the **delegate of Germany**.

3.3 It was **agreed** to set up a Group 5 ad hoc 5, coordinated by the delegate of New Zealand, which would report to the Committee at its following meeting.

3.4 The **Chairman** invited comments on Section 1 (mobile-satellite service generic allocation in the 1.5 - 1.6 GHz range) with respect to Article S5 and Resolution [COM5-24].

MOD Table 1 452 - 1 530 MHz

3.5 **Approved**.

SUP S5.352

3.6 **Approved.**

ADD S5.352A

3.7 The **representative of BR** pointed out that the footnote related to allocations for downlinks and should thus refer to space stations rather than mobile earth stations. An amendment he proposed to that effect was simplified by the **delegate of Sweden**, who proposed that the words "mobile earth stations" be replaced by "stations in the mobile-satellite service, except stations in the maritime mobile-satellite service".

3.8 The **delegate of the United Arab Emirates** requested that his country be deleted from the footnote. The **delegates of Egypt, Oman, Morocco, Nigeria, Guinea, Pakistan, Malta, Mauritania, Tanzania** and **Mali** requested that their countries be added in the footnote.

3.9 ADD S5.352A, as amended by the delegate of Sweden and subsequent speakers, was **approved**.

MOD Table 1 530 - 1 535 MHz

3.10 Approved.

MOD Table 1 535 - 1 610.6 MHz

3.11 The **representative of BR** pointed out that footnote S5.362A*bis* was not mentioned in the Table, so that if it was approved, a reference would have to be added.

3.12 The part of the Table relating to 1 535 - 1 559MHz was **approved**.

SUP S5.353

3.13 Approved.

ADD S5.353A

3.14 The **delegate of the United Kingdom** said that, following informal discussions the previous day, it had been agreed to delete the square brackets round the reference to Resolution [COM5-24] at the end of the footnote. With respect to the other part of the footnote in square brackets, the compromise reached had immediately been challenged by one delegation, with the result that the only possible solution appeared to be to delete the square brackets and retain the text.

3.15 The **delegate of Greece** wished it to be placed on record that, in his view, the expression within square brackets should be deleted, so as to maintain the integrity of GMDSS as a whole. The arguments in favour of that proposal had been presented extensively at previous meetings of Working Group 5B, Sub-Working Group 5B-2 and the ad hoc Group of 5B on generic MSS, as well as at the end of Document 262 (IMO statement) and in Documents 186, 53 and 5 (proposal EUR/5/283 in conjunction with EUR/5/46). Consequently, given the broad participation in those groups, they were familiar to delegates and did not need to be presented in detail in the meeting of Committee 5. He concluded by expressing regret that the compromise solution worked out the previous evening, at an informal meeting after the closure of the last meeting of Working Group 5B, had been undermined, just when it had met with the almost universal consensus of participants, by one delegate claiming to speak on behalf of a group of countries that were not sitting at the table and, as a matter of fact, were unaware of the compromise."

3.16 The **delegate of Russia** said that he had some problems agreeing to the text, which, in his view, did not meet needs in the frequency bands in question and failed to take account of IMO's position. Nevertheless his Administration would not oppose its adoption.

3.17 ADD S5.353A, as amended by the delegate of the United Kingdom, was **approved**.

NOC S5.356

3.18 Approved.

[SUP S5.358]

3.19 It was **agreed** to delete the square brackets, and SUP S5.358 was **approved**.

SUP S5.360

3.20 Approved.

[SUP S5.361]

3.21 At the request of the **delegate of Mexico**, it was **agreed** to retain the square brackets for the time being.

SUP S5.362

3.22 Approved.

ADD S5.362A

3.23 The **delegate of the United Kingdom** said that it had also been agreed to delete the square brackets around the reference to Resolution [COM5-24] at the end of the footnote.

3.24 The **delegate of the United Arab Emirates** said that BR had confirmed that ITU Members that were not Members of ICAO could not be bound by the latter's Convention.

3.25 ADD S5.362A, as amended, was **approved**.

ADD S5.362A*bis*

3.26 The **delegate of Mexico** said that the footnote caused his Administration difficulties on account of the reference to No. S9.11A. The **delegate of the United States**, having proposed that the reference in square brackets at the end of the footnote be deleted, the **delegate of Mexico** felt that the reference should be kept in square brackets, pending the outcome of discussions between the two countries. The **delegate of Canada** asked to join in the discussions.

3.27 The **Chairman** proposed that the footnote be taken up at the following meeting.

3.28 It was so **agreed**.

MOD Table 1 610.6 - 1 631.5 MHz

3.29 At the request of the **delegate of Sweden**, it was **agreed** to add S5.353A for the three Regions.

3.30 The Table, as amended, was **approved**.

MOD Table 1 631.5 - 1 670 MHz

3.31 It was **agreed** to add S5.362A*bis* in square brackets in the bands 1656 - 1 660 MHz and 1 660 - 1 660.5 MHz, pending the outcome of the discussions between the delegations of Canada, Mexico and the United States.

3.32 The Table, as amended, was **approved**.

SUP S5.373A, MOD S5.374, NOC S5.375, ADD S5.376A

3.33 Approved.

Draft Resolution [COM5-24]

3.34 The **Chairman** invited comments on draft Resolution [COM5-24] (Use of the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz by the mobile-satellite service).

Considering **a) to f)**

3.35 Approved.

Considering **g)**

3.36 The **representative of BR** said that "[except No. S9.13]" should be deleted, since S9.13 had not been approved by WRC-95 and thus did not appear in Volume 4 of the Radio Regulations.

3.37 At the request of the **delegate of the United Kingdom**, who wished to discuss the matter with the Radiocommunication Bureau, it was **agreed** to retain the words "[except No. S9.13]", pending the outcome of those consultations.

Considering further **a) and b)**

3.38 Approved.

New *considering further* b-*bis*)

3.39 The **delegate of the United Kingdom** proposed that BR be instructed to draft a new paragraph b-*bis*) under *further considering* making specific reference to the new provisions which the Conference was adopting on GMDSS.

3.40 It was so **agreed**.

Considering further **c)**

3.41 **Approved**, with the replacement of "S51" by "S53", as proposed by the **observer for IMO**.

Recognizing

3.42 Approved.

Noting

3.43 At the proposal of the **delegate of the United Kingdom**, it was **agreed** to delete the square brackets and amend the wording under *noting* as follows: "that some countries in Region 2 use the bands 1 525 - 1 544 MHz, 1 545 - 1 559 MHz, 1 626.5 - 1 645.5 MHz and 1 646.5 - 1 660.5 MHz to provide national mobile-satellite service on a generic basis and, where agreements with other administrations concerned are in place, provide multinational service".

3.44 *Noting*, as amended, was **approved**.

Resolves **1**

3.45 Approved.

Resolves **2**

3.46 At the proposal of the **delegate of the United Kingdom** it was **agreed** to delete the square brackets.

3.47 *Resolves* 2 was **approved**.

***Requests ITU-R* 1 and 2**

3.48 Approved.

Requests ITU-R* 3 and *requests the next competent WRC

3.49 **Approved**, with the insertion of square brackets around "WRC-99" and "the next competent WRC", at the proposal of the **delegate of Germany**.

3.50 The **delegate of the United Kingdom**, pointing out that the Committee had deleted the only footnote containing a reference to Resolution 208 (Mob-87) and had incorporated the issues covered by that Resolution in the new Resolution, proposed recommending that Resolution 208 (Mob-87) be deleted.

3.51 It was so **agreed**.

3.52 The **Chairman** proposed that consideration of Document 262 be completed at the following meeting.

3.53 It was so **agreed**.

3.54 The **observer for ICAO** made the statement reproduced in Annex 1.

3.55 The **observer for IMO**, referring to his statement appearing at the end of Document 262, emphasized that as it stood footnote S5.353A was splitting the GMDSS as a system described in the SOLAS Convention and jeopardizing its integrity, effectiveness and implementation.

4 Report by Group 5 ad hoc 1

4.1 The **Chairman of Group 5 ad hoc 1** said that, despite all the efforts which had been deployed during the five meetings it had held, Group ad hoc 1 had not reached a consensus regarding the band 18.6 - 18.8 GHz and therefore proposed that the Committee request Working Group PLEN-1 to place the matter on the agenda again for the next conference.

4.2 It was so **agreed**.

4.3 The **observer for WMO** said that passive telemetry in the 18.6 - 18.8 GHz band involved many important applications for meteorology and WMO. It was therefore extremely regrettable that a compromise had not been reached, which would have enabled active services to be developed within reasonable bounds and the band to be used for passive telemetry.

4.4 The **delegate of the United States** said he was also very disappointed that a compromise had not been achieved and greatly hoped that a solution could be found at WRC-99.

5 Report by Group 5 ad hoc 2 (Documents 240, 264)

Report by the Chairman of Group 5 ad hoc 2 (Document 264)

5.1 Approved.

Recommendation [COM5-A] (WRC-97) (Document 240)

5.2 **Approved**.

5.3 The **Chairman** reminded the meeting that adoption of Recommendation [COM5-5A] (WRC-97) would entail the deletion of Resolution 711 (WARC-92).

6 Report by Group 5 ad hoc 3 (Documents 247, 251, 257, 260)

6.1 The **Chairman of Group 5 ad hoc 3** said that the Group had devoted two meetings to the question of identifying appropriate frequency bands above 30 GHz for use by the fixed service for high-density systems. It had been felt that there was no need for the Conference to take a decision on the studies called for in proposal EUR/5/319 (Document 5) and that it would be preferable for administrations to submit matters related to such studies direct to the ITU-R Study Groups. On the other hand, participants had not reached consensus on the portion of spectrum between 37 and 42.5 GHz. In that connection, Group 5 ad hoc 3 requested guidance from the Committee on the approach to be followed.

6.2 At the proposal of the **Chairman**, it was **agreed** to continue consideration of the work of Group 5 ad hoc 3 and Documents 247, 251, 257 and 260 at the following meeting.

7 MSS and FSS issues (Document 208)

7.1 The **Chairman of Group 5 ad hoc 6** said that the Group had considered, together with the Radiocommunication Bureau, the question of whether Resolution 120 (WRC-95) needed to be retained. Since changes had been made for MSS feeder links in the bands 19 and 20 GHz which might call for immediate decisions by the Conference, before the Final Acts entered into force, the Group had prepared a draft amending Resolution 120 (WRC-95). The text was available to anyone interested.

8 Consideration of country footnotes (continued) (Document 174)

8.1 The **Chairman** reminded the meeting that, on account of the change in the status of the allocations referred to in footnote S5.464, India had requested that its name be deleted from the footnote.

8.2 The **delegates of Sweden** and **Japan** believed that S5.464 had become superfluous and requested that their countries also be deleted from the footnote.

8.3 The **Chairman** requested other countries wishing to be deleted from the footnote to make themselves known; the footnote could only be deleted once all the countries listed therein had requested that their names be removed.

The meeting rose at 1235 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

Annex: 1

ANNEX 1

Original: English

Statement by the International Civil Aviation Organization

The International Civil Aviation Organization presented in Documents 22 and 93 to the World Radiocommunication Conference 1997, its views on the possible extension of the so called "generic allocation" concept into the bands currently exclusively allocated to the aeronautical mobile-satellite (R) service.

ICAO has always been supportive of any initiative aiming at a more efficient use of the radio frequency spectrum. However, ICAO has since WARC-87 expressed serious concerns on the application of the generic allocation concept in a real environment, in particular where multiple service providers are involved.

It has been the organization's position that further detailed studies by ITU-R and associated relevant trials and demonstrations should have been conducted before any decision to change the present allocation was made.

ICAO recognizes that significant improvements have been made by this Conference in the regulatory provisions concerning the theoretical protection and coordination procedures with the addition of footnote S5.362A and the new Resolution COM5-24.

ICAO regrets however, to state that the decision of this Conference to change the current exclusive allocation to the aeronautical mobile-satellite (R) service to a generic allocation to mobile-satellite service (MSS) still raises concerns. To date, demonstration of real application of all aspects of the generic allocation concept in a safety-related aeronautical communications environment has not been presented to ITU or ICAO.

The consequences of this decision must be given the most serious consideration by civil aviation to ensure that it meets in all regards the many concerns as expressed in the referenced documents presented by ICAO. This will necessarily involve the establishment of a programme of analysis to be consolidated and supported by the results of carefully planned operational validation. It is hoped that future work in ITU, with the participation of ICAO as required, will overcome these concerns.

Until these actions have been completed, ICAO, together with the international civil aviation community, will remain unconvinced of the safety and efficiency of the generic allocation principle application in the aeronautical safety-related services.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1(Rev.1) to Document 290-E
18 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

USE OF THE BANDS 18.8 - 19.3 GHz AND 28.6 - 29.1 GHz BY NETWORKS OPERATING IN THE FIXED-SATELLITE SERVICE

1) **Add** a new *noting* as follows:

noting

that the band 18.8 - 19.3 GHz is heavily used by the fixed service and there is a need to continue the use of this band in many countries;

2) **Re-label** the existing *resolves* in Resolution [COM5-27] as *resolves* 1.

3) **Add** a new *resolves* that reads:

2 that should modifications arise to frequency assignments of NGSO FSS systems which were notified before 18 November 1995, when coordination was not required, then no coordination is required when the characteristics of the modified frequency assignment are within the limits of those of the original notification.

_____

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 290-E
17 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

USE OF THE BANDS 18.8 - 19.3 GHz AND 28.6 - 29.1 GHz BY NETWORKS OPERATING IN THE FIXED-SATELLITE SERVICE

1) **Add** a new *noting* as follows:

noting

that the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz are heavily used by the fixed service and there is a need to continue the use of the these bands in many countries.

2) **Re-label** the existing *resolves* in Resolution [COM5-27] as *resolves* 1.

3) **Add** a new *resolves* that reads:

2 that should modifications arise to frequency assignments of NGSO FSS systems notified when coordination was not required, then no coordination is required when the change in the characteristics does not increase interference to those networks for which Appendix S4 notification information has been submitted to the Bureau prior to such modifications.

_____

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 290-E
15 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

USE OF THE BANDS 18.8 - 19.3 GHz AND 28.6 - 29.1 GHz BY NETWORKS OPERATING IN THE FIXED-SATELLITE SERVICE

MOD

GHz
18.6 – 20.2

Allocation to Services		
Region 1	Region 2	Region 3
18.8 – 19.3	FIXED FIXED-SATELLITE (space-to-Earth) MOD S5.523A MOBILE	

MOD

GHz
27 – 29.9

Allocation to Services		
Region 1	Region 2	Region 3
28.5 – 29.1	FIXED FIXED-SATELLITE (Earth-to-space) MOD S5.523A S5.539 MOBILE Earth Exploration-Satellite (Earth-to-space) S5.541 S5.540	

MOD S5.523A ~~The use of the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz by the FSS shall be in accordance with Resolution **118 (WRC-95).**~~ The use of the bands 18.8 - 19.3 GHz (space-to-Earth) and 28.6 - 29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed-satellite service networks is subject to the application of the provisions of No. **S9.11A**/Resolution **46 (Rev.WRC-95)** and No. **S22.2** [**2613**] does not apply. Administrations having geostationary networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. **S9.11A**/Resolution **46 (Rev.WRC-95)** with non-geostationary networks that have been received by the Bureau prior to that date for notification with a view to reaching results acceptable to all the parties concerned.
Non-geostationary networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix **3** notification information is considered as having been received by the Bureau prior to 18 November 1995.

RESOLUTION [COM5-27] (WRC-97)

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that, by its Resolution **118**, the World Radiocommunication Conference (1995) recommended that this Conference review the results of studies carried out by ITU-R relating to the use of the frequency bands 20/30 GHz;

b) that it also recommended that this Conference take appropriate action, including adjustments to spectrum allocations, for the harmonious development of GSO and non-GSO systems and terrestrial services in the same bands;

c) that it has reviewed the above studies, and has taken appropriate action in relation to the use of the frequency bands 18.8 - 18.9 GHz and 28.6 - 28.7 GHz as indicated in provision No. MOD **S5.523A**;

d) that in its Resolution **118**, WRC-95 considered:

- that the development of GSO and non-GSO systems in the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz is based on a major source of global investment and consequently their reciprocal coordination needs the firm commitment of all parties concerned on the basis of application of Resolution **46 (Rev.WRC-95)**;
- that WRC-97 should consider the non-application of **S22.2** (No. **2613**) of the Radio Regulations in the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz in light of the spectrum requirements for non-GSO systems;

e) that WRC-95 adopted in *resolves* 1 to 5 of Resolution **118** the procedures applicable to the frequency bands 18.9 - 19.3 GHz and 28.7 - 29.1 GHz only;

f) that in light of *considering* d) and e) above, GSO and non-GSO FSS systems referred to in MOD **S5.523A** are being developed in the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz;

g) that MOD **S5.523A** will enter into force on the date indicated in Article **S59** of the Radio Regulations;

h) that WRC-97 decided to suppress Resolution **118**, as of 22 November 1997,

resolves

that, as of 18 November 1995, the provisions of Resolution **46 (Rev.WRC-95)/S9.11A** shall apply and No. **S22.2** of the Radio Regulations shall not apply in the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz, to frequency assignments of GSO and non-GSO systems of the fixed-satellite service,

instructs the Radiocommunication Bureau

to apply the provisions of MOD **S5.523A (WRC-97)**, in the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz from 22 November 1997.

_____

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 291-E
14 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

WORKING GROUP 1 OF THE PLENARY

NOTE FROM THE CHAIRMAN OF COMMITTEE 5 TO THE CHAIRMAN OF WORKING GROUP 1 OF THE PLENARY

As part of its consideration of the WRC-97 agenda, Committee 5 considered allocations to space science services in a number of frequency bands in accordance with Resolution 712 (WRC-95). With respect to *resolves* 4 of the Resolution, Committee 5 was not able to agree to a common worldwide allocation for the earth exploration-satellite (passive) and space research (passive) services in the band 18.6 - 18.8 GHz. The conclusion of Committee 5 was that this is a high priority issue that needs to be considered again by WRC-99.

This item is therefore referred to WG PL1 for consideration of its inclusion in the draft agenda for WRC-99.

_____

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 3 au Document 292-F/E/S
19 novembre 1997
Original: anglais

COMMISSION 5

Ghana, Indonésie (République d'), Nigéria (République fédérale de), Papouasie-Nouvelle-Guinée

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Supprimer "**Malawi**" dans la liste des pays signataires de ce document.

* * * * * * * * * *

COMMITTEE 5

Ghana, Indonesia (Republic of), Nigeria (Federal Republic of), Papua New Guinea

PROPOSALS FOR THE WORK OF THE CONFERENCE

Delete "**Malawi**" from the list of countries cosponsoring this document.

* * * * * * * * * *

COMISIÓN 5

Ghana, Indonesia (República de), Nigeria (República Federal de), Papua Nueva Guinea

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Suprimir "**Malawi**" de la lista de países firmantes de este documento.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 2 au
Document 292-F/E/S
19 novembre 1997
Original: anglais

COMMISSION 5

Ghana, Indonésie (République d'), Malawi, Nigéria (République fédérale de), Papouasie-Nouvelle-Guinée

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter "**Népal**" dans la liste des pays signataires de ce document.

* * * * * * * * * *

COMMITTEE 5

Ghana, Indonesia (Republic of), Malawi, Nigeria (Federal Republic of), Papua New Guinea

PROPOSALS FOR THE WORK OF THE CONFERENCE

Add "**Nepal**" in the list of countries cosponsoring this document.

* * * * * * * * * *

COMISIÓN 5

Ghana, Indonesia (República de), Malawi, Nigeria (República Federal de), Papua Nueva Guinea

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Añádase "**Nepal**" a la lista de países firmantes de este documento.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 1 au
Document 292-F/E/S
17 novembre 1997
Original: anglais

COMMISSION 5

Ghana, Indonésie (République d'), Malawi, Nigéria (République fédérale de), Papouasie-Nouvelle-Guinée

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter "**Cap-Vert (République du), Liban**" dans la liste des pays signataires de ce document.

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COMMITTEE 5

Ghana, Indonesia (Republic of), Malawi, Nigeria (Federal Republic of), Papua New Guinea

PROPOSALS FOR THE WORK OF THE CONFERENCE

Add "**Cape Verde (Republic of), Lebanon**" in the list of countries cosponsoring this document.

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COMISIÓN 5

Ghana, Indonesia (República de), Malawi, Nigeria (República Federal de), Papua Nueva Guinea

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Añádanse "**Cabo Verde, Líbano**" a la lista de países firmantes de este documento.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 292-E
14 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Ghana, Indonesia (Republic of), Malawi, Nigeria (Federal Republic of), Papua New Guinea

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 1.9.1 - MOBILE-SATELLITE SERVICE BELOW 1 GHz

Sharing between non-GSO MSS Earth-to-space links and the land mobile service to support additional allocations to the non-GSO MSS below 1 GHz, in the bands 454 - 456 MHz and 459 - 460 MHz

1 Introduction

The dynamic channel assignment techniques described in Section 4.1.1.2.1 and 4.1.1.9 of the CPM-97 Report, were developed to facilitate sharing between the non-GSO MSS (Earth-to-space link) and fixed and land mobile services in the bands below 1 GHz. Section 4.1.1.2.1 of the CPM-97 Report also addresses the sharing studies performed at 460 MHz between non-GSO MSS below 1 GHz (Earth-to-space link) and the land mobile service.

2 Proposal

This document proposes a footnote regarding the bands 454 - 456 MHz and 459 - 460 MHz in order to facilitate smooth development of NGSO MSS in the concerned countries whilst not depriving the existing service.

GHA/INS/MWI/
NIG/PNG/292/1

ADD S5.286E *Additional allocation:* in Ghana, Indonesia, Malawi, Nigeria and Papua New Guinea, the bands 454 - 456 MHz and 459 - 460 MHz are also allocated to the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **S9.21**. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the table, to ensure that no harmful interference is caused to such services.

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UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-97 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 27 OCTOBRE – 21 NOVEMBRE 1997

Corrigendum 1 au
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17 novembre 1997
Original: anglais

COMMISSION 5

Brunéi Darussalam, Corée (République de), Japon, Philippines (République des), Singapour (République de)

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ce corrigendum ne concerne pas le texte français.

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COMMITTEE 5

Brunei Darussalam, Korea (Republic of), Japan, Philippines (Republic of the), Singapore (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Korea should read Korea (Republic of).

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COMISIÓN 5

Brunei Darussalam, Corea (República de), Japón, Filipinas (República de), Singapur (República de)

PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

Este corrigéndum no concierne al texto español

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 293-E
14 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

Brunei Darussalam, Korea, Japan, Philippines (Republic of the), Singapore (Repubic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

PROPOSED PROVISIONAL VALUES OF EQUIVALENT PFD AND AGGREGATE PFD NECESSARY TO PROTECT GSO FIXED-SATELLITE SERVICES

1 Introduction

In Document EUR/5, equivalent pfd and aggregate pfd values are proposed to protect GSO fixed-satellite services (GSO/FSS). If these values are used as hard limits for NGSO/FSS networks as per the European proposal to provide objective criteria of frequency sharing between NGSO/FSS and GSO/FSS networks, these values must be examined to see whether they are sufficient or not to protect any GSO systems which are operating or are planned all over the world. This document proposes provisional values calculated by using system parameters of Japanese operating GSO/FSS networks.

2 Calculation basis

The values are calculated for two categories, long-term limits and short-term limits. About 20 types of GSO/FSS networks in operation are examined.

i) For long-term limits

- Step 1

At first, the values are calculated based on a noise temperature increase of 6% caused by interference from single NGSO/FSS networks using system parameters of wanted GSO/FSS networks.

- Step 2

Considering interference from plural NGSO/FSS networks, 5 dB (=10*log(3)) margin is added to the calculated values in Step 1. Because, as described in Document DL/42 by France, the cumulative effect of long-term interference from plural NGSO/FSS networks is additive in power. In the case of the frequency sharing between GSO/FSS networks, coordination is not required if interference from the newly proposed GSO/FSS network does not cause a 6% noise temperature increase to the existing GSO/FSS system. However, the aggregate noise temperature increase due

to interference from other GSO systems assumes to be less than 20%, because interference from other GSO systems decreases according to the separation angle of the orbit. Thus, all of the GSO networks nearby do not always cause a 6% noise temperature increase to the wanted system. In the case of frequency sharing between GSO/FSS and NGSO/FSS networks, all NSGO/FSS networks could cause a 6% noise temperature increase to the wanted system. Therefore, a 5 dB margin is added assuming three NGSO/FSS networks, because two NGSO/FSS networks (F-SATMULTI1B and a "Loopus" type system) have been already proposed.

ii) For short-term limits

At first, link margin (C/(N+I)-C/(N+I) required) are calculated in the clear-sky condition where there is no NGSO/FSS network. Then the values for short-term limits are calculated by assigning 50% of this operational margin to interference from one NGSO/FSS network. Because the cumulative effect of short-term interference from plural NGSO/FSS networks seems not to be additive in power, only one NGSO/FSS is considered in the calculation.

2 Proposed provisional values

The following tables show proposed provisional equivalent pfd and aggregate pfd values.

Proposed provisional equivalent pfd values

Frequency band	Equivalent pfd dB(W/m^2)	Reference antenna diameter*	Percentage of time during which pfd level may not be exceeded (%)	Reference bandwidth (kHz)
Ku (Non-planned FSS and AP30B bands)	-184	less than 60 cm	99.70	4
	-197	less than 3 m	99.90	
	-200	less than 10 m	99.97	
	-180	for all diameters	100.0	
Ka (Non-planned FSS except Res. 118 and Res. 120 bands)	-160	less than 30 cm	99.00	1000
	-160	less than 2 m	99.70	
	-175	less than 8 m	99.90	
	-178	less than 12 m	99.90	
	-155	for all diameters	100.0	

* Antenna radiation pattern is assumed to be in accordance with ITU-R Recommendation 465-5.

