



**Documents of the Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3) (2nd session) (Geneva, 1975)**

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(ITU) للاتصالات الدولي الاتحاد في والمحفوظات المكتبة قسم أجراه الضوئي بالمسح تصوير نتاج (PDF) الإلكترونية النسخة هذه والمحفوظات المكتبة قسم في المتوفرة الوثائق ضمن أصلية ورقية وثيقة من نقلاً

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BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 101-E

27 October 1975

Original : English

COMMITTEE 4

REPORT OF THE CHAIRMAN OF WORKING GROUP 4A

"ASIA AND PACIFIC REGION" TO COMMITTEE 4

Usable field strength "Target"

1. The group analysed the I.F.R.B. print-out of 20 October 1975 with the aim of producing practical figures as a result of applying the proposed Australian method of establishing a usable field strength target for the purposes of "reduction of overall requirements" as defined in the terms of reference of the regional groups.

The region was divided into three sub-regions for the purpose of the analysis and calculations made on both a sub-regional and regional basis. The sub-regions were defined as :

Sub-region 1 - AUS/BRM/CBG/FJI/GUM/INS/MLA/NHB/NCL/GIL/
NZL/PHL/PNG/SLM/SNG/THA/VIN/WAK/WAL

Sub-region 2 - CHN/J/KOR/MNG/RJU/URS/BRU/HKG

Sub-region 3 - AFG/ARS/BGD/CLN/IND/IRN/KWT/NPL/PAK/QAT/
UAE/YEM/YMS/TUR (Asian broadcasting part)

2. The analysis was performed