Proposed provisional aggregate pfd values

Frequency band	Aggregate pfd dB(W/m^2)	Percentage of time during which pfd level may not be exceeded (%)	Reference bandwidth (kHz)
Ku*1	-186	100	4
Ka*2	-155	100	1 000

*1 Non-planned FSS and AP30B bands.

*2 Non-planned FSS except Resolution 118 and Resolution 120 bands.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 294(Rev.2)-E
18 November 1997
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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

DRAFT RESOLUTION [COM5-18]

1 **Replace** the text of *resolves* 1 with the following text:

1 that, as of 22 November 1997, in the frequency bands specified in Tables **S22-3** and **S22-4**, and in Tables 1 and 2 in Annex 1 to this Resolution, NGSO/FSS systems for which complete notification information has been received by the Radiocommunication Bureau after 21 November 1997 shall be subject to the provisional power limits appearing in Article **S22** and in Annex 1 to this Resolution and shall apply the procedures of Sections I and III of Article 11/Section I of Article **S9**, **S9.17** and **S9.17A**, and the procedures of Article **13/S11**;

2 **Replace** the text of *resolves* 5 with the following text:

5 that, as of [the end of WRC-99], in the frequency bands specified in **S22.29** and Section 2.4 of Annex 1 to this Resolution, GSO FSS systems for which complete coordination information has been received by the Bureau after [the end of WRC-99] shall be subject to the limits appearing in Article **S22** and Sections 2.1, 2.2 and 2.3 of Annex 1 to this Resolution as revised, as appropriate, by [WRC-99];

3 **Delete** *resolves* 6.

4 **Replace** 1) in the Note to WG PL1 with the following text:

1) review and if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure the feasibility of these power limits and that these limits do not impose undue constraints on the development of these systems and services;

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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18 November 1997
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COMMITTEE 5

REPORT TO COMMITTEE 5 ON THE REGULATORY PROVISIONS RELATING TO THE OPERATION OF NGSO FSS AND GSO SYSTEMS IN THE 10.7 TO 30 GHz BANDS

This document provides the proposed elements for a regulatory approach to the NGSO FSS issue, along the following three steps, identified in Document CMR97/114(Add.2):

a) Ku band: establishment of provisional hard limits;

b) Parts of the Ka band not covered by Resolution 118 or Resolution 120: establishment of provisional hard limits;

c) Parts of the Ka band covered by Resolution 118: application of Resolution 46.

This report relates to steps a) and b). Step c) is submitted as Document 290.

It should be noted that a draft agenda item for WRC-99 is provided to address the sharing among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services.

The coordinators:

F. Rancy T. Tycz

1 Regulatory provisions concerning the Ku band and the parts of Ka band not covered by Resolution 118 or Resolution 120 (Steps a) and b) of Document CMR97/114(Add.2))

In the FSS frequency bands covered by **S22.2** in Ku and Ka bands, the proposed regulatory provisions are intended to ensure protection of GSO FSS and BSS systems and full protection of the Plans and their future modifications. These provisions consist of modifications of Articles **S5** (for the current allocations to FSS and for an additional allocation to FSS) and **S22** and of two Resolutions, addressing respectively the frequency bands which are not subject to a plan and those which are subject to a plan.

Concerning the specific frequency bands that would need to be covered by these provisions, it was agreed that as many as possible of these frequency bands to meet urgent needs should be the subject of these provisions. In order to retain sufficient flexibility for NGSO operators to design systems that can coexist in all three regions with terrestrial or other services studies in other frequency bands could be pursued as requirements develop. To ensure such coexistence in all cases, the need for further studies on the possible coexistence between NGSO FSS and terrestrial and other space science services in the bands shared between these services, in particular, protection from NGSO space systems to radiolocation in the band 17.3 - 17.7 GHz, and to GSO space stations in the 17.3 - 17.8 GHz, and space science services (passive) in the band 18.6 - 18.8 GHz.

1.1 Modifications to Article S5

MOD **S5.441** The use of the bands 4 500 - 4 800 MHz (space-to-Earth), 6 725 - 7 025 MHz (Earth-to-space)~~,~~ by the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by GSO satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by NGSO satellite systems in the fixed-satellite service shall be in accordance with the provisions of Resolution [**COM5-18**].

ADD **S5.441A*** The use of the bands 10.95 - 11.2 GHz (space-to-Earth), 11.45 - 11.7 GHz (space-to-Earth), 11.7 - 12.2 GHz (space-to-Earth) in Region 2, 12.2 - 12.75 GHz (space-to-Earth) in Region 3, 12.5 - 12.75 GHz (space-to-Earth) in Region 1, 13.75 - 14.5 GHz (Earth-to-space), 17.8 - 18.6 GHz (space-to-Earth), 19.7 - 20.2 GHz (space-to-Earth), 27.5 - 28.6 GHz (Earth-to-space), 29.5 - 30 GHz (Earth-to-space) by NGSO and GSO satellite systems in the fixed-satellite service is subject to the provisions of Resolution [**COM5-18**]. The use of the band 17.8 - 18.1 GHz (space-to-Earth) by NGSO FSS systems is also subject to the provisions of Resolution [**COM5-19**].

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* NOTE - Footnote S5.441A shall be placed in all boxes in the table in Article S5 referring to frequency bands in that note.

MOD

GHz
10.7 – 12.7

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td rowspan="3">11.7 – 12.5
FIXED
BROADCASTING
BROADCASTING-SATELLITE
Mobile except aeronautical mobile</td><td>11.7 – 12.1
FIXED S5.486
FIXED-SATELLITE (space-to-Earth)
Mobile except aeronautical mobile
S5.485 S5.488</td><td rowspan="2">11.7 – 12.2
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE</td></tr>
<tr><td>12.1 – 12.2
FIXED-SATELLITE (space-to-Earth)
S5.485 S5.488 S5.489</td></tr>
<tr><td>12.2 – 12.7
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE
S5.488 S5.490 S5.492 S5.487A</td><td>12.2 – 12.5
FIXED
MOBILE except aeronautical mobile
BROADCASTING
S5.487 S5.491</td></tr>
<tr><td colspan="2">S5.487 S5.487A</td><td></td></tr>
</table>

MOD S5.516 The use of the band 17.3 - 18.1 GHz by GSO satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3 - 17.8 GHz in Region 2 by the feeder links for the broadcasting-satellite service in the band 12.2 - 12.7 GHz, see Article **S11**. The use of the bands 17.3 - 18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8 - 18.1 GHz (Earth-to-space) in Region 2 by NGSO satellite systems in the fixed-satellite service is subject to the provisions of Resolution [**COM5-19**].

ADD **S5.487A** *Additional allocation:* in Region 1, the band 11.7 - 12.5 GHz, in Region 2, the band 12.2 - 12.7 GHz and in Region 3 the band 11.7 - 12.2 GHz are also allocated to the fixed-satellite service (space-to-Earth), limited to non-geostationary-satellite systems and subject to the provisions of Resolution [**COM5-19**].

1.2 Modifications to Article S22

While the following text concerning modifications to Article S22 is reproduced in this document, the discussion of the following regulatory text was not discussed in detail in the drafting group.

Section II. Control of Interference to Geostationary-Satellite Systems

MOD **S22.2** § 2. (1) Non-geostationary ~~space stations~~ satellite systems shall ~~cease or reduce to a negligible level their emissions, and their associated earth stations shall not transmit to them, whenever there is~~ not cause unacceptable interference to geostationary-satellite ~~space~~ systems in the fixed-satellite service operating in accordance with these Regulations.

ADD **S22.5A1** In the frequency band 17.8 - 18.1 GHz, the maximum aggregate power flux-density produced at the geostationary-satellite orbit by all the space stations in a non-geostationary-satellite system in the fixed-satellite service or in the broadcasting-satellite service shall not exceed the values given in Table **S22-2**.

ADD **S22.5B** § 6. (1) The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary orbit, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-1** for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions, into a reference antenna and in the reference bandwidth as specified in Table **S22-1**, for all pointing directions towards the geostationary orbit.

ADD **S22.5B.1** [1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(q_i)}{G_{\max}}\right]$$

where:

– N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;

– i is the index of the considered non-geostationary space station;

– pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;

– q_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;

– $G_r(q_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;

– G_{max} is the maximum gain of the above receive reference antenna;

– $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables S22-1 through S22-4 and provisions Nos. S22.26 through S22.29 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD TABLE **S22-1**

Frequency band allocated to the BSS	**Antenna diameter (cm)**	**pfd level (dB(W/m^2/4kHz) which may not be exceeded during the percentage of time shown**		**Reference antenna radiation pattern**
		99.7%	**100%**	
11.7 - 12.5 GHz in Region 1,	30	-172.3	-169.3	Recommendation ITU-R BO.1213
11.7 - 12.2 GHz and	60	-183.3	-170.3	
12.5 - 12.75 GHz in Region 3	90	-186.8	-170.3	
12.2 - 12.7 GHz in Region 2	45	-174.3	-165.3	Section 3.7.2 of Annex 5 of Appendix **30**
	100	-186.3	-170.3	
	120	-187.9	-170.3	
	180	-191.4	-170.3	
17.3 - 17.8 GHz in Region 2	For further study[1)]			

[1)] The interference from NGSO FSS systems into GSO BSS systems operating in the frequency bands 17.3 - 17.8 GHz relates to the two following sharing situations:

- NGSO FSS transmit earth station into GSO receive earth station;
- GSO BSS transmit space station into NGSO FSS receive space stations.

Both situations need to be studied, in particular since coexistence of receive BSS earth stations and large numbers of transmit NGSO FSS terminals would not be feasible within the same country.

ADD S22.5C (2) The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system in the fixed-satellite service, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-2** for the specified percentages of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

ADD S22.5C.1 [1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{P_i(t)/10} \cdot \frac{G_t(q_i)}{4 \cdot p \cdot d_i^{\,2}}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m^2) in the reference bandwidth;

– $q_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(q_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– d is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– $apfd$ is the aggregate power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD TABLE **S22-2**

Frequency band	**Aggregate pfd dB(W/m^2/4 kHz)**	**Percentage of time during which pfd level may not be exceeded**
17.3 - 18.1 GHz in Regions 1 and 3 and 17.8 - 18.1 GHz in Region 2	163	100%

ADD S22.5D (3) The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-3** for the given percentages of time.

These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions into all the reference antennas and in the reference bandwidths specified in this table, and for all pointing directions towards the geostationary orbit.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD

PART (A) OF TABLE **S22-3**

Frequency band	**Equivalent pfd dB(W/m^2)**	**Percentage of time during which epfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter, and reference radiation pattern**
10.7 - 11.7 GHz	-179	99.7	4	60 cm, ITU-R Rec. 465-5
11.7 - 12.2 GHz in Region 2	-192	99.9	4	3 m, ITU-R Rec. 465-5
	-186	99.97	4	3 m, ITU-R Rec. 465-5
12.2 - 12.5 GHz in Region 3	-195	99.97	4	10 m, ITU-R Rec. 465-5
12.5 - 12.75 GHz in Regions 1 and 3	-170	99.999	4	60 cm, ITU-R Rec. 465-5
	-173	99.999	4	3 m, ITU-R Rec. 465-5
	-178	99.999	4	10 m, ITU-R Rec. 465-5
	-170	100	4	≥60 cm, ITU-R Rec. 465-5

PART (B) OF TABLE **S22-3**

Frequency band (GHz)	**Equivalent pfd dB(W/m²)**	**Percentage of time during which epfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter, and reference radiation pattern**
17.8 - 18.6	-165 -151	99.0	40 1000	30 cm, ITU-R Rec. 465-5
	-165 -151	99.0	40 1000	70 cm, ITU-R Rec. 465-5
	-165 -151	99.5	40 1000	90 cm, ITU-R Rec. 465-5
	-167 -153	99.8	40 1000	1.5 m, ITU-R Rec. 465-5
	-180 -166	99.9	40 1000	5 m, ITU-R Rec. 465-5
	-184 -170	99.9	40 1000	7.5 m, ITU-R Rec. 465-5
	-188 -174	99.9	40 1000	12 m, ITU-R Rec. 465-5
	-165 -151	100	40 1000	30 cm to 12 m, ITU-R Rec. 465-5
19.7 - 20.2	-154 -140	99.0	40 1000	30 cm, ITU-R Rec. 465-5
	-164 -150	99.9	40 1000	90 cm, ITU-R Rec. 465-5
	-167 -153	99.8	40 1000	2 m, ITU-R Rec. 465-5
	-174 -160	99.9	40 1000	5 m, ITU-R Rec. 465-5
	-154 -140	100	40 1000	30 cm to 12 m, ITU-R Rec. 465-5

ADD **S21.19** (2) The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-4** for any percentage of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD PART (A) OF TABLE **S22-4**

Frequency band (GHz)	**Aggregate pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
12.5 - 12.75	-170	100	4
12.75 - 13.25	-186	100	4
13.75 - 14.5	-170	100	4

PART (B) OF TABLE **S22-4**

Frequency band (GHz)	**Aggregate pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
27.5 - 28.6 GHz	-159	100	40
29.5 - 30 GHz	-145		1000

ADD **S22.5F** The limits given in Tables **S22-2** to **S22-4** may be exceeded on the territory of any country whose administration has so agreed.

Section VI. Earth Station Off-Axis Power Limitations in the Fixed-Satellite Service

MOD **S22.26** § 9. The level of equivalent isotropically radiated power (e.i.r.p.) emitted by an earth station ~~at angles in the direction of the geostationary-satellite orbit off the main beam axis has a significant impact on interference caused to other geostationary-satellite networks. Enhanced utilization of the geostationary-satellite orbit and easier coordination would be attained by minimizing such off-axis radiation and administrations are encouraged to~~

~~achieve the lowest values practicable bearing in mind the latest ITU-R Recommendations. Minimizing such levels is particularly important in intensively used up-link bands~~shall not exceed the following values for any off-axis angle φ, which is 2.5° or more off the main lobe axis of an earth station antenna:

Angle off-axis	*Maximum e.i.r.p. per 40 kHz*
2.5° ≤ φ ≤ 7°	(39 - 25 log φ) dB(W/40 kHz)
7° < φ ≤ 9.2°	18 dB(W/40 kHz)
9.2° < φ ≤ 48°	(42 - 25 log φ) dB(W/40 kHz)
48° < φ ≤ 180°	0 dB(W/40 kHz)

ADD S22.27 For FM-TV emissions with energy dispersal, the limits in **S22.26** above may be exceeded by up to 3 dB provided the off-axis total e.i.r.p. of the transmitted FM-TV carrier does not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
2.5° ≤ φ ≤ 7°	(53 - 25 log φ) dBW
7° < φ ≤ 9.2°	32 dBW
9.2° < φ ≤ 48°	(56 - 25 log φ) dBW
48° < φ ≤ 180°	14 dBW

ADD S22.28 For FM-TV carriers which operate without energy dispersal, such carriers should be modulated at all times with programme material or appropriate test patterns. In this case, the off-axis total e.i.r.p. of the emitted FM-TV carrier shall not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
2.5° ≤ φ ≤ 7°	(53 - 25 log φ) dBW
7° < φ ≤ 9.2°	32 dBW
9.2° < φ ≤ 48°	(56 - 25 log φ) dBW
48° < φ ≤ 180°	14 dBW

ADD S22.29 The e.i.r.p. limits given in **S22.26**, **S22.27** and **S22.28** are applicable in the following frequency bands allocated to the fixed-satellite service (Earth-to-space):

12.75 - 13.25 GHz

13.75 - 14 GHz

14 - 14.5 GHz

DRAFT RESOLUTION [COM5-18]

USE OF NON-GEOSTATIONARY SYSTEMS IN THE FIXED-SATELLITE SERVICE IN CERTAIN FREQUENCY BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the International Telecommunication Union has, among its purposes, "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. **6** of the Constitution of the International Telecommunication Union (Geneva, 1992));

b) that it is desirable, in this respect, to promote systems capable of providing a universal service;

c) that new telecommunication services need advanced and reliable networks permitting high-capacity communications;

d) the need to encourage the development and implementation of new technologies;

e) that systems based on the use of new technologies associated with both geostationary (GSO) and non-geostationary (NGSO) satellite constellations are capable of providing the most isolated regions of the world with high-capacity and low-cost means of communication;

f) that there should be equitable access to the radio-frequency spectrum and orbital resources in a mutually acceptable manner that allows for new entrants in the provision of services;

g) that all Members of the Union would benefit from the implementation of proponent systems in the allocated spectrum, and the avoidance of monopolization or exclusive use of an allocation by a single system;

h) that the operation of such systems requires a suitable amount of spectrum in appropriate frequency bands;

i) that decisions on this matter should permit as many systems as possible to be operated;

j) that in spite of the urgency attached to the development of such systems, technical, operational and regulatory issues should be studied in order to achieve the most efficient use of the spectrum that may be available for these systems;

k) that there is a need for the provision of services on a competitive basis between GSO/FSS and NGSO/FSS as well as between NGSO/FSS and NGSO/FSS;

l) that the Radio Regulations must be sufficiently flexible to accommodate the introduction and implementation of innovative technologies as they evolve, and allow the further development and implementation of any proposed system in conformity with their provisions,

considering further

a) that further technical, operational and regulatory studies are required in order to further determine the conditions under which sharing of the frequency bands 10 - 30 GHz which are allocated to the FSS and where Resolution **46** does not apply is feasible between GSO and NGSO systems, between NGSO systems and between NGSO and terrestrial systems;

b) that it is likely that NGSO/FSS systems communicated to the Radiocommunication Bureau will not be brought into use before the 1999 World Radiocommunication Conference (WRC-99);

c) that the diverging interpretations arising from No. **S22.2** result in an ambiguous regulatory status for both existing and future GSO and NGSO systems in the fixed-satellite service (FSS) in the bands where this provision applies, with consequential risks for both types of systems;

d) that the harmonious development of NGSO and GSO systems in the FSS requires that these ambiguities be resolved with no further delay;

e) that in resolving these ambiguities in the bands referred to in *resolves* 1 below, the GSO arc must be protected to ensure continued use of existing FSS systems and the development of new GSO technologies and systems;

f) that these ambiguities may be resolved in certain frequency bands by adopting power flux-density (pfd) limits which would apply to NGSO FSS systems to protect GSO FSS systems, by including in Article **S22** limits to the power radiated by NGSO FSS systems in order to adequately protect GSO FSS systems in the frequency bands and sharing situations where Resolution **46** does not apply;

g) that in certain frequency bands which are currently used or planned to be used extensively by GSO FSS systems, provisional power flux-density limits applicable to NGSO FSS systems have been developed;

h) that NGSO FSS systems have been proposed in some of these bands which could meet these limits and would not require specific protection from existing and future GSO FSS, provided minimum constraints are applied to GSO FSS systems, such as off-axis earth station e.i.r.p. limits;

i) that in the bands where the limits referred to in *considering further* f), g) and h) would apply, there would be no need for a coordination procedure between NGSO/FSS and GSO systems with the exception of coordination between earth stations operating in opposite directions of transmissions;

j) that there would be a need for a coordination procedure between NGSO systems within the FSS and between NGSO FSS systems and NGSO systems in other services and for specific sharing criteria associated with this procedure, also taking into consideration various types of NGSO systems, including those in highly elliptical orbits;

k) the need to protect other co-primary services allocated in the frequency bands referred to in *considering further* a) above and the need to further assess the sharing conditions between NGSO FSS systems and these services;

l) further studies on sharing conditions in frequency bands other than the 10 - 30 GHz frequency bands, where Resolution **46** does not apply, may be also be necessary on the basis of the requirements that may develop,

noting

1 that information relating to GSO and NGSO systems in the FSS in the 10 - 30 GHz bands has been communicated to the Radiocommunication Bureau;

2 that some of these systems are in operation and others will be operated in the near future and, consequently, difficulties may be experienced in modifying their characteristics;

3 the need to protect existing and future terrestrial and space services and systems;

4 that **S22.2** is an operational provision which is to be applied between administrations, and does not require any specific action or finding by the Bureau,

recognizing

that the geostationary-satellite orbit and its associated spectrum are a uniquely valuable resource and that equitable access to this resource needs to be protected for all countries in the world,

resolves

1 that, as of 22 November 1997, in the frequency bands specified in Tables **S22-3** and **S22-4**, and in Tables 1 and 2 in Annex 1 to this Resolution, NGSO/FSS for which complete notification information has been received by the Radiocommunication Bureau after 21 November 1997 shall be subject to the provisional power limits appearing in Article **S22** and in Annex 1 to this Resolution;

2 that these limits shall be applied provisionally until the end of the WRC-99 Conference, and that non-geostationary systems in the fixed-satellite service for which complete notification information has been received by the Radiocommunication Bureau after 21 November 1997 shall be subject to the power limits appearing in Article **S22**, as revised if appropriate by WRC-99;

3 that, as of 22 November 1997, in applying No. **S22.2,** administrations may consider these provisional power limits as corresponding to permissible levels of interference from a NGSO system into a GSO system, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and of the complete coordination information of the GSO network;

4 that, as of the end of WRC-99, an administration operating a NGSO FSS system which is in compliance with the limits appearing in Article **S22**, as revised if appropriate, by WRC-99, shall be considered as having fulfilled its obligations under **S22.2** with respect to any GSO network, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and of the complete coordination information of the GSO network;

5 that, as of 22 November 1997, in the frequency bands specified in **S22.29** and Tables 1 and 2 of Annex 1 to this Resolution, GSO FSS systems for which complete coordination information has been received by the Bureau after 21 November 1997 shall be subject to the provisional limits appearing in Article **S22**;

6 that these limits shall be applied provisionally until the end of the WRC-99 Conference, and that GSO/FSS systems for which complete coordination information has been received by the Radiocommunication Bureau after the end of WRC-99 shall be subject to the power limits appearing in Article **S22**, as revised if appropriate by WRC-99;

7 that, as of 22 November 1997, in the frequency bands specified in **S22.29** and Tables 1 and 2 of Annex 1 to this Resolution, NGSO systems shall not claim protection from GSO networks operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete notification information relating to these NGSO systems and of the complete coordination information of the GSO networks;

7*bis* that between 22 November 1997 and the [end of WRC-99], if an administration operating or bringing into use a GSO FSS system before the [end of WRC-99] considers that the NGSO FSS system proposed by another administration might cause unacceptable interference into its GSO system, then:

7*bis*.1 the administration having the GSO system shall send to the administration having the NGSO FSS system, the technical details upon which its disagreement is based,

7*bis*.2 in the bands from 10.7 - 14.5 GHz, the administration having the NGSO FSS system shall resolve the difficulties,

7*bis*.3 in the frequency bands 17.8 - 18.6 GHz (space-to-Earth), 19.7 - 20.2 GHz (space-to-Earth), 27.5 - 28.6 GHz (Earth-to-space) and 29.5 - 30.0 GHz (Earth-to-space), the administrations concerned shall make every possible effort to resolve the difficulties by means of mutually acceptable adjustments to their networks;

8 that, if an administration bringing into use a GSO FSS system after the [end of WRC-99] considers that the NGSO FSS system proposed by another administration and which complies with the limits appearing in Article **S22**, as revised if appropriate by WRC-99, might cause unacceptable interference into its GSO system, the administrations concerned shall make every possible effort to resolve the difficulties by means of mutually acceptable adjustments to their networks;

9 that, as of 22 November 1997, NGSO systems in the FSS in the frequency bands referred to in *resolves* 1 above, shall, for coordination with other NGSO/FSS systems, be subject to the application of the provisions of paragraph 2.1 of Section II of Resolution **46 (WRC-95)**/No. **S9.12**,

requests ITU-R

1[1] taking into account *considering further* a), to conduct, as a matter of urgency and complete, in time for consideration by [WRC-99]:

a) the appropriate technical, operational and regulatory studies to review the regulatory conditions relating to the coexistence among NGSO and GSO systems in the FSS in order to ensure that they do not pose undue constraints on the development of NGSO and GSO FSS systems;

b) the development of a methodology for calculating the power levels produced by NGSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 and 2 above;

c) the studies relating to the sharing criteria to be applied for determining the need for coordination between NGSO FSS systems on the one hand and NGSO systems in the FSS and in other space services and terrestrial services on the other hand, with a view to promote efficient use of spectrum/orbit resources and equitable access to these resources by all countries;

2[1] taking into account *considering further* l), to undertake the development of power limits or other frequency sharing mechanisms among GSO, NGSO and terrestrial systems in the frequency bands other than those referred to in *resolves* 1 above and where NGSO FSS systems are likely to be implemented and GSO systems are used or expected to be used extensively,

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[1] See Annex 2 for further details concerning specific aspects of these studies in relation to frequency sharing between NGSO FSS and GSO FSS.

instructs the Radiocommunication Bureau

as of the end of WRC-99, to review and, if appropriate, revise, any finding previously made on the compliance with the limits contained in Article **S22**, of a NGSO FSS system for which notification information has been received between 22 November 1997 and the end of WRC-99. This review shall be based on the values appearing in Article **S22**, as revised if appropriate by WRC-99.

ANNEX 1 TO DRAFT RESOLUTION [COM5-18]

PROVISIONAL LIMITS

Section I. Control of Interference to Geostationary-Satellite Systems

1.1 The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions into all the reference antennas and in the reference bandwidths specified in this table, and for all pointing directions towards the geostationary orbit.

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[1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(\theta_i)}{G_{\max}}\right]$$

where:

- N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;
- i is the index of the considered non-geostationary space station;
- pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;
- θ_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;
- $G_r(\theta_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;
- G_{max} is the maximum gain of the above receive reference antenna;
- $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables 1 and 2 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolution [COM5-18]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

TABLE 1 (PART A)

Frequency band (GHz)	**Equivalent pfd dB(W/m^2)**	**Percentage of time during which epfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter and reference radiation pattern**
10.7 - 11.7	-179	99.7	4	60 cm, ITU-R Rec. 465-5
11.7 - 12.2 in Region 2	-192	99.9	4	3 m, ITU-R Rec. 465-5
	-186	99.97	4	3 m, ITU-R Rec. 465-5
12.2 - 12.5 in Region 3	-195	99.97	4	10 m, ITU-R Rec. 465-5
	-170	99.999	4	60 cm, ITU-R Rec. 465-5
12.5 - 12.75 in Regions 1 and 3	-173	99.999	4	3m, ITU-R Rec. 465-5
	-178	99.999	4	10 m, ITU-R Rec. 465-5
	-170	100	4	≥60 cm, ITU-R Rec. 465-5

TABLE 1 (PART B)

Frequency band (GHz)	**Equivalent pfd dB(W/m^2)**	**Percentage of time during which epfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter, and reference radiation pattern**
17.8 - 18.6	-165 -151	99.0	40 1000	30 cm, ITU-R Rec. 465-5
	-165 -151	99.0	40 1000	70 cm, ITU-R Rec. 465-5
	-165 -151	99.5	40 1000	90 cm, ITU-R Rec. 465-5
	-167 -153	99.8	40 1000	1.5 m, ITU-R Rec. 465-5
	-180 -166	99.9	40 1000	5 m, ITU-R Rec. 465-5
	-184 -170	99.9	40 1000	7.5 m, ITU-R Rec. 465-5
	-188 -174	99.9	40 1000	12 m, ITU-R Rec. 465-5
	-165 -151	100	40 1000	30 cm to 12 m, ITU-R Rec. 465-5

19.7 - 20.2	-154 -140	99.0	40 1000	30 cm, ITU-R Rec. 465-5
	-164 -150	99.9	40 1000	90 cm, ITU-R Rec. 465-5
	-167 -153	99.8	40 1000	2 m, ITU-R Rec. 465-5
	-174 -160	99.9	40 1000	5 m, ITU-R Rec. 465-5
	-154 -140	100	40 1000	30 cm to 12 m, ITU-R Rec. 465-5

1.2 The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for any percentage of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

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[1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{P_i(t)/10} \cdot \frac{G_t(\theta_i)}{4 \cdot \pi \cdot d_i^2}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m^2) in the reference bandwidth;

– $\varphi_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(\varphi_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– d is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– $apfd$ is the aggregate power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables 1 and 2 contain provisional limits corresponding to an interference level caused by one NGSO FSS system in the frequency bands to be applied in accordance with Resolution [COM5-18]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

TABLE 2 (PART A)

Frequency band (GHz)	**Aggregate pfd dB(W/m^2)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
12.5 - 12.75	-170	100	4
12.75 - 13.25	-186	100	4
13.75 - 14.5	-170	100	4

TABLE 2 (PART B)

Frequency band (GHz)	**Aggregate pfd dB(W/m^2)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
27.5 - 28.6 GHz	-159	100	40
29.5 - 30 GHz	-145		1000

1.3 The limits given in Table 2 may be exceeded on the territory of any country whose administration has so agreed.

Section II. Earth Station Off-Axis Power Limitations in the Fixed-Satellite Service

2.1 The level of equivalent isotropically radiated power (e.i.r.p.) emitted by an earth station shall not exceed the following values for any off-axis angle φ, which is 2.5° or more off the main lobe axis of an earth station antenna:

Angle off-axis	*Maximum e.i.r.p. per 40 kHz*
$2.5° \leq \varphi \leq 7°$	(39 - 25 log φ) dB(W/40 kHz)
$7° < \varphi \leq 9.2°$	18 dB(W/40 kHz)
$9.2° < \varphi \leq 48°$	(42 - 25 log φ) dB(W/40 kHz)
$48° < \varphi \leq 180°$	0 dB(W/40 kHz)

2.2 For FM-TV emissions with energy dispersal, the limits in 2.1 above may be exceeded by up to 3 dB provided the off-axis total e.i.r.p. of the transmitted FM-TV carrier does not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
$2.5° \leq \varphi \leq 7°$	(53 - 25 log φ) dBW
$7° < \varphi \leq 9.2°$	32 dBW
$9.2° < \varphi \leq 48°$	(56 - 25 log φ) dBW
$48° < \varphi \leq 180°$	14 dBW

2.3 For FM-TV carriers which operate without energy dispersal, such carriers should be modulated at all times with programme material or appropriate test patterns. In this case, the off-axis total e.i.r.p. of the emitted FM-TV carrier shall not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
$2.5° \leq \varphi \leq 7°$	(53 - 25 log φ) dBW
$7° < \varphi \leq 9.2°$	32 dBW
$9.2° < \varphi \leq 48°$	(56 - 25 log φ) dBW
$48° < \varphi \leq 180°$	14 dBW

2.4 The e.i.r.p. limits given in 2.1, 2.2 and 2.3 are applicable in the following frequency bands allocated to the fixed-satellite service (Earth-to-space):

12.75 - 13.25 GHz

13.75 - 14 GHz

14 - 14.5 GHz

ANNEX 2 TO DRAFT RESOLUTION [COM5-18]

STUDIES FOR THE ITU-R IN FREQUENCY SHARING BETWEEN NGSO FSS AND GSO FSS

The following is a list of those studies and related activities required.

1) The characterization of short-duration interference peaks which might exceed epfd limits set by a WRC for large earth station antennas, in terms of maximum and mean heights, maximum and mean durations, mean time between occurrences, aggregate percentages of time of occurrences and typical amplitude/time profiles.

2) The acquisition of data regarding the impact of the interference peaks on the performance of a range of earth station demodulators of various types and origins. Administrations are encouraged to cooperate in this matter by arranging for the appropriate measurements to be carried out, and submitting the results to the appropriate Working Parties or Task Groups in time to be included in the ITU-R report to the next conference.

3) The carrying out of computer simulations to determine the impact on epfd statistics of multiple NGSO networks interfering with a GSO downlink, and in particular to discover the percentage-of-time thresholds for which the probability of simultaneous interference peaks from satellites in different NGSO constellations becomes significant. Both homogeneous and inhomogeneous sets of NGSO systems should be simulated where the necessary data is available.

4) The conducting of investigations to find out whether the emissions from the satellites and earth stations of NGSO systems would cause problems for the TT&C of GSO (and NGSO) satellites, during both launch and operational phases of the latter, and the development of ways to avoid such problems.

5) The carrying out of computer simulations to derive the time statistics of short-term interference between two or more NGSO FSS networks.

6) The identification and accreditation of software which could be used by the BR to check whether a system for which an application for spectrum has been made would comply with the epfd and apfd limits.

7) The carrying out of studies to determine the feasibility of frequency sharing between NGSO FSS networks using circular orbits and networks using slightly-inclined geostationary orbits, and also between NGSO FSS networks and networks using "quasi-geostationary" orbits.

8) The development if practicable of continuous curves of epfd versus the antenna diameter and/or the G/T of the GSO earth station to be protected. Whilst it may be necessary to limit the compliance checking by the BR to a few discrete antenna sizes, administrations will need to know that the protection will be adequate in the cases of antennas of other sizes; hence the desirability of continuous curves.

9) The continuation of the studies into techniques for mitigating the interference between GSO and NGSO networks, and between NGSO and NGSO networks.

10) Refinement of the methodologies in new Recommendation ITU-R [Document BL/14] for the derivation of I/N limits and their conversion to epfd and apfd limits, taking into account propagation fade statistics, the different circumstances of "transparent" and remodulating satellite transponders, and the impact of fade counter-measures such as adaptive power control.

DRAFT RESOLUTION [COM5-19]

USE OF THE FREQUENCY BANDS COVERED BY APPENDICES 30 AND 30A BY NGSO SYSTEMS IN THE FIXED-SATELLITE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that provisional limits have been established and included in Article **S22** and in the Annex to this Resolution to ensure that the interference caused by non-geostationary-satellite (NGSO) systems in the fixed-satellite service (FSS) into assignments operated in conformity with the Appendices 30 and 30A Plans is maintained within negligible levels;

b) that the integrity of the above-mentioned Plans and their future modifications is to be ensured;

c) that NGSO systems should not be entered into those Plans and therefore should not apply the procedures associated with these Plans and should not be protected by these procedures;

d) that this Conference has decided to introduce in Article **S5** of the Radio Regulations a new allocation to the FSS in the frequency bands 11.7 GHz to 12.5 GHz in Region 1, 12.2 GHz to 12.7 GHz in Region 2 and 11.7 GHz to 12.2 GHz in Region 3, limited to NGSO/FSS systems,

resolves

1 that, as of 22 November 1997, a NGSO FSS system operating in the frequency bands covered by Appendices 30 and 30A:

a) shall comply with the provisional limits specified in Article **S22** and in the Annex to this Resolution;

b) shall, as of the end of WRC-99, comply with the limits specified in Article **S22,** as revised, if appropriate by WRC-99, irrespective of the date of receipt of the complete notification information relating to this NGSO FSS system;

c) that, as of 22 November 1997, in applying No. **S22.2,** administrations may consider these provisional power limits as corresponding to permissible levels of interference from a NGSO system into a GSO system, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and to the GSO network;

d) that, as of the end of WRC-99, an administration operating a NGSO FSS system in the band 17.8 - 18.1 GHz (space-to-Earth) which is in compliance with the limits appearing in Article **S22** as revised, if appropriate, by WRC-99, shall be considered as having fulfilled its obligations under **S22.2** with respect to any GSO network operating in the Earth-to-space direction, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and of the complete coordination or notification information, as appropriate, relating to the GSO network;

d1) that between 22 November 1997 and the [end of WRC-99], if an administration operating or bringing into use a GSO FSS system before the [end of WRC-99] considers that the NGSO FSS system proposed by another administration might cause unacceptable interference into its GSO system, then:

– the administration having the GSO system shall send to the administration having the NGSO FSS system, the technical details upon which its disagreement is based;

– the administration having the NGSO FSS system shall resolve the difficulties especially taking into account degradation of pciture and sound quality with regard to GSO systems in operation;

e) shall apply the procedures of Sections I and III of Article 11 Section I of Article **S9**, and **S9.17** and **S9.17A**, and the procedures of Article 13/**S11**; and

f) shall be subject, for the coordination with NGSO systems, to the application of the provisions of paragraph 2.1 of Section II of Resolution **46 (WRC-95)**/No. **S9.12**;

g) shall apply, using an equivalent power flux-density threshold of -185.3 dB(W/m^2/4 kHz) for 99.7% of the time, calculated into the reference 90 cm diameter antenna pattern provided in Annex 5 of Appendix 30 (Orb-85) for Regions 1 and 3, the provisions of Article 7 of Appendix 30/**S9.8** with respect to those assignments in [step 1] of the Appendix 30 Plan for Regions 1 and 3 as revised by WRC-97;

2 that NGSO FSS systems in the frequency bands referred to in *resolves* 1 above shall not be operated before the end of WRC-99,

requests ITU-R

a) to conduct, as a matter of urgency and in time for consideration by WRC-99, the appropriate technical, operational and regulatory studies to review the regulatory provisions concerning the operation of NGSO FSS systems in the frequency bands referred to in *resolves* 1 a) above in order to ensure that these conditions ensure appropriate protection of the Plans and their future modifications and do not pose unreasonable constraints on the development of GSO systems in these bands;

b) to undertake and complete the development of a methodology for calculating the power levels produced by NGSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 a) and 1 b) above;

c) to complete the studies relating to the sharing criteria to be applied for determining the need for coordination between NGSO FSS systems, with a view to promote efficient use of spectrum/orbit resources and equitable access to these resources by all countries;

d) to report to CPM-99 on the conclusion of these studies,

instructs the Radiocommunication Bureau

as of the end of WRC-99, to review and, if appropriate, revise, any finding previously made on the compliance with the limits contained in Article **S22**, of a NGSO FSS system for which notification information has been received between 22 November 1997 and [the end of WRC-99]. This review shall be based on the values appearing in Article **S22**, as revised if appropriate by [WRC-99].

ANNEX TO DRAFT RESOLUTION [COM5-19]

PROVISIONAL LIMITS

Section I. Control of Interference to Geostationary-Satellite Systems

1.1 In the frequency band 17.8 - 18.1 GHz the maximum aggregate power flux-density produced at the geostationary-satellite orbit by all the space stations in a non-geostationary-satellite system in the fixed-satellite service or in the broadcasting-satellite service shall not exceed the values given in Table 2.

1.2 The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary orbit, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions, into a reference antenna and in the reference bandwidth as specified in Table 1, for all pointing directions towards the geostationary orbit.

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[1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(\theta_i)}{G_{\max}}\right]$$

where:

– N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;

– i is the index of the considered non-geostationary space station;

– pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;

– θ_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;

– $G_r(\theta_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;

– G_{max} is the maximum gain of the above receive reference antenna;

– $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

TABLE 1

Frequency band allocated to the BSS	**Antenna diameter (cm)**	**pfd level (dB(W/m^2/4kHz) which may not be exceeded during the percentage of time shown**		**Reference antenna radiation pattern**
		99.7%	**100%**	
11.7 - 12.5 GHz in Region 1, 11.7 - 12.2 GHz and 12.5 - 12.75 GHz in Region 3	30 60 90	-172.3 -183.3 -186.8	-169.3 -170.3 -170.3	Recommendation ITU-R BO.1213
12.2 - 12.7 GHz in Region 2	45 100 120 180	-174.3 -186.3 -187.9 -191.4	-165.3 -170.3 -170.3 -170.3	Section 3.7.2 of Annex 5 of Appendix **30**
17.3 - 17.8 GHz in Region 2	For further study[1)]			

[1)] The interference from NGSO FSS systems into GSO BSS systems operating in the frequency bands 17.3 - 17.8 GHz relates to the two following sharing situations:

- NGSO FSS transmit earth station into GSO receive earth station;
- GSO BSS transmit space station into NGSO FSS receive space stations.

Both situations need to be studied, in particular since coexistence of receive BSS earth stations and large numbers of transmit NGSO FSS terminals would not be feasible within the same country.

1.3 The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system in the fixed-satellite service, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 2 for the specified percentages of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

[1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{p_i(t)/10} \cdot \frac{G_t(\theta_i)}{4 \cdot \pi \cdot d_i^2}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m^2) in the reference bandwidth;

– $\varphi_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(\varphi_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– d is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– *apfd* is the aggregate power flux-density in dB(W/m^2) in the reference bandwidth.

TABLE 2

Frequency band	**Aggregate pfd dB(W/m²/4 kHz)**	**Percentage of time during which pfd level may not be exceeded**
17.3 - 18.1 GHz in Regions 1 and 3 and 17.8 - 18.1 GHz in Region 2	-163	100%

1.4 The limits given in Table 2 may be exceeded on the territory of any country whose administration has so agreed.

NOTE TO WG PL1

The following agenda item should be included in the draft agenda for WRC-99:

On the basis of the results of the studies in accordance with Resolutions [COM5-18], [COM5-19] and [COM5-23]:

1) review and if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure that these power limits do not impose undue constraints on the development of these systems and services;

2) consider the inclusion in other frequency bands of similar limits in Articles **S21** and **S22**, or other regulatory approaches to be applied in relation to sharing situations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

REPORT TO COMMITTEE 5 ON THE REGULATORY PROVISIONS RELATING TO THE OPERATION OF NGSO FSS AND GSO SYSTEMS IN THE 10.7 TO 30 GHz BANDS

This document provides the results of the work of Sub-Drafting Group 1 of Drafting Group 1 of 5B ad hoc Group 4 on the regulatory provisions that would be required in order to enable NGSO FSS systems to be operated in the frequency bands from 10.7 to 30 GHz. These results are presented directly to Committee 5.

Following the meeting of Drafting Group 1 of 5B ad hoc Group 4, held on Saturday, 8 November 1997 from 1000 hours to 1500 hours, under the chairmanship of Dr. Ito, Sub-Drafting Group 1 of this drafting group met each day from 8 through 14 November in order to prepare possible elements for a regulatory approach to the NGSO FSS issue, along the following three steps, identified in Document CMR97/114(Add.2):

a) Ku band: establishment of provisional hard limits;

b) Parts of the Ka band not covered by Resolution 118 or Resolution 120: establishment of provisional hard limits;

c) Parts of the Ka band covered by Resolution 118: application of Resolution 46.

This report relates to steps a) and b). Step c) is submitted as Document 290.

It should be noted that all of the exact values of the proposed power limits to be applied to NGSO and to GSO FSS systems, as well as the exact frequency bands in which these limits may apply, still need to be discussed.

For completeness, the provisions relating to the protection of Appendices **30** and **30A** are also reproduced. These provisions, as well as Resolution 506, will be addressed by WG 4D. These elements are kept in square brackets pending review by WG 4D. It is suggested that these elements be brought to the attention of WG 4D at the earliest opportunity, in order to facilitate the discussions in this group.

It should be noted that a draft agenda item for WRC-99 is provided to address the sharing among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services.

The coordinators:

F. Rancy T. Tycz

1 Regulatory provisions concerning the Ku band and the parts of Ka band not covered by Resolution 118 or Resolution 120 (Steps a) and b) of Document CMR97/114(Add.2))

In the FSS frequency bands covered by **S22.2** in Ku and Ka bands, the proposed regulatory provisions are intended to ensure protection of GSO FSS and BSS systems and full protection of the Plans and their future modifications. These provisions consist of modifications of Articles **S5** (for the current allocations to FSS and for an additional allocation to FSS) and **S22** and of two Resolutions, addressing respectively the frequency bands which are not subject to a plan and those which are subject to a plan.

Concerning the specific frequency bands that would need to be covered by these provisions, it was agreed that as many as possible of these frequency bands to meet urgent needs should be the subject of these provisions. In order to retain sufficient flexibility for NGSO operators to design systems that can coexist in all three regions with terrestrial or other services studies in other frequency bands could be pursued as requirements develop. To ensure such coexistence in all cases, the need for further studies on the possible coexistence between NGSO FSS and terrestrial and other space science services in the bands shared between these services, in particular, protection from NGSO space systems to radiolocation in the band 17.3 - 17.7 GHz, and to GSO space stations in the 17.3 - 17.8 GHz, and space science services (passive) in the band 18.6 - 18.8 GHz.

Concerning the level of protection of GSO networks from NGSO systems, technical Sub-Drafting Group 1 of 5B ad hoc 4 is addressing all the values related to the power flux-density limits.

Three alternatives were discussed concerning the placement of the provisional limits. The alternatives were: the Radio Regulations, or in an Annex to the Resolution, or in both the Radio Regulations and an Annex to the Resolution.

While the following text concerning modifications to Article S5 is reproduced in this document, the discussion of frequency bands was not done at the drafting group.

1.1 Modifications to Article S5

MOD **S5.441** The use of the bands 4500 - 4800 MHz (space-to-Earth), 6725 - 7025 MHz (Earth-to-space)~~,~~ by the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by GSO satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by NGSO satellite systems in the fixed-satellite service shall be in accordance with the provisions of Resolution [**COM5-19**].

ADD **S5.441A** The use of the bands [10.95 - 11.2 GHz (space-to-Earth), 11.45 - 11.7 GHz (space-to-Earth), 11.7 - 12.2 GHz (space-to-Earth) in Region 2, 12.2 - 12.75 GHz (space-to-Earth) in Region 3, 12.5 - 12.75 GHz (space-to-Earth) in Region 1, 13.75 - 14.5 GHz (Earth-to-space), 18.1 - 18.6 GHz (space-to-Earth), 19.7 - 20.2 GHz (space-to-Earth), 27.5 - 28.6 GHz (Earth-to-space), 29.5 - 30 GHz (Earth-to-space)] by NGSO and GSO satellite

systems in the fixed-satellite service is subject to the provisions of Resolution [**COM5-18**].

MOD

GHz
10.7 – 12.7

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td rowspan="3">11.7 – 12.5
FIXED
BROADCASTING
BROADCASTING-SATELLITE
Mobile except aeronautical mobile

S5.487 S5.487A</td><td>11.7 – 12.1
FIXED S5.486
FIXED-SATELLITE (space-to-Earth)
Mobile except aeronautical mobile
S5.485 S5.488</td><td rowspan="2">11.7 – 12.2
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE

S5.487 S5.487A</td></tr>
<tr><td>12.1 – 12.2
FIXED-SATELLITE (space-to-Earth)
S5.485 S5.488 S5.489</td></tr>
<tr><td>12.2 – 12.7
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE

S5.488 S5.490 S5.492 S5.487A</td><td>12.2 – 12.5
FIXED
MOBILE except aeronautical mobile
BROADCASTING

S5.487 S5.491</td></tr>
</table>

[The following two provisions are left in square brackets pending review by WG 4D:

MOD **S5.516** The use of the band 17.3 - 18.1 GHz by GSO satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3 - 17.8 GHz in Region 2 by the feeder links for the broadcasting-satellite service in the band 12.2 - 12.7 GHz, see Article ~~**S11**~~**S10**. The use of the bands 17.3 - 18.1 GHz by NGSO satellite systems in the fixed-satellite service is subject to the provisions of Resolution [**COM5-19**].

ADD **S5.487A** *Additional allocation:* in Region 1, the band 11.7 - 12.5 GHz, in Region 2, the band 12.2 - 12.7 GHz and in Region 3 the band 11.7 - 12.2 GHz are also allocated to the fixed-satellite service (space-to-Earth), limited to non-geostationary-satellite systems and subject to the provisions of Resolution [**COM5-19**].]

1.2 Modifications to Article S22

While the following text concerning modifications to Article S22 is reproduced in this document, the discussion of the following regulatory text was not discussed in detail in the drafting group.

Section II. Control of Interference to Geostationary-Satellite Systems

MOD **S22.2** § 2. (1) Non-geostationary ~~space stations~~ satellite systems shall ~~cease or reduce to a negligible level their emissions, and their associated earth stations shall not transmit to them, whenever there is~~ not cause unacceptable interference to geostationary-satellite ~~space~~ systems in the fixed-satellite service operating in accordance with these Regulations.

ADD **S22.5A1** In the frequency bands 10.7 - 11.7 GHz, 12.5 - 12.75 GHz, 17.3 - 18.1 GHz and 18.1 - 18.4 GHz, the maximum aggregate power flux-density produced at the geostationary-satellite orbit by all the space stations in a non-geostationary-satellite system in the fixed-satellite service or in the broadcasting-satellite service shall not exceed the values given in Tables **S22-2** and **S22-4**.

[The provisions S22.5B to Table S22-2 are left in square brackets pending review by WG 4D:

ADD **S22.5B** § 6. (1) The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary orbit, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-1** for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions, into a reference antenna and

in the reference bandwidth as specified in Table **S22-1**, for all pointing directions towards the geostationary orbit.

ADD S22.5B.1 [1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(\theta_i)}{G_{\max}}\right]$$

where:

– N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;

– i is the index of the considered non-geostationary space station;

– pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;

– θ_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;

– $G_r(\theta_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;

– G_{max} is the maximum gain of the above receive reference antenna;

– $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD TABLE **S22-1**[1]

Frequency band allocated to the BSS	**Equivalent pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference antenna radiation pattern**	**Reference bandwidth (MHz)**
11.7 - 12.5 GHz in Region 1, 11.7 - 12.2 GHz and 12.5 - 12.7 GHz in Region 3	-145 -132	99.7% 100%	Recommendation ITU-R BO.1213 (for Regions 1 and 3)	27
12.2 - 12.7 GHz in Region 2	-144 -131	99.7% 100%	Section 3.7.2 of Annex 5 of Appendix **30** for Region 2	27

ADD S22.5C (2) The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system in the fixed-satellite service, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-2** for the specified percentages of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

ADD S22.5C.1 [1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{P_i(t)/10} \cdot \frac{G_t(\theta_i)}{4 \cdot \pi \cdot d_i^{\,2}}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m^2) in the reference bandwidth;

– $\theta_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(\theta_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– d is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– *apfd* is the aggregate power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD TABLE **S22-2**[1]

Frequency band	**Aggregate pfd dB(W/m^2)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (MHz)**
14.5 - 14.8 GHz in Regions 1 and 3 (outside Europe)	-119	99.97%	27
	-115	100%	
17.3 - 18.1 GHz in Regions 1, 2 and 3			

]

ADD S22.5D (3) The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-3** for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions into all the reference antennas and in the reference bandwidths specified in this table, and for all pointing directions towards the geostationary orbit.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD

TABLE **S22-3**[1]

Frequency band	**Equivalent pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter, and reference radiation pattern**
10.7 - 11.7 GHz	-179	99.7%	4	60 cm, ITU-R Rec. 465-5
11.7 - 12.2 GHz in Region 2	-192	99.9%	4	3 m, ITU-R Rec. 465-5
12.2 - 12.5 GHz in Region 3	-185	99.97%	4	10 m, ITU-R Rec. 465-5
12.5 - 12.75 GHz in Regions 1 and 3	-170	100%	4	60 cm, 3 m and 10 m, ITU-R Rec. 465-5
17.7 - 18.8 GHz	-153	99%	1 000	30 cm, ITU-R Rec. 465-5
19.7 - 20.2 GHz	-153	99.7%	1 000	2 m, ITU-R Rec. 465-5
	-153	99.9%	1 000	5 m, ITU-R Rec. 465-5
	-138	100%	1 000	30 cm, 2 m and 5 m, ITU-R Rec. 465-5

ADD S21.19 (2) The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system for all conditions and for all methods of modulation, shall not exceed the limits given in Table **S22-4** for any percentage of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

NOTE - Tables S22-1 through S22-4 and RR S22.26 through S22.30 contain provisional limits in the frequency bands to be applied in accordance with Resolutions [COM5-18] and [COM5-19]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

ADD

TABLE **S22-4**[1]

Frequency band	**Aggregate pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
12.75 - 13.25 GHz	-186	100%	4
13.75 - 14.5 GHz	-170	100%	4
27 - 27.5 GHz in Regions 2 and 3 27.5 - 28.6 GHz 29.1 - 30 GHz*	-145	100%	1 000

* In the band 29.1 - 29.5 GHz, these limits do not apply to non-geostationary mobile-satellite service feeder-link networks.

ADD S22.5F The limits given in Tables **S22-2** to **S22-4** may be exceeded on the territory of any country whose administration has so agreed.

Section VI. Earth Station Off-Axis Power Limitations

MOD S22.26 § 9. The level of equivalent isotropically radiated power (e.i.r.p.) emitted by an earth station ~~at angles in the direction of the geostationary-satellite orbit off the main-beam axis has a significant impact on interference caused to other geostationary-satellite networks. Enhanced utilization of the geostationary-satellite orbit and easier coordination would be attained by minimizing such off-axis radiation and administrations are encouraged to achieve the lowest values practicable bearing in mind the latest ITU-R Recommendations. Minimizing such levels is particularly important in intensively used up-link bands~~shall not exceed the following values for any off-axis angle φ, which is 2.5° or more off the main lobe axis of an earth station antenna:

Angle off-axis	*Maximum e.i.r.p. per 40 kHz*
2.5° ≤ φ ≤ 7°	(39 - 25 log φ) dB(W/40 kHz)
7° < φ ≤ 9.2°	18 dB(W/40 kHz)
9.2° < φ ≤ 48°	(42 - 25 log φ) dB(W/40 kHz)
48° < φ ≤ 180°	0 dB(W/40 kHz)

ADD S22.27 For FM-TV emissions with energy dispersal, the limits in **S22.26** above may be exceeded by up to 3 dB provided the off-axis total e.i.r.p. of the transmitted FM-TV carrier does not exceed the following values:

Angle off-axis		*Maximum e.i.r.p.*
2.5°	≤ φ ≤ 7°	(53 - 25 log φ) dBW
7°	< φ ≤ 9.2°	32 dBW
9.2°	< φ ≤ 48°	(56 - 25 log φ) dBW
48°	< φ ≤ 180°	14 dBW

ADD S22.28 For FM-TV carriers which operate without energy dispersal, such carriers should be modulated at all times with programme material or appropriate test patterns. In this case, the off-axis total e.i.r.p. of the emitted FM-TV carrier shall not exceed the following values:

Angle off-axis		*Maximum e.i.r.p.*
2.5°	≤ φ ≤ 7°	(53 - 25 log φ) dBW
7°	< φ ≤ 9.2°	32 dBW
9.2°	< φ ≤ 48°	(56 - 25 log φ) dBW
48°	< φ ≤ 180°	14 dBW

ADD S22.29 The e.i.r.p. limits given in **S22.26**, **S22.27** and **S22.28** are applicable in the following frequency bands allocated to the fixed-satellite service (Earth-to-space):

12.5 - 12.75 GHz (Region 1)

12.7 - 12.75 GHz (Region 2)

12.75 - 13.25 GHz

13.75 - 14 GHz

14 - 14.5 GHz

17.3 - 18.4 GHz

ADD Section VII. Geostationary Space Station Power Limitations

ADD S22.30 Geostationary space stations shall not produce power flux-density values at the Earth's surface greater than those given in the following table:

Frequency band	**Service**	**Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane**			**Reference bandwidth**
		0° - 5°	**5° - 25°**	**25° - 90°**	
11.7 - 12.2 GHz (Region 2)	Fixed-Satellite (S-E)	-114	-114 + 0.5 (δ–5)	-104	10 MHz
12.5 - 12.75 GHz (Region 1)	Fixed-Satellite (S-E)	-114	-114 + 0.5 (δ–5)	-104	10 MHz
19.7 - 20.2 GHz	Fixed-Satellite (S-E)	-105	-105 + 0.5 (δ–5)	-95	10 MHz

ADD S22.31 The limits given in **S22.30** may be exceeded on the territory of any country whose administration has so agreed.

DRAFT RESOLUTION [COM5-18]

USE OF NON-GEOSTATIONARY SYSTEMS IN THE FIXED-SATELLITE SERVICE IN CERTAIN FREQUENCY BANDS

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that the International Telecommunication Union has, among its purposes, "to promote the extension of the benefit of the new telecommunication technologies to all the world's inhabitants" (No. **6** of the Constitution of the International Telecommunication Union (Geneva, 1992));

b) that it is desirable, in this respect, to promote systems capable of providing a universal service;

c) that new telecommunication services need advanced and reliable networks permitting high-capacity communications;

d) the need to encourage the development and implementation of new technologies;

e) that systems based on the use of new technologies associated with both geostationary (GSO) and non-geostationary (NGSO) satellite constellations are capable of providing the most isolated regions of the world with high-capacity and low-cost means of communication;

f) that there should be equitable access to the radio-frequency spectrum and orbital resources in a mutually acceptable manner that allows for new entrants in the provision of services;

g) that all Members of the Union would benefit from the implementation of proponent systems in the allocated spectrum, and the avoidance of monopolization or exclusive use of an allocation by a single system;

h) that the operation of such systems requires a suitable amount of spectrum in appropriate frequency bands;

i) that decisions on this matter should permit as many systems as possible to be operated;

j) that in spite of the urgency attached to the development of such systems, technical, operational and regulatory issues should be studied in order to achieve the most efficient use of the spectrum that may be available for these systems;

k) that there is a need for the provision of services on a competitive basis between GSO/FSS and NGSO/FSS as well as between NGSO/FSS and NGSO/FSS;

l) that the Radio Regulations must be sufficiently flexible to accommodate the introduction and implementation of innovative technologies as they evolve, and allow the further development and implementation of any proposed system in conformity with their provisions,

considering further

a) that further technical, operational and regulatory studies are required in order to further determine the conditions under which sharing of the frequency bands 10 - 30 GHz which are allocated to the FSS and where Resolution **46** does not apply is feasible between GSO and NGSO systems, between NGSO systems and between NGSO and terrestrial systems;

b) that it is likely that NGSO/FSS systems communicated to the Radiocommunication Bureau will not be brought into use before the 1999 World Radiocommunication Conference (WRC-99);

c) that the diverging interpretations arising from No. **S22.2** result in an ambiguous regulatory status for both existing and future GSO and NGSO systems in the fixed-satellite service (FSS) in the bands where this provision applies, with consequential risks for both types of systems;

d) that the harmonious development of NGSO and GSO systems in the FSS requires that these ambiguities be resolved with no further delay;

e) that in resolving these ambiguities in the bands referred to in *resolves* 1 below, the GSO arc must be protected to ensure continued use of existing FSS systems and the development of new GSO technologies and systems;

f) that these ambiguities may be resolved in certain frequency bands by adopting power flux-density (pfd) limits which would apply to NGSO FSS systems to protect GSO FSS systems, by including in Article **S22** limits to the power radiated by NGSO FSS systems in order to adequately protect GSO FSS systems in the frequency bands and sharing situations where Resolution **46** does not apply;

g) that in certain frequency bands which are currently used or planned to be used extensively by GSO FSS systems, provisional power flux-density limits applicable to NGSO FSS systems have been developed;

[h) that NGSO FSS systems have been proposed in some of these bands which could meet these limits and would not require specific protection from existing and future GSO FSS, provided minimum constraints are applied to GSO FSS systems, such as off-axis earth station e.i.r.p. limits and space station power flux-density limits;]

i) that in the bands where the limits referred to in *considering further* f), g) and h) would apply, there would be no need for a coordination procedure between NGSO/FSS and GSO systems with the exception of coordination between earth stations operating in opposite directions of transmissions;

j) that there would be a need for a coordination procedure between NGSO systems within the FSS and between NGSO FSS systems and NGSO systems in other services and for specific sharing criteria associated with this procedure, also taking into consideration various types of NGSO systems, including those in highly elliptical orbits;

k) the need to protect other co-primary services allocated in the frequency bands referred to in *considering further* a) above and the need to further assess the sharing conditions between NGSO FSS systems and these services;

l) further studies on sharing conditions in frequency bands other than the 10 - 30 GHz frequency bands, where Resolution **46** does not apply, may be also be necessary on the basis of the requirements that may develop,

noting

1 that information relating to GSO and NGSO systems in the FSS in the 10 - 30 GHz bands has been communicated to the Radiocommunication Bureau;

[2 that some of these systems are in operation and others will be operated in the near future and, consequently, difficulties may be experienced in modifying their characteristics;]

3 the need to protect existing and future terrestrial and space services and systems;

4 that **S22.2** is an operational provision which is to be applied between administrations, and does not require any specific action or finding by the Bureau,

recognizing

that the geostationary-satellite orbit and its associated spectrum are a uniquely valuable resource and that equitable access to this resource needs to be protected for all countries in the world,

resolves

1 that, as of 22 November 1997, in the frequency bands specified in Tables **S22-3** and **S22-4**, and in Tables 1 and 2 in the Annex to this Resolution, NGSO/FSS for which complete notification information has been received by the Radiocommunication Bureau after 21 November 1997 shall be subject to the provisional power limits appearing in Article **S22** and in the Annex to this Resolution;

2 that these limits shall be applied provisionally until the end of the WRC-99 Conference, and that non-geostationary systems in the fixed-satellite service for which complete notification information has been received by the Radiocommunication Bureau after 21 November 1997 shall be subject to the power limits appearing in Article **S22**, as revised if appropriate by WRC-99;

3 that, as of 22 November 1997, in applying No. **S22.2,** administrations may consider these provisional power limits as corresponding to permissible levels of interference from a NGSO system into a GSO system, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and of the complete coordination information of the GSO network;

4 that, as of the end of WRC-99, an administration operating a NGSO FSS system which is in compliance with the limits appearing in Article **S22**, as revised if appropriate, by WRC-99, shall be considered as having fulfilled its obligations under **S22.2** with respect to any GSO network[, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and of the complete coordination information of the GSO network];

[5 that, as of 22 November 1997, in the frequency bands specified in **S22.29** and **S22.30** and Tables [1] and [2] of the Annex to this Resolution, GSO FSS systems for which complete coordination information has been received by the Bureau after 21 November 1997 shall be subject to the provisional limits appearing in Article **S22**;]

6 that these limits shall be applied provisionally until the end of the WRC-99 Conference, and that GSO/FSS systems for which complete coordination information has been received by the Radiocommunication Bureau after the end of WRC-99 shall be subject to the power limits appearing in Article **S22**, as revised if appropriate by WRC-99;

7 that, as of 22 November 1997, in the frequency bands specified in **S22.29** and **S22.30** and Tables [1] and [2] of the Annex to this Resolution, NGSO systems shall not claim protection from GSO networks operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete notification information relating to these NGSO systems and of the complete coordination information of the GSO networks;

8 that, after WRC-99, if an administration operating or planning to operate a GSO FSS system considers that the NGSO FSS system operated or planned to be operated by another administration and which complies with the limits appearing in Article **S22**, as revised if appropriate by WRC-99, might cause unacceptable interference into its GSO system, the administrations concerned shall

make every possible effort to resolve the difficulties by means of mutually acceptable adjustments to their networks;

9 that, as of 22 November 1997, NGSO systems in the FSS in the frequency bands referred to in *resolves* 1 above, shall, for coordination with other NGSO/FSS systems, be subject to the application of the provisions of paragraph 2.1 of Section II of Resolution **46 (WRC-95)**/No. **S9.12**,

requests ITU-R

1 taking into account *considering further* a), to conduct, as a matter of urgency and complete, in time for consideration by WRC-99:

a) the appropriate technical, operational and regulatory studies to review the regulatory conditions relating to the coexistence among NGSO and GSO systems in the FSS in order to ensure that they do not pose undue constraints on the development of NGSO and GSO FSS systems;

b) the development of a methodology for calculating the power levels produced by NGSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 and 2 above;

c) the studies relating to the sharing criteria to be applied for determining the need for coordination between NGSO FSS systems on the one hand and NGSO systems in the FSS and in other space services and terrestrial services on the other hand, with a view to promote efficient use of spectrum/orbit resources and equitable access to these resources by all countries;

2 taking into account *considering further* l), to undertake the development of power limits or other frequency sharing mechanisms among GSO, NGSO and terrestrial systems in the frequency bands other than those referred to in *resolves* 1 above and where NGSO FSS systems are likely to be implemented and GSO systems are used or expected to be used extensively,

instructs the Radiocommunication Bureau

as of the end of WRC-99, to review and, if appropriate, revise, any finding previously made on the compliance with the limits contained in Article **S22**, of a NGSO FSS system for which notification information has been received between 22 November 1997 and the end of WRC-99. This review shall be based on the values appearing in Article **S22**, as revised if appropriate by WRC-99.

ANNEX TO DRAFT RESOLUTION [COM5-18]

PROVISIONAL LIMITS

Section I. Control of Interference to Geostationary-Satellite Systems

1.1 In the frequency bands 10.7 - 11.7 GHz, 12.5 - 12.75 GHz and 18.1 - 18.4 GHz, the maximum aggregate power flux-density produced at the geostationary-satellite orbit by all the space stations in a non-geostationary-satellite system in the fixed-satellite service, shall not exceed the values given in Table 2.

1.2 The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions into all the reference antennas and in the reference bandwidths specified in this table, and for all pointing directions towards the geostationary orbit.

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[1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(\theta_i)}{G_{\max}}\right]$$

where:

- N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;
- i is the index of the considered non-geostationary space station;
- pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;
- θ_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;
- $G_r(\theta_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;
- G_{max} is the maximum gain of the above receive reference antenna;
- $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables 1 and 2 contain provisional limits in the frequency bands to be applied in accordance with Resolution [COM5-18]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

TABLE 1

Frequency band	**Equivalent pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna diameter and reference radiation pattern**
10.7 - 11.7 GHz	-179	99.7%	4	60 cm, ITU-R Rec. 465-5
11.7 - 12.2 GHz in Region 2	-192	99.9%	4	3 m, ITU-R Rec. 465-5
	-185	99.97%	4	10 m, ITU-R Rec. 465-5
12.2 - 12.5 GHz in Region 3	-170	100%	4	60 cm, 3 m and 10 m, ITU-R Rec. 465-5
12.5 - 12.75 GHz in Regions 1 and 3				
17.7 - 18.8 GHz	-153	99%	1 000	30 cm, ITU-R Rec. 465-5
19.7 - 20.2 GHz	-153	99.7%	1 000	2 m, ITU-R Rec. 465-5
	-153	99.9%	1 000	5 m, ITU-R Rec. 465-5
	-138	100%	1 000	30 cm, 2 m and 5 m, ITU-R Rec. 465-5

1.3 The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for any percentage of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

[1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{P_i(t)/10} \cdot \frac{G_t(\theta_i)}{4 \cdot \pi \cdot d_i^2}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m²) in the reference bandwidth;

– $\theta_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(\theta_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– *d* is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– *apfd* is the aggregate power flux-density in dB(W/m^2) in the reference bandwidth.

NOTE - Tables 1 and 2 contain provisional limits in the frequency bands to be applied in accordance with Resolution [COM5-18]. These provisional limits are subject to review by ITU-R and shall be confirmed by WRC-99.

TABLE 2

Frequency band	**Aggregate pfd dB(W/m^2)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (kHz)**
10.7 - 11.7 GHz and 12.5 - 12.75 GHz	-170	100%	4
12.75 - 13.25 GHz	-186	100%	4
13.75 - 14.5 GHz	-170	100%	4
18.1 - 18.4 GHz 24.75 - 25.75 GHz in Regions 2 and 3 27 - 27.5 GHz in Regions 2 and 3 27.5 - 28.6 GHz 29.1 - 30 GHz*	-145	100%	1 000
* In the band 29.1 - [29.4] [29.5] GHz, these limits do not apply to non-geostationary mobile-satellite service feeder-link networks.			

1.4 The limits given in Table 2 may be exceeded on the territory of any country whose administration has so agreed.

Section II. Earth Station Off-Axis Power Limitations

2.1 The level of equivalent isotropically radiated power (e.i.r.p.) emitted by an earth station shall not exceed the following values for any off-axis angle φ, which is 2.5° or more off the main lobe axis of an earth station antenna:

Angle off-axis	*Maximum e.i.r.p. per 40 kHz*
$2.5° \leq \varphi \leq 7°$	(39 - 25 log φ) dB(W/40 kHz)
$7° < \varphi \leq 9.2°$	18 dB(W/40 kHz)
$9.2° < \varphi \leq 48°$	(42 - 25 log φ) dB(W/40 kHz)
$48° < \varphi \leq 180°$	0 dB(W/40 kHz)

2.2 For FM-TV emissions with energy dispersal, the limits in 2.1 above may be exceeded by up to 3 dB provided the off-axis total e.i.r.p. of the transmitted FM-TV carrier does not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
$2.5° \leq \varphi \leq 7°$	(53 - 25 log φ) dBW
$7° < \varphi \leq 9.2°$	32 dBW
$9.2° < \varphi \leq 48°$	(56 - 25 log φ) dBW
$48° < \varphi \leq 180°$	14 dBW

2.3 For FM-TV carriers which operate without energy dispersal, such carriers should be modulated at all times with programme material or appropriate test patterns. In this case, the off-axis total e.i.r.p. of the emitted FM-TV carrier shall not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
$2.5° \leq \varphi \leq 7°$	(53 - 25 log φ) dBW
$7° < \varphi \leq 9.2°$	32 dBW
$9.2° < \varphi \leq 48°$	(56 - 25 log φ) dBW
$48° < \varphi \leq 180°$	14 dBW

2.4 The e.i.r.p. limits given in 2.1, 2.2 and 2.3 are applicable in the following frequency bands allocated to the fixed-satellite service (Earth-to-space):

12.5 - 12.75 GHz (Region 1)

12.7 - 12.75 GHz (Region 2)

12.75 - 13.25 GHz

13.75 - 14 GHz

14 - 14.5 GHz

17.3 - 18.4 GHz

Section III. Geostationary Space Station Power Limitations

3.1 Geostationary space stations shall not produce power flux-density values at the Earth's surface greater than those given in the following table:

Frequency band	Service	Limit in dB(W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
11.7 - 12.2 GHz (Region 2)	Fixed-Satellite (S-E)	-114	-114 + 0.5 (δ–5)	-104	10 MHz
12.5 - 12.75 GHz (Region 1)	Fixed-Satellite (S-E)	-114	-114 + 0.5 (δ–5)	-104	10 MHz
19.7 - 20.2 GHz	Fixed-Satellite (S-E)	-105	-105 + 0.5 (δ–5)	-95	10 MHz

3.2 The limits given in 3.1 may be exceeded on the territory of any country whose administration has so agreed.

DRAFT RESOLUTION [COM5-19]

USE OF THE FREQUENCY BANDS COVERED BY APPENDI[X][CES] [30, 30A AND] 30B BY NGSO SYSTEMS IN THE FIXED-SATELLITE SERVICE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that provisional limits have been established and included in Article **S22** and in the Annex to this Resolution to ensure that the interference caused by non-geostationary-satellite (NGSO) systems in the fixed-satellite service (FSS) into assignments operated in conformity with the Appendi[x][ces] [30, 30A and] 30B Plan[s] is maintained within negligible levels;

b) that the integrity of the above-mentioned Plans and their future modifications is to be ensured;

c) that NGSO systems should not be entered into those Plans and therefore should not apply the procedures associated with these Plans and should not be protected by these procedures;

[d) that this Conference has decided to introduce in Article **S5** of the Radio Regulations a new allocation to the FSS in the frequency bands 11.7 GHz to 12.5 GHz in Region 1, 12.2 GHz to 12.7 GHz in Region 2 and 11.7 GHz to 12.2 GHz in Region 3, limited to NGSO/FSS systems,]

resolves

1 that, as of 22 November 1997, a NGSO FSS system operating in the frequency bands covered by Appendi[x][ces] [30, 30A and] 30B in the frequency bands from [10.7 GHz to 17.8 GHz]:

a) shall comply with the provisional limits specified in Article **S22** and in the Annex to this Resolution;

b) shall, as of the end of WRC-99, comply with the limits specified in Article **S22,** as revised, if appropriate by WRC-99, irrespective of the date of receipt of the complete notification information relating to this NGSO FSS system;

c) that, as of 22 November 1997, in applying No. **S22.2,** administrations may consider these provisional power limits as corresponding to permissible levels of interference from a NGSO system into a GSO system, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and to the GSO network;

d) that, as of the end of WRC-99, an administration operating a NGSO FSS system which is in compliance with the limits appearing in Article **S22** as revised, if appropriate, by WRC-99, shall be considered as having fulfilled its obligations under **S22.2** with respect to any GSO network[, irrespective of the dates of receipt by the Bureau of the complete notification information relating to the NGSO system and to the GSO network];

e) shall apply the procedures of Sections I and III of Article 11, Section I of Article **S9**, and **S9.17** and **S9.17A**, and the procedures of Article 13/**S11**; and

f) shall be subject, for the coordination with NGSO systems, to the application of the provisions of paragraph 2.1 of Section II of Resolution **46 (WRC-95)**/No. **S9.12**;

[g) shall apply, on the basis of the limits specified in Article **S22**, but using the reference antenna provided in Annex 5 of Appendix 30 (Orb-85) for Regions 1 and 3, the provisions of Article 7 of Appendix 30/**S9.8** with respect to those assignment in [step 1] of Appendix 30/30A Plans;]

2 that NGSO FSS systems in the frequency bands referred to in *resolves* 1 above shall not be operated before the end of WRC-99,

requests ITU-R

a) to conduct, as a matter of urgency and in time for consideration by WRC-99, the appropriate technical, operational and regulatory studies to review the regulatory provisions concerning the operation of NGSO FSS systems in the frequency bands referred to in *resolves* 1 a) above in order to ensure that these conditions ensure appropriate protection of the Plans and their future modifications and do not pose unreasonable constraints on the development of GSO systems in these bands;

b) to undertake and complete the development of a methodology for calculating the power levels produced by NGSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 a) and 1 b) above;

c) to complete the studies relating to the sharing criteria to be applied for determining the need for coordination between NGSO FSS systems, with a view to promote efficient use of spectrum/orbit resources and equitable access to these resources by all countries;

d) to report to CPM-99 on the conclusion of these studies,

instructs the Radiocommunication Bureau

as of the end of WRC-99, to review and, if appropriate, revise, any finding previously made on the compliance with the limits contained in Article **S22**, of a NGSO FSS system for which notification information has been received [between 22 November 1997 and the end of WRC-99]. This review shall be based on the values appearing in Article **S22**, as revised if appropriate by WRC-99.

ANNEX TO DRAFT RESOLUTION [COM5-19]

PROVISIONAL LIMITS

Section I. Control of Interference to Geostationary-Satellite Systems

1.1 In the frequency band 17.3 - 18.1 GHz the maximum aggregate power flux-density produced at the geostationary-satellite orbit by all the space stations in a non-geostationary-satellite system in the fixed-satellite service or in the broadcasting-satellite service shall not exceed the values given in Table 2.

[The provisions 1.2 to Table 2 are left in square brackets pending review by Working Group 4D:

1.2 The equivalent power flux-density[1], at any point on the Earth's surface visible from the geostationary orbit, produced by emissions from all the space stations of a non-geostationary system operating in the following frequency bands in the fixed-satellite service, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 1 for the given percentages of time. These limits relate to the equivalent power flux-density which would be obtained under free-space propagation conditions, into a reference antenna and in the reference bandwidth as specified in Table 1, for all pointing directions towards the geostationary orbit.

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[1] The equivalent power flux-density is defined as the sum of the power flux-densities produced at a point of the Earth's surface by all space stations within a non-geostationary system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing towards the geostationary orbit. The equivalent power flux-density is calculated using the following formula:

$$epfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{pfd_i/10} \cdot \frac{G_r(\theta_i)}{G_{\max}}\right]$$

where:

- N is the number of non-geostationary space stations visible from the point considered at the Earth's surface, within an elevation angle greater or equal to 0°;
- i is the index of the considered non-geostationary space station;
- pfd_i is the power flux-density produced at the point considered at the Earth's surface in dB(W/m^2) in the reference bandwidth;
- θ_i is the angle between the direction considered towards the geostationary orbit and the direction of the interfering space station in the non-geostationary system;
- $G_r(\theta_i)$ is the gain of the receive reference antenna to be considered as part of a geostationary network;
- G_{max} is the maximum gain of the above receive reference antenna;
- $epfd$ is the computed equivalent power flux-density in dB(W/m^2) in the reference bandwidth.

TABLE 1

Frequency band allocated to the BSS	**Equivalent pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference antenna radiation pattern**	**Reference bandwidth (MHz)**
11.7 - 12.5 GHz in Region 1, 11.7 - 12.2 GHz and 12.5 - 12.7 GHz in Region 3	-145 -132	99.7% 100%	Recommendation ITU-R BO.1213 (for Regions 1 and 3)	27
12.2 - 12.7 GHz in Region 2	-144 -131	99.7% 100%	Section 3.7.2 of Annex 5 of Appendix 30 for Region 2	27

1.3 The aggregate power flux-density[1] produced at any point in the geostationary-satellite orbit by the emissions from all the earth stations in a non-geostationary system in the fixed-satellite service, for all conditions and for all methods of modulation, shall not exceed the limits given in Table 2 for the specified percentages of time. These limits relate to the power flux-density which would be obtained under free-space propagation conditions in the reference bandwidth specified in this table.

[1] The aggregate power flux-density is defined as the summation of the power flux-densities produced at a point in the geostationary-satellite orbit by all the earth stations of a non-geostationary system. The aggregate power flux-density is computed by means of the following formula:

$$apfd = 10 \cdot \log_{10}\left[\sum_{i=1}^{N} 10^{p_i(t)/10} \cdot \frac{G_t(\theta_i)}{4 \cdot \pi \cdot d_i^2}\right]$$

where:

– N is the number of earth stations in the non-geostationary system with an elevation angle greater or equal to 0°, from which the point considered in the geostationary orbit is visible;

– i is the index of the earth station considered in the non-geostationary system;

– P_i is the RF power at the input of the transmitting antenna of the earth station considered in the non-geostationary system in dB(W/m²) in the reference bandwidth;

– $\theta_i(t)$ is the off-axis angle between the boresight of the earth station considered in the non-geostationary system and the direction of the point considered in the geostationary-satellite orbit;

– $G_t(\theta_i)$ is the transmit antenna gain of the earth station considered in the non-geostationary system in the direction of the point considered in the geostationary-satellite orbit;

– d is the distance between the earth station considered in the non-geostationary system and the point considered in the geostationary-satellite orbit;

– $apfd$ is the aggregate power flux-density in dB(W/m²) in the reference bandwidth.

TABLE 2

Frequency band	**Aggregate pfd dB(W/m²)**	**Percentage of time during which pfd level may not be exceeded**	**Reference bandwidth (MHz)**
14.5 - 14.8 GHz in Regions 1 and 3 (outside Europe)	-119 -115	99.97% 100%	27
17.3 - 18.1 GHz in Regions 1, 2 and 3			

]

1.4 The limits given in Table 2 may be exceeded on the territory of any country whose administration has so agreed.

Section II. Earth Station Off-Axis Power Limitations

2.1 The level of equivalent isotropically radiated power (e.i.r.p.) emitted by an earth station shall not exceed the following values for any off-axis angle φ, which is 2.5° or more off the main lobe axis of an earth station antenna:

Angle off-axis	*Maximum e.i.r.p. per 40 kHz*
2.5° ≤ φ ≤ 7°	(39 - 25 log φ) dB(W/40 kHz)
7° < φ ≤ 9.2°	18 dB(W/40 kHz)
9.2° < φ ≤ 48°	(42 - 25 log φ) dB(W/40 kHz)
48° < φ ≤ 180°	0 dB(W/40 kHz)

2.2 For FM-TV emissions with energy dispersal, the limits in 2.1 above may be exceeded by up to 3 dB provided the off-axis total e.i.r.p. of the transmitted FM-TV carrier does not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
2.5° ≤ φ ≤ 7°	(53 - 25 log φ) dBW
7° < φ ≤ 9.2°	32 dBW
9.2° < φ ≤ 48°	(56 - 25 log φ) dBW
48° < φ ≤ 180°	14 dBW

2.3 For FM-TV carriers which operate without energy dispersal, such carriers should be modulated at all times with programme material or appropriate test patterns. In this case, the off-axis total e.i.r.p. of the emitted FM-TV carrier shall not exceed the following values:

Angle off-axis	*Maximum e.i.r.p.*
2.5° ≤ φ ≤ 7°	(53 - 25 log φ) dBW
7° < φ ≤ 9.2°	32 dBW
9.2° < φ ≤ 48°	(56 - 25 log φ) dBW
48° < φ ≤ 180°	14 dBW

2.4 The e.i.r.p. limits given in 2.1, 2.2 and 2.3 are applicable in the following frequency bands allocated to the fixed-satellite service (Earth-to-space):

12.75 - 13.25 GHz

17.3 - 18.1 GHz in Regions 1 and 3

17.3 - 17.8 GHz in Region 2

NOTE TO WG PL1

The following agenda item should be included in the draft agenda for WRC-99:

On the basis of the results of the studies in accordance with Resolutions [COM5-18], [COM5-19] and [COM5-23]:

1) review and if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure that these power limits do not impose undue constraints on the development of these systems and services;

2) consider the inclusion in other frequency bands of similar limits in Articles **S21** and **S22**, or other regulatory approaches to be applied in relation to sharing situations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 4

CHAIRMAN, WORKING GROUP 4A

FOURTH REPORT FROM WORKING GROUP 4A TO COMMITTEE 4

1 The Working Group reviewed the texts of Articles S8, S13 and S14 of the Simplified Radio Regulations, from the point of view of their consistency with other provisions of the Radio Regulations. The approved texts, as reproduced in Attachment 1, are submitted to Committee 4 for consideration. The delegation of the UAE reserved its position with regard to the proposed addition of S13.12A, on behalf of the Arab group of countries. The text of S13.17A is still pending the decision of Working Group 4D concerning the contents of the Plans annexed to Appendices S30 and S30A.

2 The Working Group also reviewed provisions Nos. S19.35 and S19.99, taking account of the discussions during the fifth Plenary Meeting. The agreed modifications to these provisions, with respect to the texts appearing in Document 266, are given in Attachment 2.

3 Working Group 4A also reviewed those Resolutions and Recommendations from WARC/WRC that have incidence on the terms of reference of Working Group 4A. As a consequence, the Working Group agreed to modify the text of Resolution 13, as indicated in Attachment 3 to this document. The Working Group also proposes that the Resolutions and Recommendations, indicated in Attachment 4, should be suppressed.

4 The Working Group also considered other issues related to coordination and notification procedures, as included in the BR Report to WRC-97 (Document 28) and proposes the following course of action in this respect:

4.1 Concerning the updating of Appendix 27Aer.2: the Working Group proposes that the Conference instructs the BR to update this Appendix so as to reflect the appropriate geographical and political changes, as well as the new scheme concerning the designation of emissions, without altering the substance of any of these provisions.

4.2 Concerning the problems relating to the identification of tropospheric scatter systems in the fixed service (Recommendation 100 (Rev.WRC-95)): the Working Group endorses the course of action as suggested by the BR, i.e., use of a special symbol ("ST") in the Preface to the IFL, in the context of column 6B (item 6B of Appendix S4) with the meaning "Fixed station using tropospheric scatter".

Attachments: 4

ATTACHMENT 1

1 Article S8

ARTICLE S8

NOC S8.1

MOD S8.1.1 [1] The expression "frequency assignment", wherever it appears in this Chapter, shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master International Frequency Register. Additionally, wherever the expression relates to a space station in the geostationary-satellite orbit or non-geostationary-satellite orbit, it shall be associated with ~~a nominal location in that orbit~~ item A.4 of Annex 2A to Appendix **S4**, as relevant.

(S8.2 not used)

MOD S8.3 Any frequency assignment recorded in the Master Register with a favourable finding under No~~s~~. **S11.31** ~~to **S11.34** and **S11.41**, as appropriate,~~ shall have the right to international recognition. For such an assignment, this right means that other administrations~~, recognizing Nos. **S4.2** and **S4.3** in particular,~~ shall take it into account when making their own assignments, in order to avoid harmful interference. In addition, frequency assignments in frequency bands subject to a coordination or to a plan shall have a status derived from the application of the procedures relating to the coordination or from those associated with the plan.

MOD S8.4 A frequency assignment shall be known as a non-conforming assignment when it is not in accordance with the Table of Frequency Allocations or the other[2] provisions of these Regulations. Such an assignment shall be recorded for information purposes, only when the notifying administration states that it will be operated in accordance with No. ~~**S8.5**~~**S4.4** (See also No. ~~**S4.4**~~**S8.5**).

NOC S8.4.1 - S8.5

2 Article S13

ARTICLE S13

[MOD S13.1 to S13.4][1]

(S13.5 to S13.8: not used)

NOC S13.9 - S13.12

ADD S13.12A *b)* whenever it appears from reliable information available that a recorded assignment has not been brought into regular operation in accordance with the notified required characteristics as specified in Appendix **S4**, or is not being used in accordance with those characteristics, the Bureau shall consult the notifying administration and, subject to its agreement or in the event of no response within three months of the dispatch of a reminder, shall either cancel, or suitably modify, or retain the basic characteristics of the entry.

SUP S13.13

(MOD) S13.14 ~~*b*~~*c)* enter in the Master Register and publish in the Preface to the International Frequency List (IFL) all frequencies prescribed by these Regulations for common use;

(MOD) S13.15 ~~*c*~~*d)* make appropriate entries in the Master Register resulting from its examinations of frequency assignment notices in accordance with Article **S11**;

(MOD) S13.16 ~~*d*~~*e)* maintain and periodically update the Preface to the IFL.

NOC S13.17

MOD S13.17A The Bureau shall maintain master copies of all world frequency allotment or assignment plans contained in appendices to these Regulations, or adopted by world conferences convened by the Union, including, where applicable, the [carrier to interference levels, or] margins, [as appropriate,] associated with each assignment or allotment, and incorporating any ~~agreed~~ modifications resulting from the successful application of the relevant modification procedure, and shall provide such copies in an appropriate form for publication by the Secretary-General when justified by circumstances.

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[1] These provisions are still under consideration, with a view to incorporating the text of Section 4.3.20 of Appendix 30 (Document 284 refers).

NOC **S13.18 to 13.19**

SUP **S13.20**

NOC **S13.21 to 13.23**

ADD **Section IV. Board Documents**

ADD **S13.23A** The Bureau shall, where appropriate, prepare draft modifications or additions to the Rules of Procedure which shall be made available for comment before being submitted to the Board. One week beforehand the draft agenda of each Board meeting shall be sent by facsimile, or mailed, to all administrations and shall also be made available in electronic form. At the same time all documents which are both referenced in that draft agenda and available at that time shall be sent by facsimile, or mailed, to those administrations requesting them as well as simultaneously being made accessible in electronic form.

ADD **S13.23B** Within one week after a meeting of the Board, a summary of all decisions taken in that meeting, as well as the approved minutes of the meeting preceding this one, shall be published. These shall be circulated to administrations by means of a circular-letter from the Bureau as well as then being made available in electronic form.

ADD **S13.23C** A copy of all documents considered at the Board's meetings, including the minutes, shall be available for public inspection by administrations in the offices of the Bureau as well as be available in electronic form.

3 **Article S14**

ARTICLE S14

NOC **S14.1**

MOD **S14.2** For this purpose, the administration concerned shall submit a request for a review to the Bureau; it shall also cite the relevant provisions of the Radio Regulations and other references and shall state the ~~redress or other~~ action it seeks.

NOC **S14.3**

MOD **S14.4** If the outcome of the review successfully resolves the matter with the requesting administration without adversely affecting the interests of other administrations, the Bureau shall publish an outline of the review, the arguments, the settlement and any implications affecting other administrations for the information of all Members of the Union. If this review results in a modification to a finding previously rendered by the Bureau, the Bureau shall re-apply the relevant steps of the procedure within which the previous finding had been given, including, if appropriate, the removal of the corresponding entries in the Master Register or any consequential effect on notices subsequently received by the Bureau.

NOC **S14.5 - S14.7A**

SUP **S14.8 and S14.9**

ATTACHMENT 2

ARTICLE S19

MOD S19.35 § 16. The Secretary-General shall be responsible for allocating additional maritime identification digits to countries[2] within the limits specified[3], provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI, which should be ~~and~~ in conformity with the ~~guidelines contained in the~~ relevant ITU-R and ITU-T Recommendations ~~(see Resolution **27 (WRC-95)**)~~.

MOD S19.99 § 39. When a station[1] in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Nos. **S19.100** to **S19.126**, and when doing so, administrations should take into account ~~in accordance with~~ the relevant ITU-R and ITU-T Recommendations ~~(see Resolution **27 (WRC-95)**)~~. In accordance with **S20.16,** administrations shall notify the Radiocommunication Bureau immediately when assigning maritime mobile service identities.

ATTACHMENT 3

RESOLUTION 13 (Rev.WRC-~~95~~97)

FORMATION OF CALL SIGNS AND ALLOCATION OF NEW INTERNATIONAL SERIES

The World Radiocommunication Conference (Geneva, ~~1995~~1997),

considering

~~a) the adoption by this Conference of Article **S19** and Appendix **S42**;~~

~~b)~~ the increasing demand for call signs justified by the increased number of Members of the Union and by the increased requirements of countries which are already Members,

believing

that call signs already in use should, as far as possible, not be changed,

noting

a) that the former call sign series formed of three letters, or a figure and two letters, having been exhausted, a new series has been introduced formed of a letter, a figure and a letter; but in no case may the figure be 0 or 1;

b) that the method mentioned in *noting* a) is not applicable to series beginning with one of the following letters: B, F, G, I, K, M, N, R, W,

resolves

1 that the Director of the Radiocommunication Bureau shall continue to urge administrations:

1.1 to make maximum use of the possibilities of the series at present allocated, in order to avoid, as far as possible, further requests;

1.2 to review the call-sign assignments they have already made from their present allocations, with a view to releasing any series and placing them at the disposal of the Union;

2 that the Director shall, upon request, furnish advice to administrations on the means of effecting the greatest economy, which should be the rule, in the use of a series of call signs;

3 that if, nevertheless, before the next competent world radiocommunication conference, it appears that all the possibilities of the present system of forming call signs will be exhausted, the Director shall:

3.1 explore the possibility of extending the present ~~series as foreseen in Resolution **71 (WRC-95)**~~allocations of international call sign series by lifting the limitation on use of the letter "Q" and the digits "0" and "1";

3.2 issue a circular-letter:

3.2.1 explaining the position;

3.2.2 urging the administrations to send in their proposals for possible solutions;

4 that, from the information thus submitted, the Director shall prepare a report, together with his comments and suggestions, for submission to the next competent world radiocommunication conference.

ATTACHMENT 4

List of Resolutions of WARC/WRC which are proposed for suppression

Resolution No.	Subject	Proposed action
17	Conference structure	SUP
19 (Mob-87)	Decisions of regional conferences	SUP
22 (WARC-92)	Assistance in implementing changes in allocations	SUP
37	Automated Frequency Management	SUP
38 (Rev.Mob-87)	Reassignment of frequencies in 2 MHz (R1)	SUP
47 (WRC-95)	Immediate application of RS46 in some bands	SUP
61	Division of the world into climatic zones	SUP
65	Cross-referencing of ITU-R Recommendations in RR	SUP
69 (Orb-88)	Simplified methods for assessment of interference between satellite networks	SUP
71 (WRC-95)	Identification of stations (Article 25/S19)	SUP
93 (WARC-92)	Treatment of Resolutions/Recommendations	SUP
94 (WARC-92)	Review of Resolutions/Recommendations	SUP
104 (Orb-88)	Application of RR 1550	SUP
107 (Orb-88)	Existing networks AP30B	SUP
110 (Orb-88)*	MPM	SUP
403	Use of common aeronautical frequencies (3 023 kHz and 5 680 kHz)	SUP
410 (WARC-92)	Development of AP26 Plan	SUP
702	RARC for VHF/UHF bands in R3	SUP
704 (Mob-83)	Planning of MMS/Aero.nav in LF/MF	SUP
713 (WRC-95)*	Operational matters concerning AMS and MMS	SUP

List of Recommendations of WARC/WRC which are proposed for suppression

Recommendation No.	Subject	Proposed action
6	Assistance to developing countries	SUP
10	Presentation of draft amendments to RR	SUP
11	Marginal numbering of the RR	SUP
13	WARC for partial revision of RR	SUP
15 (Orb-88)	Review of Article 14 of the RR	SUP
31	Handbook on Frequency Management	SUP
60	Technical standards of the IFRB	SUP
72	Terminology	SUP
73	Use of term "channel"	SUP
74	Use of SI	SUP

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Addendum 1 to Document 296-E
18 November 1997
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COMMITTEE 4

REPORT FROM WORKING GROUP 4D TO COMMITTEE 4

The attached text contains the proposed additional items to Annex 2 of Appendices 30 (S30) and 30A (S30A) which were postponed by Working Group 4D until further decisions on these issues.

ANNEX 2

(to Appendix 30 (S30))

(NOC) 12. Space station transmitting antenna characteristics:

(MOD) *d)* sense of polarization, and, in the case of a linear polarization, the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite in the direction of the nominal boresight or aim point as defined under item 8 above;

(NOC) 14. Modulation characteristics:

(ADD) *i)* in the case of a digital modulation, the effective and transmitted bit/symbol rates.

(ADD) 22. Connection between Earth-to-space and space-to-Earth frequencies in the network in the case of Region 2.

(ADD) 23. Description of the group(s) required in the case of non-simultaneous emissions.

ANNEX 2

(to Appendix 30A (S30A))

(NOC) 1.6 Modulation characteristics:

(ADD) *i)* in the case of a digital modulation, the effective and transmitted bit/symbol rates.

(NOC) 2.6 Transmitting antenna characteristics of the earth station:

(MOD) *f)* sense of polarization, and, in the case of a linear polarization, the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite in the direction of the nominal boresight or aim point as defined under items 3.4 *e)* or 3.4 *f)* below;

(NOC) 3.4 Space station receiving antenna characteristics:

(MOD) *d)* sense of polarization, and, in the case of a linear polarization, the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite in the direction of the nominal boresight or aim point as defined under items 3.4 *e)* or 3.4 *f)* below;

(ADD) 4. Connection between Earth-to-space and space-to-Earth frequencies in the network in the case of Region 2.

(ADD) 5. Description of the group(s) required in the case of non-simultaneous emissions.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

REPORT FROM WORKING GROUP 4D TO COMMITTEE 4

The attached text contains the proposed changes to Annex 2 of Appendices 30 and 30A agreed so far by Working Group 4D.

ANNEX 2

(to Appendix 30 (S30))

Basic Characteristics to Be Furnished in Notices[2] Relating to Space Stations in the Broadcasting-Satellite Service[3]

(MOD) 1. Country ~~and ITU number* in the case of Regions 1 and 3; country~~ and beam identification ~~in the case of Region 2~~.

(NOC) 2. Nominal orbital position (in degrees from the Greenwich meridian) in the case of Regions 1 and 3; orbital position (xxx.xx degrees from the Greenwich meridian) in the case of Region 2.

(MOD) 3. Assigned frequency ~~or channel number~~.

(ADD) 4. Assigned frequency band.

(NOC) ~~4~~5. Date of bringing into use.

(NOC) ~~5~~6. Identity of the space station.

(MOD) ~~6~~7. Service area ~~(if necessary, the service area may be defined by~~identified by:

(MOD) a) a set of a ~~number~~ maximum of twenty ~~"~~test points, and~~")~~

(ADD) b) a service area contour on the surface of the Earth or a service area defined by a minimum elevation angle in degrees, and

(ADD) c) the name of other administration(s) (country/territory symbols) included in the service area.

(NOC) ~~7~~8. Geographical coordinates of the intersection of the antenna beam axis with the Earth.

(SUP) ~~8. Rain climatic zone(s)[4].~~

(NOC) 9. Class of station.

(NOC) 10. Class of emission and necessary bandwidth.

(NOC) [2] The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Annex.

(NOC) [3] In Region 2, only those notices relating to frequency assignments for space stations used for telemetry and tracking purposes associated with the Region 2 Plan shall be furnished in accordance with Appendix **S4** to the Radio Regulations.

(SUP) ~~* NOTE BY THE SECRETARIAT - Former IFRB Serial Number.~~

(SUP) ~~[4] As defined in Annex 5 to this Appendix.~~

(MOD) 11. Power supplied to the antenna (dBW) ~~in the case of Regions 1 and 3; and, in the case of Region 2, power supplied to the antenna (dBW)~~ and the maximum power density per Hz supplied to the antenna (dB(W/Hz)), averaged over the worst 5 MHz, 4 kHz and 27 MHz, as well as averaged over the worst 40 kHz ~~and 4 kHz, supplied to the antenna~~ in the case of Region 2.

(MOD) 12. ~~A~~Space station transmitting antenna characteristics:

(MOD) *a)* co-polar gain of the antenna in the direction of maximum radiation referred to an isotropic radiator (dBi), as well as the cross-polar gain of the antenna in the case of a beam of other than elliptical shape;

(SUP) ~~*b) shape of the beam (elliptical, circular, or other);*~~

(NOC) ~~*c*~~*b)* pointing accuracy;

(NOC) ~~*d*~~*c)* type of polarization;

(NOC) ~~*e*~~*d)* sense of polarization;

(SUP) ~~*f) for circular beams indicate the following:*~~

(SUP) ~~– half-power beamwidth in degrees;~~

(SUP) ~~– co-polar and cross-polar radiation patterns;~~

(MOD) ~~*g*~~*e)* for elliptical beams[5] indicate the following:

(NOC) – co-polar and cross-polar radiation patterns;

(NOC) – rotation accuracy;

(NOC) – orientation;

(NOC) – major axis (degrees) at the half-power beamwidth;

(NOC) – minor axis (degrees) at the half-power beamwidth;

(MOD) ~~*h*~~*f)* for beams of other than ~~circular or~~ elliptical shape, indicate the following:

(NOC) – co-polar and cross-polar gain contours plotted on a map of the Earth's surface, preferably in a radial projection from the satellite on to a plane perpendicular to the line from the centre of the Earth to the satellite. The isotropic or absolute gain shall be indicated at each contour which corresponds to a decrease in gain of 2, 4, 6, 10 and 20 dB and thereafter at 10 dB intervals down to a value of 0 dB relative to an isotropic radiator;

(NOC) – wherever practicable, a numerical equation or table providing the necessary information to allow the gain contours to be plotted.

(SUP) ~~*In the case of Regions 1 and 3:*~~

(SUP) ~~*i)* Δ*G* (difference between the maximum gain and the gain in the direction of the point in the service area at which the power flux-density is at a minimum).~~

(NOC) 13. Station keeping accuracy.

(ADD) [5] A circular beam is considered as a particular elliptical beam where major and minor axes are equal and where major axis orientation and rotational accuracy are equal to 0°.

(NOC) 14. Modulation characteristics:

(NOC) *a)* type of modulation;

(NOC) *b)* pre-emphasis characteristics;

(NOC) *c)* TV standard;

(NOC) *d)* sound broadcasting characteristics;

(NOC) *e)* frequency deviation;

(NOC) *f)* composition of the baseband;

(NOC) *g)* type of multiplexing of the video and sound signals;

(NOC) *h)* energy dispersal characteristics.

(NOC) 15. Minimum angle of elevation in the service area in the case of Regions 1 and 3.

(MOD) 16. Receiving antenna characteristics of the earth station:

(ADD) *a)* the isotropic gain (dBi) of the antenna in the direction of maximum radiation (dBi);

(ADD) *b)* the beamwidth in degrees between the half power points (describe in detail if not symmetrical);

(ADD) *c)* either the measured co-polar and cross-polar radiation patterns of the antenna (taking as a reference the direction of maximum radiation) or the reference co-polar and cross-polar radiation patterns;

(ADD) *d)* equivalent diameter of the antenna (metres);

(NOC) e) Type of reception (individual or community) in the case of Regions 1 and 3.

(NOC) 17. Regular hours of operation (UTC).

(NOC) 18. Coordination.

(NOC) 19. Agreements.

(NOC) 20. Other information.

(MOD) 21. Operating administration or ~~company~~agency.

ANNEX 2

(to Appendix 30A (S30A))

Basic Characteristics to be Furnished in Notices[1] Relating to Feeder-Link Stations in the Fixed-Satellite Service Operating in the Frequency Bands 14.5 - 14.8 GHz and 17.3 - 18.1 GHz[2]

(NOC) 1. The following information shall be provided in notices relating to both transmitting earth stations and receiving space stations.

(NOC) 1.1 Country and beam identification.

(NOC) 1.2 Assigned frequency.

(NOC) 1.3 Assigned frequency band.

(NOC) 1.4 Date of bringing into use.

(NOC) 1.5 Designation of emission (in accordance with Article **S2** of the Radio Regulations).

(NOC) 1.6 Modulation characteristics:

(NOC) *a)* type of modulation;

(NOC) *b)* pre-emphasis characteristics;

(NOC) *c)* TV system;

(NOC) *d)* sound-broadcasting characteristics;

(NOC) *e)* frequency deviation;

(NOC) *f)* composition of the baseband;

(NOC) *g)* type of multiplexing of the video and sound signals;

(NOC) *h)* energy dispersal characteristics.

(NOC) 2. The following additional information shall be provided in notices relating to transmitting earth stations.

(NOC) 2.1 Identity of the transmitting feeder-link station.

(MOD) 2.2 ~~In the case of Region 2, geographical coordinates of the feeder-link earth station in the frequency band 17.7 - 17.8 GHz~~For a specific feeder-link earth station, the identity of the earth station and the geographical coordinates of the antenna site.

(NOC) [1] The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Annex. The Bureau is further invited to consider the feasibility of a single notice for feeder-link earth stations operating within more than one feeder-link service area.

(NOC) [2] Only those notices relating to frequency assignments for space stations and earth stations used for telecommand and tracking purposes associated with the Plan shall be furnished in accordance with Appendix **S4**.

(MOD) 2.3 ~~In all other cases, f~~Feeder-link service area ~~for a feeder-link earth station~~ identified by:.

(MOD) a) a set of a maximum of ~~ten~~ twenty feeder-link test points, and

(ADD) b) a service area contour on the surface of the Earth or a service area defined by a minimum elevation angle in degrees.

(NOC) 2.4 Identity of the associated space station with which communication is to be established.

(SUP) ~~2.5 Rain climatic zone for each test point (for guidance see Figures 1, 2 and 3 of Annex 3 to this Appendix).~~

(NOC) 2.~~6~~5 Power characteristics of the transmission:

(NOC) *a)* The following information is required for each assigned frequency:

(NOC) – total transmitting power (dBW) in the assigned frequency band supplied to the input of the antenna;

(NOC) – for the band 17.3 - 18.1 GHz, the maximum power density per Hz (dB(W/Hz)) supplied to the input of the antenna averaged over the worst 1 MHz band;

(NOC) – for the band 14.5 - 14.8 GHz, the maximum power density per Hz (dB(W/Hz)) supplied to the input of the antenna averaged over the worst 4 kHz band;

(NOC) – for the band 17.3 - 17.8 GHz, the maximum power density per Hz (dB(W/Hz)) supplied to the input of the antenna averaged over the total RF bandwidth (24 MHz for Region 2 or 27 MHz for Regions 1 and 3).

(MOD) *b)* Additional information required if power control is used (see Sections [3.11] and [4.10] of Annex 3 to this Appendix):

(NOC) – range, expressed in dB, above the transmitting power used in *a)* above.

(NOC) 2.~~7~~6 Transmitting antenna characteristics of the earth station:

(NOC) *a)* antenna diameter (metres);

(NOC) *b)* gain of the antenna in the direction of maximum radiation referred to an isotropic radiator (dBi);

(NOC) *c)* half-power beamwidth in degrees (describe in detail if not symmetrical);

(NOC) *d)* measured radiation diagram of the antenna (taking as a reference the direction of maximum radiation), or reference radiation diagram to be used for coordination;

(NOC) *e)* type of polarization;

(NOC) *f)* sense of polarization;

(NOC) *g)* horizon elevation angle in degrees and the antenna gain in the direction of the horizon for each azimuth[1] around the earth station;

(NOC) *h)* altitude of the antenna above mean sea level, in metres;

(NOC) *i)* minimum elevation angle, in degrees.

(NOC) 2.~~8~~7 Regular hours of operation (UTC).

(NOC) [1] At suitable increments, e.g. every five degrees, in tabular or graphic form.

(NOC) 2.~~9~~8 Coordination.

(NOC) 2.~~10~~9 Agreements.

(NOC) 2.11~~0~~ Other information.

(MOD) 2.12~~1~~ Operating administration or ~~company~~agency.

(NOC) 3. The following information shall be provided in notices relating to receiving space stations.

(NOC) 3.1 Orbital position (from the Greenwich Meridian).

(NOC) 3.2 Identity of the space station.

(NOC) 3.3 Class of station.

(NOC) 3.4 Space station receiving antenna characteristics:

(MOD) *a)* co-polar gain of the antenna in the direction of maximum radiation referred to an isotropic radiator (dBi), as well as the cross-polar gain of the antenna in the case of a beam of other than elliptical shape;

(SUP) ~~*b) shape of the beam (circular, elliptical or other);*~~

(NOC) ~~*c*~~*b)* pointing accuracy (degrees);

(NOC) ~~*d*~~*c)* type of polarization;

(NOC) ~~*e*~~*d)* sense of polarization;

(SUP) ~~*f) for circular beams, indicate the following:*~~

(SUP) ~~– half-power beamwidth in degrees;~~

(SUP) ~~– co-polar and cross-polar radiation patterns;~~

(SUP) ~~– nominal intersection of the antenna beam axis with the Earth (boresight longitude and latitude);~~

(MOD) ~~*g*~~*e)* for elliptical beams[2], indicate the following:

(NOC) – co-polar and cross-polar radiation patterns;

(NOC) – rotation accuracy (degrees);

(NOC) – orientation (degrees);

(NOC) – major axis (degrees) at the half-power beamwidth;

(NOC) – minor axis (degrees) at the half-power beamwidth;

(NOC) – nominal intersection of the antenna beam axis with the Earth (boresight longitude and latitude);

(MOD) ~~*h*~~*f)* for beams of other than ~~circular or~~ elliptical shape, indicate the following:

(ADD) [2] A circular beam is considered as a particular elliptical beam where major and minor axes are equal and where major axis orientation and rotational accuracy are equal to 0°.

(NOC) – co-polar and cross-polar gain contours plotted on a map of the Earth's surface, preferably in a radial projection from the satellite onto a plane perpendicular to the axis from the centre of the Earth to the satellite. The isotropic gain shall be indicated at each contour which corresponds to a decrease in gain of 2, 4, 6, 10 and 20 dB and thereafter at 10 dB intervals down to a value of 0 dB relative to an isotropic radiator;

(NOC) – wherever practicable, a numerical equation or table providing the necessary information to allow the gain contours to be plotted;

(ADD) – nominal intersection of the antenna beam axis with the Earth (boresight or aim point longitude and latitude);

(NOC) ~~*i*~~*g)* for an assignment in the bands 14.5 - 14.8 GHz or 17.7 - 18.1 GHz, the isotropic gain in the direction of those parts of the geostationary-satellite orbit which are not obstructed by the Earth. Use a diagram showing estimated isotropic gain relative to orbit longitude.

(NOC) 3.5 Receiver system noise temperature referred to the output of the antenna (kelvins).

(NOC) 3.6 Station-keeping accuracy (degrees).

(NOC) 3.7 Regular hours of operation (UTC).

(NOC) 3.8 Coordination.

(NOC) 3.9 Agreements.

(NOC) 3.10 Other information.

(NOC) 3.11 Operating administration or company.

(NOC) 3.12 Range of automatic gain control[1].

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(MOD) [1] See Sections [3.10] and [4.9] of Annex [3] to this Appendix.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

SUMMARY RECORD

OF THE

EIGHTH MEETING OF COMMITTEE 4

(REGULATORY AND ASSOCIATED ISSUES)

Thursday, 13 November 1997, at 1120 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		**Documents**
1	Progress reports from the Chairmen of the Working Groups and ad hoc Group 1	-
2	Sixth report of Working Group 4B	222
3	Report of the Chairman of Working Group 4B concerning the recommended future WRC agendas and the revision of resolutions and recommendations according to Resolution 94 (WARC-92) (continued)	220(Add.1)
4	First report of Working Group 4C	259
5	Report of the Chairman of Working Group 4D	269
6	Proposed modification to Article S18	35(Add.1), 216
7	Organization of work	252, 266

1 Progress reports from Chairmen of the Working Groups and ad hoc Group 1

1.1 The **Chairman of Working Group 4A** said that the Working Group had held three meetings since his previous report. Major issues considered included modifications to Articles S9 and S11 and Appendix S5, with particular reference to inconsistencies. Having reached consensus on those modifications, and on issues relating to Resolution 18 (Kyoto, 1994) on the basis of decisions taken by GTPLEN-1, the Working Group had formed a Drafting Group (4A4) to finalize the agreed texts. The Working Group had also discussed incorporation by reference, particularly with regard to possible modification of Resolution 27 (WRC-95), and the matter had been referred to Sub-Working Group 4A2 for the elaboration of the relevant text. Articles S13 and S14 had been finalized. A highly contentious issue relating to Article S8 had been resolved through informal consultations. The Working Group had also considered the resolutions and recommendations assigned to it and had completed its work on most of them.

1.2 The **Chairman of Working Group 4B** said that the Working Group had completed its work and had put forward two documents for the Committee's consideration.

1.3 The **Chairman of Working Group 4C** said that, although the Working Group had initially made some progress in the three meetings held since his last report, it was now bogged down over certain issues. Ad hoc Group 4, which had been considering early introduction of the WARC-92 extension bands, had been unable to reach a consensus. Ad hoc Group 3 had completed its revision of Resolution 517 (HFBC-87) and would be undertaking the consideration of resolutions and recommendations relating to HF broadcasting. Working Group 4C was now dealing with the consequences of the draft resolution on the implementation of Article S12. He expected that it would be able to complete its work on schedule, but in order to do so the full cooperation of all its members would be required. The Working Group had two documents for consideration by the Committee at the current meeting.

1.4 The **Chairman of Working Group 4D** drew attention to Document 269, which outlined the progress achieved since his last report.

1.5 The **Chairman of ad hoc Group 1** reported that, although a great deal of time had been spent on the question of providing other administrations with broadcasting services, general agreement had been reached on the intent of a resolution on further studies to be carried out by 1999 regarding the feasibility of providing additional capacity to all countries in Regions 1 and 3. The exact wording still posed a problem, and a small informal group had sought guidance from the Chairman of the Conference. The Radiocommunication Bureau had also been invited to provide a document outlining its requirements for undertaking the work on planning. The Group looked forward to further progress in those areas.

2 Sixth report of Working Group 4B (Document 222)

2.1 The **Chairman of Working Group 4B** introduced Document 222 and read out a number of editorial corrections. In Article S52, under MOD S52.55, a change was to be introduced that might prove to be substantive: "and S52.54.1" should be inserted after "No. S52.222.1" and, at the end, "and S52.54" should be deleted. In Table S15.2, under MOD 1 530 - 1 544 kHz, at the end of the notes, the reference "([RR5.353A])" should be inserted. Under MOD 1 626.5 - 1 645.5 kHz, the reference "RR S5.353" should be deleted. With reference to the annex to Resolution [COM4-12] on cancelling of false distress alerts, the Editorial Committee should be made aware of the need to align the French and Spanish versions with the English version. The modifications to Articles S5, S19, S33, S51 and S52 and to Appendix S15 aligned those texts with changes made to other

provisions. The Working Group proposed the deletion of Resolutions 210 (Mob-87) and 330 (Mob-87), and editorial corrections, as well as updating, to the Annex to Resolution 312 (Rev.Mob-87). Draft new resolutions had been prepared, including: Resolution [COM4-10], on the use of digital techniques in the MF and HF bands, Resolution [COM4-11], dealing with studies on shore-to-ship distress priority, and Resolution [COM4-12], on the operational procedures for cancelling false distress alerts. Returning to the changes mentioned earlier concerning Article S52, he observed that CPM had agreed that the present Conference should be able to permit, on a non-interference basis, digital techniques in the HF-Morse working channels, which were becoming underutilized as GMDSS techniques increasingly replaced Morse. The Working Group had supported a proposal to that effect, but the reference therein to S52.54 had been misplaced. At the end of the text, that footnote merely described the emissions; it should rightfully be placed at the beginning of the text, as one of the exceptions.

2.2 The **Chairman** invited the Committee to consider the proposals in Document 222 one by one.

Article S5, (MOD S5.73, MOD S5.81), Article S19 (ADD S19.96A), Article S33 (NOC S33.39, ADD S33.39A, ADD S33.39.1, ADD S33.39B, ADD Section VIII (Medical Advice), ADD S33.54, ADD S33.55), Article S51 (MOD S51.53), Article S52 (MOD S52.3, MOD S52.7, MOD S52.54)

2.3 **Approved.**

Article S52 (ADD S52.54.1)

2.4 **Approved**, as editorially corrected.

Article S52 (MOD S52.55)

2.5 The **Chairman of Working Group 4B** pointed out that some administrations had been very concerned about the use of digital techniques on HF channels, mainly because the results of digital technology studies were not yet available. They had no objection, however, to the editorial change proposed.

2.6 MOD S52.55, as editorially corrected, was **approved**.

Article S52 (MOD S52.189, MOD S52.217, MOD S52.219, MOD S52.220), Appendix S15 (NOC Table S15.1)

2.7 **Approved.**

Appendix S15 (MOD Table S15.2)

2.8 The **delegate of the United Kingdom** observed that the corrections to the table's Notes, as suggested by the Chairman of Working Group 4B, were related to efforts now under way in Committee 5. She proposed that the underlined portions of the Notes should be placed in square brackets, pending the outcome of the work being done in Committee 5.

2.9 It was so **agreed**.

2.10 On that understanding, Table S15.2 was **approved**.

MOD Annex to Resolution 312 (Rev.Mob-87), ADD draft Resolution [COM4-9], ADD draft Resolution [COM4-10], ADD draft Resolution [COM4-11]

2.11 Approved.

Draft new Resolution [COM4-12]

2.12 Approved, subject to editorial amendment.

Annex to Resolution [COM4-12]

2.13 The **Chairman** noted that the French and Spanish texts were to be aligned with the English version.

2.14 The Annex was **approved**.

2.15 Document 222 was **approved**, subject to review of the text currently remaining within square brackets.

3 Report of the Chairman of Working Group 4B concerning the recommended future WRC agendas and the revision of resolutions and recommendations according to Resolution 94 (WARC-92) (continued) (Document 220(Add.1))

3.1 Chairman of Working Group 4B introduced Addendum 1 to Document 220. Referring to items for the WRC-99 agenda, he drew attention in particular to a new item 11, intended to take account of the use of new technology in the band 156 - 174 MHz and, if appropriate, make the consequential revision of Appendix S18 to the Radio Regulations (Resolution [COM4-3)]. In response to an observation by the **Chairman**, he said that the original item 1 had been deleted because Working Group 4B had received no suggestion of any action at WRC-99 relating to the aeronautical mobile service. With regard to items for the WRC-01 agenda, he said that the deletion of item 2 had been proposed because of the suggested amendment to agenda item 1 for WRC-99; he also drew attention to the proposed additions relating to item 11.

3.2 The **Chairman** suggested that the question of deleting references to the aeronautical mobile service from agenda item 1 of the WRC-99 agenda should perhaps be left for consideration by Working Group PLEN-1. He invited the Committee to consider the recommended agenda items for WRC-99 and WRC-01.

3.3 The recommended agenda items for WRC-99 and WRC-01, as set out in Addendum 1 to Document 220, were **approved**.

4 First report of Working Group 4C (Document 259)

4.1 The **Chairman of Working Group 4C** introduced Document 259, relating to proposed Article S12. He briefly reviewed the Working Group's deliberations on the various parts of the text, and read out a number of editorial amendments. As a consequence of certain of those amendments, "NOC S12.1" should read "MOD S12.1" and "NOC S12.35" should read "MOD S12.35".

4.2 The **Chairman** invited the Committee to consider Document 259 in detail.

MOD S12.1

4.3 Approved, subject to a number of editorial amendments.

NOC S12.2 to NOC S12.7

4.4 Approved.

MOD S12.8 to MOD S12.13

4.5 Approved, subject to editorial amendment.

MOD S12.14

4.6 It was **agreed** that MOD S12.14 should remain within square brackets for the time being.

NOC S12.15

4.7 Approved.

ADD S12.15A, NOC S12.16 to S12.23, MOD S12.24, NOC S12.25, MOD S12.26, NOC S12.27, NOC S12.28, MOD S12.29, NOC S12.30, NOC S12.31, MOD S12.32, NOC S12.33 to S12.38, MOD S12.39 to S12.42, NOC S12.43, MOD S12.44, NOC S12.45

4.8 Approved, subject to editorial amendment.

4.9 The **Chairman of Working Group 4C** drew attention to a statement made, in Part 1 of Document 192, on behalf of a group of African countries with reference to proposed Article S12. He also recalled that the delegate of Syria had requested a statement from the Radiocommunication Bureau, for the record of the current meeting, about the implementation of Article S12; that delegation also wished to place on record its view that the adoption of Article S12 should be deemed an exceptional approach.

4.10 The **delegate of Kenya** said that the text of Document 192 was self-explanatory.

4.11 The **representative of BR** said that the implementation of Article S12 would call for a significant allocation of resources not provided for in the budget for 1998-99 - a matter which would have to be carefully reviewed and reported on later.

5 Report of the Chairman of Working Group 4D (Document 269)

5.1 The **Chairman of Working Group 4D** reported that, while progress had been made in Sub-Working Group 4D1 on some items, there had been no consensus on the further action to be taken with regard to the regulatory and procedural issues relating to Appendices 30 and 30A. An informal group would meet later in a final effort to find a solution. Ad hoc Groups 4-4 and 4-5, established respectively to study the compatibility between non-GSO and BSS systems, and to update Annex 5 to Appendix 30 and Annex 3 to Appendix 30A, were expected to report shortly. Regarding Israel's previous request to transfer its orbital position from 13º W to 4º W, given the failure to solve the attendant technical and regulatory problems, it had been agreed to report the matter to Committee 4. Planning was proceeding meanwhile, with the previously agreed orbital position of 13º W for Israel. The Working Group had examined Annex 2 to Appendix 30 and agreed on most of the items proposed for revision, and a document was being prepared for submission to the Committee. Document 269 reflected the agreements reached on some of the compatibility issues set out in § 3.15 of Document 56. A solution had also been found to the problem of incompatibility between BSS in Region 1 and FSS in Region 3 in the frequency band 12.2 - 12.5 GHz.

5.2 The **Chairman** invited the Committee to consider Document 269 item by item.

5.3 Referring to item 1), the **delegate of France** recommended that the Committee approve the compromise solution proposed by his country in Document 223. The issue was how to deal with Appendices 30 and 30A. A decision by Working Group 4D was urgently required, as it would have implications for the work of Working Group 4A.

The meeting was suspended at 1230 hours and resumed at 1940 hours.

5.4 The **delegate of Lebanon,** speaking as the Chairman of the informal working group established earlier, read out a six-point informal draft document on the methodology for the treatment of procedural and regulatory questions related to Appendices 30 and 30A. The text represented a compromise that had been agreed by 19 delegates, whose names were listed in the draft document.

5.5 In response to a proposal by the **delegate of the United States**, supported by the **delegate of Brazil**, that an alternative text should be distributed, reflecting a different understanding of the compromise, the **Chairman** suggested that comments should be made on the draft that had been read out.

5.6 The **delegate of Syria** observed that a future replanning conference might well revisit those issues.

5.7 The **delegate of Lebanon** indicated that that there had been no negative reaction during the discussion of the proposal, at which the United States had been present.

5.8 The **delegate of the Islamic Republic of Iran**, supporting the draft document, said that what he had agreed to was the inclusion in the current structure of Appendices 30 and 30A of any amendments made by the Conference, and not the updating of Annex 4.

5.9 The **delegate of the United States** protested that since the draft document had been drawn up after the informal meeting, had been seen by only a few persons and was unavailable to the interpreters, it was improper for it to be discussed in the Committee. He was supported by the **delegates of Luxembourg**, **Spain** and **Zimbabwe**.

5.10 The **Chairman** pointed out that compromise proposals were often presented orally and cited No. 378 of the Convention which empowered him to decide whether a proposal must be submitted in writing.

5.11 The **delegate of the United States** countered by citing No. 379 of the Convention (as amended at Kyoto), which stated that the texts of all major proposals to be put to the vote had to be distributed in good time in the working languages of the Conference, in order that they might be studied before decision. The matter before the Committee was contentious and might need to be put to the vote; the document should therefore be circulated before any discussion took place. He also proposed that the term "agreed by" should not be used.

5.12 It was so **agreed.**

5.13 The **Legal Adviser** pointed out that No. 379 of the Convention referred to circulation prior to "discussion" and not "decision" and that "vote" should be interpreted in its broadest sense.

5.14 The **Chairman** suggested that the informal working group should meet again to produce a compromise in writing. The **delegate of Lebanon** concurred.

5.15 The **delegate of the United States** cautioned that the discussion in any such meeting should be placed on record. At the suggestion of the **delegate of Syria,** the **Chairman** therefore proposed

that the informal group should be transformed into a formal ad hoc group, with the title ad hoc Group 2, in order to avoid any challenge to its validity.

5.16 It was so **agreed.**

5.17 The **delegate of France** suggested that, given the inevitable delay in translating a new document, the discussion should take place on the basis of the current draft document, which should be reproduced forthwith in three languages to enable the Chairman of ad hoc Group 2 to submit it to Committee 4 or Working Group 4D to allow for oral amendments to be introduced.

5.18 It was so **agreed.**

5.19 The **delegate of the United Kingdom**, supported by the **delegate of Turkey**, stressed that there should be no further discussion of the document until it had been translated as it stood.

5.20 The **Chairman** said that the document would take the form of a note from the Chairman of the ad hoc Group; the words "agreed by" would not appear, but the participating delegations would be listed. The **delegate of Norway** agreed that the substantive part of the draft document should be reproduced and translated.

5.21 The **Chairman** invited the Committee to resume consideration of Document 269.

5.22 Items 2) and 3) were **approved**.

5.23 Referring to item 4), the **delegate of Israel** regretted that he had not received support on the important matter of changing his Administration's orbital position from 13º W to 4º W, which not only posed no problem to other systems, but would relieve congestion.

5.24 The **delegate of Egypt**, supported by the **delegates of Syria**, **the Islamic Republic of Iran**, **Lebanon** and **Saudi Arabia**, said that while every effort had been made to find a technical solution to the interference situation, he rejected the proposal on the grounds that the results of the analysis so far gave no clear evidence that it would constitute an improvement. As the analysis was incomplete, the technical aspects could be reviewed after the Conference.

5.25 Item 5) was **approved**.

5.26 The **Chairman** noted that item 6) contained text submitted for approval as a result of the discussion on § 3.15 of Document 56, on how to deal with various combinations of compatibility issues. He invited comments on that text.

5.27 Following observations by the **delegate of Russia**, the **Chairman of Working Group 4D** and the **representative of BR**, it was **agreed** that the Radiocommunication Bureau would provide a written definition of the term "new assignments" contained in § 1 of the text, and would also provide terminology for the requisite editorial amendments, which would be considered by Committee 4 itself.

5.28 On that understanding, §§ 1, 1.1, 1.2 and 1.3 were **approved**.

5.29 The **representative of BR**, responding to an observation by the **representative of Intelsat** relating to § 1.4, said that the issue dealt with the general principle of how to treat the compatibility with FSS space-to-Earth from BSS feeder links into FSS space-to-Earth. The question of Regions could perhaps be considered when the Committee had Document DT/114 before it.

5.30 On that understanding, § 1.4 was **approved**.

5.31 Following observations by the **delegate of Russia** on § 1.5, the **representative of BR**, the **Chairman of Working Group 4D** and the **delegate of Syria**, it was **agreed** to replace

"[YY.YY.YYYY]" by "27 October 1997", and to place the references to the Tables within square brackets; it was also **agreed** with regard to the limits to be given in the first Table that the Radiocommunication Bureau would discuss with the Russian delegation the possibility of using the relevant figures contained in Document 15.

5.32 On that understanding, § 1.5 was **approved**.

5.33 §§ 2 and 2.1 were **approved**.

6 Proposed modification to Article S18 (Documents 35(Add.1), 216)

6.1 The **Chairman** invited the delegate of Canada to introduce proposal CAN/35/146, contained in Addendum 1 to Document 35.

6.2 The **delegate of Canada** said that the intention of the proposal was to deal with a possible weakness, relating to licences, in the text of Article S18. The proposed ADD S18.2*bis* [2021*bis*] was aimed at enabling two or more administrations to reach agreement on mutual recognition of licences - a provision not well covered by Article S18, particularly in No. S18.1. A further aim was to support the work done in connection with the GMPCS Arrangement.

6.3 The **Chairman** invited the Legal Adviser to give a legal opinion on the two proposals before the Committee: proposal CAN/35/146 and proposal MOD S18.2*bis* [2021*bis*] in Document 216.

6.4 The **Legal Adviser**, observing that the proposal contained in Document 216 differed only slightly from the text of the Canadian proposal CAN/35/146, said that the basic elements contained in Article S18, especially Nos. S18.1 and S18.2, of the simplified Radio Regulations, merited careful study.

6.5 His starting point was the original Canadian proposal. The Canadian delegation had said that there could be a weakness in Article S18 with regard to licensing, because No. S18.1 did not fully cover the GMPCS Arrangement; but the latter, in any case, had only been provisionally adopted. With regard to the wording of the Canadian proposal, he was pleased that the words "a group of two or more administrations" had now been amended to read "two or more administrations". The wording "by concluding a special agreement to mutually recognize the licences issued by the countries which are parties to the special agreement" sounded reasonable; what was less reasonable, however, was that the basis was the GMPCS Arrangement, which, as he understood it, was intended to be general in application. From a legal viewpoint, that gave rise to two difficulties.

6.6 First, the GMPCS Arrangement (and it should be borne in mind that the Memorandum of Understanding was merely a declaration of intent) was no agreement whatsoever; the group which had elaborated it, moreover, was something new in ITU's history, combining government delegations with entities in private law. His advice, given pursuant to the Council's instruction to the Secretary-General to provide the group concerned with the necessary legal assistance, had been that, on the understanding that the MoU was only a declaration of intent, the Arrangement, in order to be at all workable, should become an agreement - something which the group had not wanted. The language was very loose, contained nothing binding, and was far from that of No. S18.2, which the Committee should peruse. For example, No. S18.2 provided for exceptions to No. S18.1, but only by means of a special agreement between the government of a country and the government of one or more "neighbouring" countries concerning one or several stations of its broadcasting service or of its land mobile services, operating on frequencies above 41 MHz. First and foremost, therefore, it

envisaged an agreement between governments, whereas the Canadian proposal referred only to administrations. The intention of the Canadian proposal was certainly not to improve national coverage, but rather the international, global coverage aimed at by the GMPCS Arrangement. In addition, the Canadian proposal was completely exceptional to No. S18.1, which made a licence a precondition for a transmitting station to be established or operational. The Arrangement was neither a treaty nor a contract in civil law, but an instrument *sui generis*, conceived by governmental and private-law entities and unable, therefore, to be considered either as a governmental agreement or an international legal instrument within the purview of Article S18 as a whole, the latter embodying the principle that a licence was required to be given by a government, and that a government could grant licensing exemptions only in agreement with another government.

6.7 Secondly, neither the Canadian proposal nor the new proposal contained in Document 216 referred to what was considered, in the Constitution, as a special arrangement. He drew attention, in that context, to No. 193 of the Constitution, which covered only matters which did not concern Members in general. The goal of the GMPCS Arrangement was the contrary: it concerned members, because it was intended to be global in purpose. Therefore, the Constitution could hardly be considered as a basis for categorizing the GMPCS Arrangement as a special agreement; nor could the paragraphs on the special agreements in Article 7 of the Radio Regulations form such a basis, being limited to frequency assignments and allocations only.

6.8 Thus, both the Canadian proposal and that in Document 216 were premature. The GMPCS Arrangement was hard to categorize with regard to its legal status; but it certainly had no binding character whatsoever. He thought it would be opportune, therefore, to await developments and see how many governments and private-sector members would subscribe to it and how it would become implementable.

6.9 The **Chairman** invited comments from the Committee.

6.10 The **delegate of Brazil**, recalling that his country had signed the Memorandum of Understanding in June 1997, said that even after having heard the Legal Adviser's arguments, he remained in favour of the Canadian proposal. The time was now ripe, while systems were still being developed, for the adoption of a provision to allow for exceptions to No. S18.1 so that arrangements could be made between two or more administrations to facilitate the circulation of mobile stations and earth stations.

6.11 The **delegate of Micronesia**, speaking neither for nor against the proposal, said that he understood special agreements to be instruments that did not concern Members in general.

6.12 The **delegate of Russia** said that he concurred with the statement made by the Legal Adviser. The proposal to add a new No. S18.2*bis* raised a whole range of legal issues connected with the interrelations among Member States. The Memorandum of Understanding, which had been signed by private enterprises that had an interest in the matter, but by almost none of the administrations, was not a sound basis for arguments in favour of the proposed addition. The new arrangements envisaged in the proposal were already provided for, in essence, by the Constitution: after all, nothing prevented Member States from concluding agreements among themselves, including on the circulation of various radioelectronic devices. He did not think that the proposal was ripe for the Committee's consideration and opposed the proposed addition.

6.13 The **delegate of Canada** said the intent of the proposal was merely to incorporate in the Radio Regulations a provision that would make it easier for administrations to recognize licences granted by others in special situations. If the Committee so desired, he was prepared to convene a small drafting group to work further on the proposal.

6.14 The **delegate of the United States** supported the intent behind the proposal. The best course at present would be to prepare a resolution for consideration by the next Plenipotentiary Conference with a view to adjusting No. 193 of the Constitution. A further modification to No. S18.2 might also be contemplated. Both of those tasks might be taken on by the drafting group proposed by the Canadian delegation.

6.15 The **delegates of Germany** and **the People's Democratic Republic of Lao** supported the ideas behind the proposal and favoured the formation of a drafting group to see if those ideas might be incorporated in No. S18.2.

6.16 The **delegate of Spain** said the purpose of the proposal was already perfectly well served by No. 193 of the Constitution, which provided ample freedom for the conclusion of agreements that did not concern Members in general. He saw no need for the Committee to discuss the proposed addition to the Radio Regulations.

6.17 The **delegate of China** observed that the GMPCS Arrangement had not matured to the extent necessary for it to be written into the Radio Regulations, nor was there sufficient consensus on the subject for such a step to be taken. Resolution 25 (WRC-95) dealt adequately with the issues raised by the development of GMPCS. The **delegates of Mauritania** and **Viet Nam** supported those remarks.

6.18 Following further comments by the **delegates of Canada**, **the United States**, **Spain** and **Turkey** and by the **Legal Adviser**, the **Chairman** suggested that an informal drafting group, to be headed by the Canadian delegation, should prepare a draft resolution setting out revisions to No. 193 of the Constitution, for consideration by the next Plenipotentiary Conference.

6.19 It was so **agreed**.

7 Organization of work (Documents 252, 266)

7.1 The **Chairman** suggested that ad hoc Group 1 should be entrusted with responding to the request from Working Group PLEN-1, contained in Document 252, for assistance with the wording of an agenda item for a future world radiocommunication conference concerning replanning of the broadcasting satellite plan. He further suggested that Working Group 4A should take up the issue of incorporation by reference in connection with MOD S19.99, contained in Document 266.

7.2 It was so **agreed**.

The meeting rose at 2225 hours.

The Secretary:
T. GAVRILOV

The Chairman:
E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 298-E
27 November 1997
Original: French

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

COMMITTEE 5

SUMMARY RECORD

OF THE

EIGHTH MEETING OF COMMITTEE 5

Friday, 14 November 1997, at 0900 hours

Chairman: Mrs. V. RAWAT (Canada)

Subjects discussed		**Documents**
1	Documents submitted by ad hoc Group 3	247, 251, 257, 260; DT/88(Rev.1)

1 Documents submitted by ad hoc Group 3 (Documents 247, 251, 257, 260; DT/88(Rev.1))

Document 251

1.1 The **Chairman of ad hoc Group 3** said that the purpose of Document 251 was to modify footnote S5.546 concerning the band 31.5 - 31.8 GHz in Region 1.

1.2 The **delegates of Estonia**, **Spain**, **Hungary**, **the Islamic Republic of Iran**, **Lithuania**, **Syria**, **Israel** and **Turkey** asked for the names of their countries to be added to the footnote.

1.3 The **observer for the World Meteorological Organization** said that the band 31.5 - 31.8 GHz, which was allocated on a worldwide basis for passive telemetry, was very important for the calibration of certain passive telemetry sensors. Excessive use of the band by active services would jeopardize many fundamental earth-exploration satellite and meteorology applications. The **delegate of Mauritius** endorsed the concerns expressed. The **delegate of the United States**, pointing out that few countries had previously been listed in the footnote under consideration, said that many passive scientific activities used the band 31.5 - 31.8 GHz and that there was a risk of compatibility problems if too many countries were included. The **delegates of India** and **Canada** shared the view expressed by the observer for WMO and by the delegate of the United States. The **delegate of the Netherlands** supported what had been said by the previous speakers, while emphasizing the importance of footnote S5.149 for radio astronomy. The **representative of IUCAF** endorsed the statement made by WMO.

1.4 The **delegates of Lebanon**, **Jordan**, **Saudi Arabia** and **the United Arab Emirates** asked for the names of their countries to be included in the footnote.

1.5 The **Chairman** took note of the concerns that had been expressed.

1.6 Document 251, as amended, was **approved**.

Document 247

1.7 The **Chairman of ad hoc Group 3** introduced Document 247, containing draft Resolution [COM5-11] on the use of the frequency band 31.8 -33.4 GHz for high-density systems in the fixed service.

1.8 The **Chairman** pointed out that the substance of Document 247 was related to Document 257 which would be considered later.

1.9 The **delegate of the United States** said that the date given in *resolves* depended on the decision of the next WRC. The **delegate of Sweden** considered that it was nevertheless important to mention the date so as not to defer the matter indefinitely. The **Chairman** suggested that the date should be left in the text of *resolves* and that a note be drafted for Working Group PLEN-1 to draw its attention to the fact that the matter was to be reviewed at the next WRC.

1.10 It was so **agreed**.

1.11 The **delegate of the United States** proposed that *resolves* 2 should be amended so that, rather than focusing on the radionavigation service, it covered all the other services quoted in *considering* b) to which an allocation was made. The **Chairman** proposed that that observation be accommodated by amending the end of *resolves* 2 to read as follows: "taking full account of the future requirements and development of the other services to which the band is allocated, and

available ITU-R studies". The **delegate of Germany** supported the proposal. The **delegate of Australia** proposed that the reference should be to "other services allocated on a primary basis" because the band was also allocated to other services on a secondary basis.

1.12 There being no objections, the amendments to *resolves* 2 were **approved**.

1.13 Draft Resolution [COM5-11] in Document 247, as amended, was **approved**.

Document 260

1.14 The **Chairman of ad hoc Group 3** said that Document 260 contained draft Resolution [COM5-12] concerning frequency bands above 30 GHz available for use by the fixed service for high-density applications. It had not been possible in the Group to reach a consensus on the *resolves* and two frequency bands remained in square brackets.

1.15 The **Chairman** invited delegates to begin by reviewing the *considering* of the draft Resolution.

1.16 The **delegate of the United States** proposed that the words "and planetary" be inserted in *considering* f) after the words "moon-to-Earth".

1.17 It was so **agreed**.

1.18 The **delegate of the United States** further proposed that a new *considering* f)bis be added, worded as follows: "that the band 37 - 38 GHz is being planned by the space research service to provide space very-long-baseline interferometry".

1.19 It was so **agreed**.

1.20 The **delegate of Germany**, noting that in the English text of *considering* f) and f)bis the use of the word "planned" was potentially misleading, proposed that the words "for use" be inserted after that word to make it quite clear that it was not a question of planning but of expectation.

1.21 It was so **agreed**.

1.22 The **Chairman** invited the Committee to consider the *resolves* paragraph, in which two frequency bands remained in square brackets.

1.23 The **delegate of the United States** pointed out that the band 31.8 - 33.4 GHz was the subject of draft Resolution [COM5-11] (Document 247) which the Committee had just approved, and that it was foreseen that the allocation for high-density systems in the fixed service in that frequency band should not come into effect before 1 January 2001. For the sake of clarity, he proposed that where the frequency band appeared under *resolves* in the draft Resolution under consideration, an asterisk should be inserted referring to a footnote which would specify that the allocation to the fixed service would not take place before 1 January 2001, with a cross-reference to Resolution COM5-11. Following an exchange of views between the **delegates of the United Kingdom**, **Israel** and **the United States**, the **Chairman** proposed that the reference to the band 31.8 - 33.4 GHz should be accompanied by an asterisk and by a footnote indicating that the date on which the allocation would come into effect would be that provided for in Resolution COM5-11.

1.24 It was so **agreed**.

1.25 The **delegate of Russia**, supported by the **delegates of Bulgaria** and **South Africa**, wanted any reference to the band 40.5 - 42.5 GHz, which was in square brackets, to be deleted. The **delegate of Germany** wanted the square brackets to be deleted around the band. The **Chairman of ad hoc Group 3** suggested that consideration of the two bands that remained in square brackets be suspended and resumed after consideration of Document DT/88(Rev.1).

1.26 It was so **agreed**.

1.27 Draft Resolution [COM5-12] given in Document 260, as amended, was **approved** with the exception of the two frequency bands in square brackets under *resolves* and subject to any amendment arising from the consideration of Document DT/88(Rev.1).

Document 257

1.28 The **Chairman of ad hoc Group 3** introduced Document 257, which contained proposals concerning the identification, by means of footnotes, of suitable frequency bands above 30 GHz for use by the fixed service for high-density applications. As consensus had not been reached within the Group, additional footnotes concerning alternative allocations in the United States appeared in the Table 31.8 - 37 GHz. With respect to MOD Table 42.5 - 54.25 GHz and MOD Table 54.25 - 71 GHz, he said that, apart from ADD S5.547, all the footnotes had been approved. The double underlining should therefore be removed, except for ADD S5.547 which was still being considered.

ADD S5.547

1.29 The **Chairman** said that the question of the square brackets [37 - 40 GHz] and [40.5 - 42.5 GHz] in ADD S5.547 would be resolved after the completion of consideration of Document DT/88(Rev.1).

1.30 Subject to that comment, ADD S5.547 was **approved**.

ADD S5.547A, Table 31.8 - 37 GHz, ADD S5.547B, ADD S5.547C, ADD S5.547D, ADD S5.547E

1.31 **Approved**.

MOD Table 42.5 - 54.25 GHz, MOD Table 54.25 - 71 GHz

1.32 The **delegate of Malaysia** expressed reservations with respect to ADD S5.556A and ADD S5.556B, which he felt should be deleted. On being reminded by the **Chairman** that those two footnotes had already been approved by the Committee, the **delegate of Malaysia** said that he would raise the matter in Plenary.

1.33 MOD Table 42.5 - 54.25 GHz and MOD Table 54.25 - 71 GHz were **approved**, subject to the reservations expressed.

Document DT/88(Rev.1)

1.34 The **Chairman of ad hoc Group 3** introduced Document DT/88(Rev.1) which dealt with the same subject as Document 257 which the Committee had just considered. Following the discussions that had taken place in the ad hoc Group, footnote ADD S5.547 and the proposed allocations on a primary basis to the fixed-satellite service and the fixed service in the frequency band 40.5 - 42.5 GHz had been put in square brackets. The question as to whether the fixed-satellite service could be given an allocation in the frequency band 40.5 - 42.5 GHz had been discussed at

length. Many administrations, in particular those belonging to Region 1, were opposed to such an allocation as they wished to protect their existing or future broadcasting services in that band. The possibility of regional allocations had been raised, but as it had not been possible to take a decision it had been decided that what was a complex matter should be referred to the Committee.

1.35 The **Chairman** said that the Committee's discussion would focus exclusively on the Table 37 - 42.5 GHz, on footnote ADD S5.551A and on the square brackets around draft Resolutions [COM5-16] and [COM5-17].

1.36 The **delegate of the United States** said that, although the identification of frequency bands for high-density applications in the fixed service was on the agenda of the Conference, some bands had already been identified, in particular the band 37 - 39.5 GHz, where many countries had already brought high-density systems into service; moreover, some countries were using an additional 500 MHz (i.e. up to 40 GHz) for the operation of such systems. Thus, in the range 30 - 60 GHz, a total portion of 16.5 GHz was allocated to the fixed service, in other words over half of the range. On the other hand, the amount of spectrum allocated to the fixed-satellite service was only 8 GHz and it was currently being shared with the fixed service. Lastly, it was very clear from ITU-R studies that the fixed-satellite service and high-density applications in the fixed service were not compatible. For that reason, the United States delegation had proposed that an additional portion of spectrum should be allocated to the fixed-satellite service in the frequency band 40.5 - 42.5 GHz, which seemed, in the current circumstances, to be the only reasonable option which would enable all countries to act according to their own needs.

1.37 The **delegate of Belgium** did not agree with the way in which the delegate of the United States had calculated the sharing of the spectrum between the fixed service and the fixed-satellite service. He explained that, whereas it had once been possible to include the separation bands, which were narrow, in the total spectrum allocated to the fixed service, that was no longer the case at high frequencies where the bandwidth was very large. What should therefore be done for the fixed service was what had long been done for the fixed-satellite service, namely to indicate the two bands used without taking into account the separation band which in fact was not used by the fixed service.

1.38 After a short suspension of the meeting, the **Chairman** invited the participants to resume discussion of the proposal for a new worldwide allocation to the fixed-satellite service in the bands 40.5 - 42.5 GHz. The **delegates of Indonesia, Costa Rica, Colombia, Canada, Ecuador, Brazil, Papua New Guinea** and **China**, and the **observer for INTELSAT**, were in favour of the new allocation, whereas the **delegates of Turkey, the United Kingdom, Bulgaria, Denmark, Estonia, Finland, Portugal** and **France** were firmly opposed to it. The **representative of IUCAF**, recalling that the radio astronomy service was operated in adjacent bands, said that from his point of view a decision on the new allocation could not be taken until such time as the question of unwanted emissions had been resolved.

1.39 The clear split between the supporters of the two positions gave rise to a short discussion between the **Chairman** and the **delegates of the United States**, **France** and **India,** who were in favour of separating the question of the designation of the bands 37 - 40.5 GHz for use by high-density systems in the fixed service from that of the proposed new worldwide allocation to the fixed-satellite service, on which the Committee should decide as a matter of priority.

1.40 The **delegate of Turkey** was also in favour of separating the two frequency ranges in question and pointed out that the implementation of high-density applications in the fixed service which was already taking place in the range 37 - 40.5 GHz did not preclude an allocation to the

fixed-satellite service in some Regions, and that in the bands 40.5 - 42.5 GHz the allocation to the fixed-satellite service might be adapted to the needs of the different Regions. Given that it was clearly impossible to make a worldwide allocation to the fixed-satellite service in those two bands, the **Chairman** proposed that the possibility of regional allocations should be considered.

1.41 The **delegate of the United Kingdom** proposed a motion for closure of the debate in accordance with No. 399 of the ITU Convention (Geneva, 1992) and for a vote in accordance with No. 418 of the ITU Convention (Geneva, 1992). The motion was supported by the **delegates of Turkey** and **Norway** and opposed by the **delegates of the United States** and **Indonesia**.

1.42 The motion for closure of the debate was **adopted** by 55 votes to 20, with 8 abstentions.

1.43 The **Chairman** then asked for a vote by show of hands on the question of the proposed new worldwide allocation to the fixed-satellite service in the band 40.5 - 42.5 GHz.

1.44 The proposed new worldwide allocation to the fixed-satellite service in the band 40.5 - 42.5 GHz was **rejected** by 50 votes to 20, with 10 abstentions.

1.45 The **delegate of the United States** acknowledged the result of the vote but added that the decision not to make a worldwide allocation to the fixed-satellite service in the band 40.5 - 42.5 GHz did not mean that other options could not be taken into consideration. Following a proposal by the **Chairman** that the question of deleting the square brackets around ADD S5.547 with respect to the frequency bands 40.5 - 42.5 GHz should be considered first, he said that his delegation needed to assess the consequences of the rejection of the proposed worldwide allocation to the fixed-satellite service in those bands and requested that possible alternative solutions to be submitted to the Committee in writing. The **delegate of Canada** supported that request. The **observer for INTELSAT** pointed out that, as a result of the vote, it was clear that footnote S5.547 should no longer be proposed as an addition in the range 37 - 40.5 GHz.

1.46 The **Chairman** asked the Chairman of Working Group 5C to coordinate work to prepare a document setting out the possible alternative solutions to the worldwide allocation to the fixed-satellite service in the band 40.5 - 42.5 GHz, which had been rejected, for consideration at a subsequent meeting of the Committee.

1.47 It was so **agreed**.

1.48 In reply to a question by the **delegate of the United Kingdom**, the **Chairman** summed up, indicating that the Committee had decided not to make a worldwide allocation to the fixed-satellite service in the band 40.5 - 42.5 GHz; to ask for possible alternative solutions, for example regional allocations, to be submitted in writing; and, once it had taken a decision on those solutions, to consider the question of deleting the square brackets around ADD S5.547.

The meeting rose at 1200 hours.

The Secretary:
J. LEWIS

The Chairman:
V. RAWAT

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 299-E 26 November 1997 Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

MINUTES

OF THE

FIFTH PLENARY MEETING

Thursday, 13 November 1997, at 1430 hours

Please replace paragraph 1.5 by the following text:

1.5 The **Chairman of Committee 4** said that since the last Plenary Meeting the Committee had held two meetings and made useful progress. All the necessary decisions had been taken to enable the BR to begin the calculations for the draft Plan and he hoped that a document containing the draft Plan would be available in time for an information meeting on the following Saturday, at which BR representatives would answer any questions administrations might have. Working Group 4B had completed its work and all its conclusions had been considered by the Committee. Working Group 4A had also completed the tasks assigned to it, with the exception of those issues awaiting a decision from Working Group 4D, and hoped to meet its target date for completion. Working Group 4C was making good progress and Committee 4 had approved revisions to Article S12 which covered HFBC planning. However, there was some difficulty in reaching agreement on the implementation of the WARC-92 extension bands. Working Group 4D still had a number of matters to resolve and seemed unlikely to complete its work by the target date. An ad hoc Group had been established to consider the question of replanning at a future conference; while there was agreement in principle, it was proving difficult to find acceptable wording. The approaches to be adopted to the provisions of Article 4 and Appendices 30 and 30A were also proving contentious, but he was optimistic that agreement would be reached at the Committee's next meeting.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 299-E
18 November 1997
Original: English

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

PLENARY MEETING

MINUTES

OF THE

FIFTH PLENARY MEETING

Thursday, 13 November 1997, at 1430 hours

Chairman: Mr. R. SMITH (Australia)

Subjects discussed		**Documents**
1	Oral reports by the Chairmen of Committees and Working Groups	-
2	Second series of texts submitted by the Editorial Committee for first reading (B.2)	229
3	Third series of texts submitted by the Editorial Committee for first reading (B.3)	265
4	Fourth series of texts submitted by the Editorial Committee for first reading (B.4)	266
5	First series of texts submitted by the Editorial Committee for second reading (R.1)	230

1 Oral reports by the Chairmen of Committees and Working Groups

1.1 The **Secretary of Committee 2** reported that, as at 13 November 1997, 107 of the 135 countries represented at the Conference had deposited their credentials, 101 of which had been found to be in order. He urged delegations which had not yet submitted their credentials to do so as soon as possible. The **Chairman** reminded delegations that only those whose credentials had been established would be entitled to sign the Final Acts of the Conference.

1.2 The **Chairman of Committee 3** said that Joint Working Group COM 3/PLEN-1 had met once in order to discuss the financial situation and begin the evaluation of the additional expenditures that would result from the decisions of WRC-97. He urged Committees 4 and 5 to expedite the transmission of any remaining documents that contained decisions with financial implications.

1.3 The **Chairman of Joint Working Group COM 3/PLEN-1** added that the Joint Working Group had noted that the decisions of WRC-97 would entail substantial additional work by the ITU-R Study Groups. The Joint Working Group had also noted that the provisional estimate for additional resources required by BR as a result of WRC-97 decisions was 3 240 000 Swiss francs, a considerable increase over the figure of 2 790 000 Swiss francs estimated at a similar point in time during WRC-95. Moreover, that estimate would rise once the subsequent decisions of Committees 4 and 5 were taken into account. The provisional estimate would be further refined with the help of BR. It was clear that the sum of 500 000 Swiss francs allocated by the Council for post-Conference expenditure would, as after WRC-95, be far exceeded, and the Joint Working Group had examined possible measures to reduce such differences in the future in order to avoid a serious deterioration in ITU's financial situation. Two measures had been considered appropriate: application of the criteria set out in the note from the Chairman of the Conference in Document 128, in particular as regards post-Conference costs relating to the development of future WRC agendas; and improvement of the proposals that were submitted to the Council.

1.4 At the suggestion of the **Chairman**, it was **agreed** that the report of the Joint Working Group should be considered by both Working Group PLEN-1 and Committee 3 prior to its submission to the Plenary.

1.5 The **Chairman of Committee 4** said that since the last Plenary Meeting the Committee had held two meetings and made useful progress. All the necessary decisions had been taken to enable the BR to begin the calculations for the draft Plan and he hoped that a preliminary document would be available in time for an information meeting on the following Saturday, at which BR representatives would answer any questions administrations might have. Working Group 4B had completed its work and all its conclusions had been considered by the Committee. Working Group 4A had also completed the tasks assigned to it, with the exception of those issues awaiting a decision from Working Group 4D, and hoped to meet its target date for completion. Working Group 4C was making good progress and Committee 4 had approved revisions to Article S12 which covered HFBC planning. However, there was some difficulty in reaching agreement on the implementation of the WARC-92 extension bands. Working Group 4D still had a number of matters to resolve and seemed unlikely to complete its work by the target date. An ad hoc Group had been established to consider the question of replanning at a future conference; while there was agreement in principle, it was proving difficult to find acceptable wording. The approaches to be adopted to the provisions of Article 4 and Appendices 30 and 30A were also proving contentious, but he was optimistic that agreement would be reached at the Committee's next meeting.

1.6 The **Chairman of Committee 5** reported that the Committee had made significant progress. Working Groups 5A and 5C had completed their work, with the exception of one question from the latter concerning high-density fixed service allocations. Working Group 5B had a number of MSS and FSS issues to complete. Progress had been made on generic MSS allocations in the bands 1.5 and 1.6 GHz, although statements in that regard had been made by ICAO, IMO, Greece and Russia, which would be reflected in the relevant summary record of Committee 5 and some of which would be brought forward to the Plenary at the appropriate time. Further work remained to be done in respect of seeking additional MSS spectrum in the band below 1 GHz and use of the bands 1 559 - 1 567 MHz and 1 675 - 1 683 MHz for MSS. Reasonable progress was being made on sharing between non-GSO and GSO FSS and between non-GSO and fixed services in the Ku and Ka bands; work was continuing in drafting groups and an ad hoc Group of Working Group 5B, the results of which would be considered directly by Committee 5.

1.7 The **Chairman of Committee 6** observed that the Committee had examined three series of texts which were submitted to the Plenary in Documents 229, 265 and 266 for first reading, and one series of texts which was submitted in Document 230 for second reading.

1.8 The **Chairman of Working Group PLEN-1** said that the Working Group had held six meetings and had considered the reports of its ad hoc Group 1 contained in Documents DT/45, DT/46, DT/47 and DT/48. Document DT/45(Rev.1) covered possible action on WARC/WRC Resolutions and Recommendations based on Annex 1 to Document 27, the report of the Director of BR. The Working Group had decided that further consideration of a draft new Resolution [GTPLEN1-XX] relating to the abrogation of certain texts, contained in Document DT/46+Add.1, should await final contributions from Committees 4 and 5. Ad hoc Group 1 had proposed a number of editorial amendments to WARC/WRC Resolutions and Recommendations with a view to bringing the language in line with the current ITU-R structure. The Resolutions and Recommendations concerned were listed in Document DT/47(Rev.1) and further details were provided in Document DL/32. Discussions were under way to determine the best way to submit those proposals to Committee 6, given that the changes were required in all three working languages. The Working Group had considered a draft new Resolution [GTPLEN1-YY] proposing a procedure for continuing the review work undertaken by ad hoc Group 1 on a regular basis at future competent conferences. A revised text of the draft was submitted to the Plenary in Document 255 for consideration at a later meeting. As a result of ad hoc Group 1's efforts, it should be possible to reduce the length of the Radio Regulations by some 150 pages.

1.9 Following discussions at the third Plenary Meeting, the Working Group had set up a second ad hoc Group to examine procedures for considering proposals relating to footnotes at future conferences, while a third ad hoc Group had been established to consider proposals stemming from Canada (Document 112), New Zealand (Document 37) and Annexes 4 and 5 to the report of the recent Radiocommunication Assembly concerning preparations for future conferences. The Working Group hoped to consider the conclusions of those two ad hoc Groups at its next meeting.

1.10 He drew attention to Document 252, through which the Working Group was seeking confirmation from Committee 4 on the wording and sequence of two possible future conference agenda items, relating to the report of the Intersessional Group of Experts on the BSS Plans for Regions 1 and 3, which were set out in Document DT/70(Add.2). In Document 235, the Working Group was submitting a preliminary list of possible WRC-99 and WRC-01 agenda items not being discussed by Committees 4 and 5, for consideration by Joint Working Group COM 3/PLEN-1. The Working Group was continuing its examination of the proposals for agenda items for future conferences contained in Documents DT/70+Add.1 but could not finalize its work until all the

proposals from Committees 4 and 5 had been received. He remained seriously concerned at the difficulty of drawing up a realistic agenda given the large number of items being proposed.

1.11 The **Chairman of Working Group PLEN-2** said that the Working Group's report was contained in Document 258 to be considered by the Plenary in due course, at which time he would provide further information.

2 Second series of texts submitted by the Editorial Committee for first reading (B.2) (Document 229)

2.1 The **Chairman** invited the meeting to consider the Committee 5 texts taken from Documents 215 and 191.

Article S5 (MOD Table 890 - 1 240 MHz, MOD Table 1 240 - 1 452 MHz, ADD S5.332, SUP S5.333)

2.2 Approved.

Article S5 (ADD S5.335)

2.3 The **Chairman of Committee 5** said that since footnote ADD S5.335 related to specific applications in Canada and the United States, the delegate of Viet Nam might wish to reconsider his request for the inclusion of his country's name in that footnote. The **delegate of Viet Nam** said that he wished to maintain that request since Viet Nam had licenced a relevant aeronautical radionavigation station.

2.4 ADD S5.335, as amended, was **approved**.

Article S5 (MOD Table 2 670 - 3 300 MHz, MOD Table 4 500 - 5 470 MHz, ADD S5.447D, ADD S5.448A, MOD Table 4 500 - 5 470 MHz, ADD S5.448B, MOD Table 7 450 - 8 175 MHz, ADD S5.461A, ADD S5.461B, Table 12.5 - 14.25 GHz (NOC 12.75 - 13.25 GHz, MOD 13.25 - 14 GHz), SUP S5.498, ADD S5.498A, ADD S5.501A, ADD S5.501B, Table 14.8 - 17.3 GHz (NOC 16.6 - 17.1 GHz, MOD 17.2 - 17.3 GHz), ADD S5.513A, MOD Table 86 - 116 GHz, ADD S5.562)

2.5 Approved.

2.6 The **delegate of Greece** said that given the other changes to Article S5, footnote S5.329 should refer to the earth-exploration satellite and space research services as well as to the radionavigation-satellite service. The **Chairman of Committee 5** pointed out that modification of that footnote had not been discussed at WRC-97. The **Chairman** suggested that the matter be brought to the attention of a future conference.

Article S21 (MOD Table S21-4)

2.7 The **delegate of the Islamic Republic of Iran**, expressing concern about protection of fixed service systems in his country, said that it had been agreed in Working Group 5A and in Committee 5 that Table S21-4 should be referred to an ITU-R Study Group for further clarification and confirmation. Following a comment by the **Chairman of Committee 5** that ITU-R could study contributions from administrations in that regard, the **Chairman** proposed that the Islamic Republic of Iran should pursue the matter directly with BR.

2.8 It was so **agreed**.

2.9 MOD Table S21-4 was **approved**.

Resolutions COM5-3 (WRC-97), COM5-4 (WRC-97)

2.10 Approved.

Appendix S3

MOD §§ 1-6 and Table I

2.11 Approved.

ADD Section II and Table II

2.12 The **Chairman of Working Group PLEN-1** proposed that in Note 14) to Table II "WRC-99" should be placed in square brackets since the date and agenda of the next WRC had not yet been fixed. The **Chairman of Committee 6** suggested that in that case the date "31 December 1999" given in the same note should also appear in square brackets. The **Chairman of Committee 5** pointed out that the date on which the note ceased to be applicable was fixed regardless of the date of the next Conference. The matter, which was largely editorial, could perhaps be resolved in informal discussions.

2.13 ADD Section II and Table II were **approved**, pending editorial amendment of Note 14) to Table II.

2.14 The second series of texts submitted by the Editorial Committee (B.2) (Document 229), as a whole, as amended, was **approved** on first reading.

3 Third series of texts submitted by the Editorial Committee for first reading (B.3) (Document 265)

3.1 The **Chairman** invited the meeting to consider the Committee 5 texts taken from Documents 239, 241 and 243.

Article S5 (MOD Table 75.2 - 137 MHz, MOD S5.198, MOD S5.202, MOD S5.203, ADD S5.203A, ADD S5.203B, MOD Table 5 580 - 7 450 MHz, MOD S5.459, MOD Table 7 450 - 8 175 MHz, MOD Table 8 175 - 8 750 MHz, ADD S5.462A, MOD S5.463, MOD Table 24.45 - 27 GHz)

3.2 Approved.

Article S5 (ADD S5.536A, ADD S5.536B)

3.3 The **delegates of Bulgaria**, **Singapore** and **Israel** requested that the names of their countries be included in ADD S5.536B.

3.4 The **delegate of Estonia**, speaking on a point of order, recalled that in accordance with No. 382 of the Convention, no amendment could be considered unless it was supported by at least one other delegation. The **Chairman** said that once all the requests had been made, he would see whether there was any support for them.

3.5 The **delegates of the Czech Republic**, **Egypt**, **Kuwait**, **Tanzania**, **Jordan**, **Saudi Arabia**, **Syria**, **the United Arab Emirates**, **Lebanon** and **the Islamic Republic of Iran** requested that their countries' names be included in ADD S5.536B.

3.6 The **delegates of New Zealand** and **the Netherlands** requested that their countries' names be deleted from the footnote.

3.7 The **delegate of Finland** supported those amendments.

3.8 The **Chairman of Committee 5** recalled that there had been extensive discussion of the two new footnotes at committee level. Although countries were concerned about the need to protect stations of the fixed and mobile services from stations of the earth exploration-satellite service, she pointed out that protection was afforded by ADD S5.536A and urged countries to reconsider their requests with respect to footnote S5.536B.

3.9 The **delegate of Turkey** proposed the deletion of the words "operated by neighbouring administrations" at the end of the first sentence of ADD S5.536A. If that were done, ADD S5.536B could be deleted.

3.10 The **delegate of India** opposed that proposal.

3.11 The **Chairman of Committee 5** said that ADD S5.536A dealt with neighbouring countries whereas ADD S5.536B was for national purposes only. It was therefore not appropriate to attempt to combine the two footnotes at the present juncture.

3.12 ADD S5.536A was **approved** as it stood.

3.13 ADD S5.536B, as amended, was **approved**.

Resolutions COM5-9 (WRC-97), COM5-13 (WRC-97)

3.14 **Approved**.

Recommendation 66 (Rev.WRC-97)

3.15 Following comments by the **delegates of the United Kingdom** and **Lebanon** on the wording of paragraph 6 under *recommends that ITU-R*, the **Chairman of Committee 5** confirmed that the text should read "such a boundary in Article S1;".

3.16 In response to a query by the **delegate of Lebanon**, the **Chairman** said that references to WRC-99 were being placed in square brackets pending the outcome of discussions in Working Group PLEN-1.

3.17 Recommendation 66 (Rev.WRC-97), as amended, was **approved**.

SUP Resolution 408 (Mob-87)

3.18 **Approved**.

3.19 In response to a request for clarification from the **delegate of Uzbekistan** as to why a number of footnotes that had been approved by Committee 5 had not been included in Document 265, the **Chairman of Committee 5** explained that her Committee had, exceptionally, considered two categories of footnotes, the first concerning proposals for deletions in conformity with Conference agenda item 1.1 and the second proposals for modifications or additions. The document now under consideration contained the Conference agenda item 1.1 footnotes; the others were to be published subsequently.

Article S5 (MOD S5.55, MOD S5.56, MOD S5.58, SUP S5.63, MOD S5.67, MOD S5.91, MOD S5.98, MOD S5.99, MOD S5.107, MOD S5.112, MOD S5.114, MOD S5.117, MOD S5.128, MOD S5.141, MOD S5.149, MOD S5.152, MOD S5.154, MOD S5.160, MOD S5.174, MOD S5.177, MOD S5.181, MOD S5.184, SUP S5.186, MOD S5.190, MOD S5.192, MOD S5.194, MOD S5.197, MOD S5.201, MOD S5.210)

3.20 **Approved.**

3.21 The **Chairman** having invited comments on the remaining footnotes relating to Article S5 taken from Document 241, the **Chairman of Committee 5**, in response to a query by the **delegate of Lithuania**, said that MOD S5.323 was in the second category of footnotes.

3.22 The **delegate of Nigeria** requested that his country's name be included in MOD S5.322.

3.23 In response to a comment by the **delegate of Estonia**, the **Chairman** said that it was not necessary to consider Document 265 concurrently with Document 174, for the latter contained a number of proposed footnotes that were not related to agenda item 1.1.

3.24 The **delegate of Estonia**, referring to MOD S5.277, requested that his country's name be placed in square brackets pending the outcome of the discussions on footnote S5.275, which was in the second category.

3.25 It was so **agreed**.

3.26 The **Chairman of Committee 5**, recalling her report to the third Plenary Meeting, said it had been implicitly understood that Committee 5 should only consider the proposals to modify footnotes which had already been formally submitted to it. She therefore urged the Chairman not to accept any further proposals to modify the footnotes currently under consideration.

3.27 The **delegate of Mauritania**, after stressing that it was impossible for small delegations to attend all the meetings held, requested that her country's name be added to MOD S5.237.

3.28 The **Chairman** said it was regrettable that countries were proposing further modifications to footnotes which had already been dealt with in considerable detail by Committee 5.

3.29 The **delegate of Germany** observed that a legal problem might arise if a footnote in the first category was approved at the present meeting and then considered again under the second category at a later meeting. The **Chairman of Committee 5** said it was her understanding that no footnote had been included in both categories.

3.30 The **delegate of Morocco** requested that his country's name be included in MOD S5.221.

3.31 The **delegate of Sweden** said that it was not appropriate to accept additions of country names to footnotes at the present juncture. Exceptionally, however, Nigeria's proposal might be considered, since it was actually a request for exclusion.

3.32 The **delegate of Côte d'Ivoire** said that his country had proposed the deletion of its name from MOD S5.464. However, that footnote did not appear in Document 265.

3.33 The **delegate of Albania** requested that his country's name be included in MOD S5.296.

3.34 The **Chairman** said that there appeared to be some confusion as to whether proposals in respect of both categories of footnotes had been taken into account. He therefore suggested that consideration of the remaining footnotes relating to Article S5 be deferred until the document containing the footnotes in the second category had been published. The two documents could then be considered concurrently.

3.35 The **Chairman of Committee 5** said that some administrations appeared to be seeking to have their names added to footnotes in the first category without having submitted the appropriate proposals before the cut-off date. While she could go along with the Chairman's suggestion for deferral, she considered that no further additions should be considered when the footnotes were discussed.

3.36 It was **agreed** to defer consideration of the remaining Article S5 footnotes taken from Document 241.

3.37 After consultation with the Chairmen of Committees 5 and 6, the **Chairman** said that the footnotes which had been deferred would be presented in the same document as those in the second category which had not yet been published. For ease of reference, furthermore, each footnote would be identified by category.

Article S1 (ADD S1.X)

3.38 The **delegate of Mexico** thought that the definition of high altitude platform station should specify the type of service concerned. The **Chairman of Committee 5** said that reference to a station "in the fixed service" would take care of that point.

3.39 The **delegate of Japan** recalled the lengthy discussion in Committee 5 and its subsidiary groups on the wording, and the fact that many countries wanted a future competent conference to consider other services using such stations. It would be preferable to leave the definition as it stood. The **Chairman of Committee 5** endorsed those remarks, observing that ADD S5.552A stated which bands were allocated to the fixed service for use by high altitude platform stations.

3.40 ADD S1.X was **approved**.

Article S4 (ADD S4.15A), Article S5 (MOD Table 40.98 - 68 MHz, ADD S5.162A, MOD Table 470 - 890 MHz)

3.41 **Approved**.

Article S5 (ADD S5.291A)

3.42 The **delegate of Norway** requested the inclusion of Norway in footnote S5.291A. The **delegates of Finland** and **Germany** supported that request. The **Chairman** confirmed that the footnote was within the scope of the agenda of the Conference, and that the request could therefore be met.

3.43 ADD S5.291A, as amended, was **approved**.

Article S5 (MOD Table 42.5 - 54.25 GHz, ADD S5.552A)

3.44 **Approved**, subject to editorial amendment of the English version only of ADD S5.552A.

Article S11 (MOD S11.24, ADD S11.26)

3.45 The **Chairman of Committee 4** suggested that both provisions should be placed in square brackets. Article S11 was still under discussion in Committee 4, and when that discussion was concluded a complete draft of Article S11 could be submitted to the Plenary for consideration.

3.46 It was so **agreed**.

Resolution COM5-7 (WRC-97)

3.47 The **delegates of India** and **the United States**, referring to the definition of high altitude platform station just approved under Article S1 (ADD S1.X), suggested that the Editorial Committee should ensure clarity and consistency in the related terminology used in Resolution COM5-7 which dealt with the use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz by high altitude platform stations in the fixed service.

3.48 The **Chairman of Committee 5** thought that the terms used in Resolution COM5-7 were clear from their context, but agreed to work with Committee 6 on the matter.

3.49 The **Vice-Chairman of Committee 6** said that, notwithstanding its title, Resolution COM5-7 actually dealt with other services as well. He therefore suggested that "and other services" should be added at the end of the title and, replying to a concern expressed by the **Chairman of Working Group 5C** that the amendment might imply an unlimited broadening of the scope of the Resolution, confirmed that the text of the Resolution specified the other services concerned.

3.50 It was so **agreed**.

3.51 The **Chairman of Committee 5** read out the following statement by the delegation of Canada:

> "Regarding, *instructs the Director of the Radiocommunication Bureau*, item 2 of Resolution [COM5-7], it is the understanding of Canada and the United States that the requirements to accept notices for only high altitude platforms in the fixed service and for feeder links for the broadcasting-satellite service shall be reviewed at WRC-99."

3.52 The **delegate of Luxembourg**, referring to paragraph 2 under *instructs the Director of the Radiocommunication Bureau*, asked for clarification of the word "notices" in the phrase "process notices". The **Director of BR** explained that "process notices" referred to all types of notices, not just notification as the final step in the Article 11 procedure.

3.53 The **delegate of Malaysia** stressed that the text, which had been discussed at length, should remain as it stood. The **delegates of Singapore, the Islamic Republic of Iran** and **Tonga** supported that view, as did the **delegate of Luxembourg**, given the clarification by the Director of BR.

3.54 Resolution COM5-7 (WRC-97), as amended, was **approved**.

Resolution COM5-5 (WRC-97)

3.55 **Approved**, subject to editorial amendment.

3.56 With the exception of the parts remaining in square brackets or deferred for subsequent consideration, the third series of texts submitted by the Editorial Committee (B.3) (Document 265), as a whole, as amended, was **approved** on first reading.

4 Fourth series of texts submitted by the Editorial Committee for first reading (B.4) (Document 266)

4.1 The **Chairman** invited the meeting to consider the Committee 4 texts taken from Document 245.

Article S1 (ADD S1.109A), Article S5 (MOD S5.287), Article S18 (NOC S18.1), Article S19 (NOC S19.1 to S19.27, MOD S19.28, ADD S19.28A)

4.2 **Approved**.

Article S19 (ADD S19.28B)

4.3 The **Legal Adviser** said that, at the request of the Chairman of Committee 4, he had studied the use of the terms "country", "Member" and "administration" in the text, and had found nothing to be corrected. The following clarification should, however, appear in the minutes: the term "administration", wherever it appeared, should be understood in the meaning of the text in the upper right-hand box of the table in ADD S19.28B, which read: "Allocation to the administration of a Member State (see definition in CS No. 1002)."

4.4 ADD S19.28B was **approved**.

Article S19 (MOD S19.29, NOC S19.30 to S19.33, MOD S19.34, SUP S19.34.1)

4.5 **Approved**.

Article S19 (MOD S19.35)

4.6 The **delegate of Germany** suggested the deletion of "(see Resolution 27 (WRC-95))". The **Legal Adviser** explained that Resolution 27 should only be mentioned in connection with incorporation by reference when specific references were given. That was not the case in MOD S19.35, therefore the reference to Resolution 27 should be deleted.

4.7 It was so **agreed**.

4.8 MOD S19.35, as amended, was **approved**.

Article S19 (SUP S19.35.1, MOD S19.35.2, MOD S19.36, NOC S19.37, MOD S19.38, MOD S19.39, NOC S19.40 to S19.95, MOD S19.96, NOC S19.97, NOC S19.98)

4.9 **Approved**.

Article S19 (MOD S19.99)

4.10 The **delegate of Germany** suggested the deletion of "(see Resolution 27 (WRC-95))", as in MOD S19.35.

4.11 Recalling the explanation given by the Legal Adviser, the **delegate of France** said that specific references to ITU-R and ITU-T Recommendations should be inserted and the reference to Resolution 27 retained.

4.12 The **delegate of Syria** emphasized that the mandatory nature of MOD S19.99 called for explicit references. In contrast, MOD S19.35 only concerned guidelines.

4.13 The **delegate of India** considered that the mandatory character of MOD S19.99 related to Nos. S19.100 to S19.126 of the Radio Regulations, and that MOD S19.99 did not constitute a true case of incorporation by reference.

4.14 At the suggestion of the **Chairman of Committee 4**, it was **agreed** that the text of MOD S19.99 should be placed in square brackets pending further consideration by Committee 4.

Article S19 (NOC S19.99.1 to S19.106, SUP S19.107, NOC S19.108 to S19.119, MOD S19.120, NOC S19.121 and S19.122, MOD S19.123, NOC S19.124 and S19.125, MOD S19.126, NOC S19.127 to S19.131

4.15 **Approved**.

Article S30 (MOD S30.1)

4.16 **Approved**.

Article S31 (MOD S31.1, ADD S31.16, MOD S31.17, NOC S31.18, MOD S31.20)

4.17 **Approved**, with an editorial change (in Spanish only) to MOD S31.17.

Article S32 (ADD S32.5A, ADD S32.5B, MOD S32.9, ADD S32.10A)

4.18 **Approved**, with an editorial change (in French only) to ADD S32.5B and removal of the outer square brackets left in error around ADD S32.10A b).

Article S47 (NOC S47.19, NOC S47.23, NOC S47.24, NOC Table S47-1), Article S48 (NOC S48.5, NOC S48.6, MOD S48.7)

4.19 **Approved**.

MOD Appendix S18

4.20 In reply to a request for clarification by the **delegate of Oman**, the **Chairman of Committee 4** explained that "x" indicated the channel to be used, but that no order of priority was specified.

4.21 MOD Appendix S18 was **approved**.

Resolutions 310 (Rev.WRC-97), 331 (Rev.WRC-97), COM4-1 (WRC-97), COM4-2 (WRC-97), COM4-3 (WRC-97), COM4-4 (WRC-97), COM4-5 (WRC-97), COM4-7 (WRC-97), COM4-8 (WRC-97)

4.22 **Approved**.

List of Resolutions and Recommendations approved for deletion

4.23 **Approved**.

4.24 With the exception of MOD S19.99 remaining in square brackets, the fourth series of texts submitted by the Editorial Committee (B.4) (Document 266), as a whole, as amended, was **approved** on first reading.

5 First series of texts submitted by the Editorial Committee for second reading (R.1) (Document 230)

Note by the Chairman of the Editorial Committee

5.1 **Approved**, with the removal of the square brackets around the fifth paragraph.

Article S4 (NOC S4.1 to S4.3, MOD S4.4, NOC S4.5 to S4.22)

5.2 **Approved**.

Article S7 (NOC S7.1 to S7.8)

5.3 **Approved**.

Article S53 (MOD S53.1, SUP S53.1.1, SUP S53.1.2, ADD S53.1A, ADD S53.1A.1)

5.4 **Approved**.

Appendix S13 (MOD Part A1, MOD Part A2)

5.5 **Approved**.

5.6 The **Chairman of Committee 4** observed that, although Recommendation 306 (WARC-79) had been deleted, references to that Recommendation had erroneously been left in the text, for example in Part A2, § 25.(1). He suggested that the Editorial Committee should be authorized to delete such references whenever they occurred.

5.7 It was so **agreed**.

5.8 Responding to a comment by the **Chairman of Committee 4** concerning omitted text indicated by asterisks, the **Chairman** said that the Final Acts should contain the complete text.

Resolutions COM5-1 (WRC-97), COM5-2 (WRC-97)

5.9 The **Chairman of Working Group PLEN-1** suggested that the second reading of Resolutions COM5-1 and COM5-2 should be deferred, as both Resolutions touched on future conference agendas, a matter still under discussion in Working Group PLEN-1.

5.10 It was so **agreed**.

Resolution 339 (Rev.WRC-97)

5.11 Replying to a query by the **delegate of Ireland**, the **Chairman** confirmed that the text of Resolution 339 had been agreed, with the exception of the date, which remained to be decided.

5.12 The **delegate of Syria** said that *considering* a) seemed outdated, and suggested its deletion. The **delegate of Sweden** supported that suggestion, with a view to simplifying the text.

5.13 It was so **agreed**.

5.14 Resolution 339 (Rev.WRC-97), as amended, was **approved**.

Recommendation 7 (Rev.WRC-97)

5.15 **Approved**.

5.16 With the exception of the texts deferred for later consideration, the first series of texts submitted by the Editorial Committee (R.1) (Document 230) as a whole, as amended, was **approved** on second reading.

The meeting rose at 1730 hours.

The Secretary:
Pekka TARJANNE

The Chairman:
R. SMITH

INTERNATIONAL TELECOMMUNICATION UNION

WRC-97 WORLD RADIOCOMMUNICATION CONFERENCE

Document 300-E
17 November 1997

GENEVA, 27 OCTOBER – 21 NOVEMBER 1997

LIST OF DOCUMENTS

(Documents 251 - 300)

Doc.	Source	Title	Destination
251	C5	Proposal to modify footnote S5.546 of the Radio Regulations	C5
252	WG PL1	Note by the Chairman of Working Group 1 of the Plenary to the Chairman of Committee 4	C4
253	GMB	Proposals for the work of the Conference	C5
254	SLV	Proposals for the work of the Conference	C5
255	WG PL1	First series of texts submitted by Working Group 1 of the Plenary to the Editorial Committee	C6
256	SWG 4D1	Final Report on the meetings of Sub-Working Group 4D1	WG 4D
257	C5	Proposals to WRC-97 concerning the identification of suitable frequency bands above 30 GHz for use by the fixed service for high density applications	C5
258	WG PL2	Report to the Plenary Meeting by Working Group 2 of the Plenary	PL
259	WG 4C	First report of Working Group 4C to Committee 4	C4
260	C5	Draft Resolution [COM5-12] - Frequency bands above 30 GHz available for use by the fixed service in high density applications	C5
261	WG 5B	Fifth Report of Working Group 5B to Committee 5	C5
262	WG 5B	Sixth Report of Working Group 5B to Committee 5	C5
263 (Rev.1)	WG 5B	Seventh Report of Working Group 5B to Committee 5	C5
264	5 ad hoc 2	Report by the Chairman of 5 ad hoc 2	C5

Doc.	Source	Title	Destination
265	C6	**B.3** - Third series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
266	C6	**B.4** - Fourth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
267	CPV	Proposals for the work of the Conference	C5
268	WG 4C	Second report of Working Group 4C to Committee 4	C4
269	WG 4D	Note by the Chairman of Working Group 4D	C4
270	WG 4C	Note from Working Group 4C	WG 4C
271	EGY	Proposals for the work of the Conference	C5
272	EQA	Proposals for the work of the Conference	C5
273 + Corr.1	SG	Results of BSS-BSS compatibility studies for the draft revised Appendices 30/30A Regions 1 and 3 Plan	WG 4D
274	C5	Summary record of the sixth meeting of Committee 5	C5
275	C4	Summary record of the seventh meeting of Committee 4	C4
276	WG 4D	Report of Working Group 4D to Committee 4	C4
277	C6	**B.5** - Fifth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
278	C4	Note from the Chairman of Committee 4 to the Chairman of Working Group 1 of the Plenary	WG PL1
279	C4	Third series of texts submitted by Committee 4 to the Editorial Committee	C6
280	C5	Note from the Chairman of Committee 5 to the Chairman of Working Group 1 of the Plenary	WG PL1
281	C5	Ninth series of texts submitted by Committee 5 to the Editorial Committee	C6
282	C5	Tenth series of texts submitted by Committee 5 to the Editorial Committee	C6
283	MDA	Proposals for the work of the Conference	C5
284	4 ad hoc 2	Methodology for the treatment of procedural and regulatory questions related to Appendices 30 and 30A	C4

Doc.	Source	Title	Destination
285	WG 4C	Third report of Working Group 4C to Committee 4	C4
286	COD	Proposals for the work of the Conference	C5
287	C6	**R.2** - Second series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
288	C6	**B.6** - Sixth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
289	C5	Summary record of the seventh meeting of Committee 5	C5
290	C5	Use of the bands 18.8-19. GHz and 28.6-29.1 GHz by networks operating in the fixed-satellite service	C5
291	C5	Note from the Chairman of Committee 5 to the Chairman of Working Group 1 of the Plenary	WG PL1
292	GHA,INS, MWI,NIG, PNG	Proposals for the work of the Conference	C5
293	BRU,KOR J, PHL, SNG	Proposals for the work of the Conference	C5
294	C5	Report to Committee 5 on the regulatory provisions relating to the operation of NGSO FSS and GSO systems in the 10.7 to 30 GHz bands	C5
295	WG 4A	Fourth report from Working Group 4A to Committee 4	C4
296	WG 4D	Report from Working Group 4D to Committee 4	C4
297	C4	Summary record of the eighth meeting of Committee 4	C4
298	C5	Summary record of the eighth meeting of Committee 5	C5
299	PL	Minutes of the fifth Plenary Meeting	PL
300	SG	List of documents (251-300)	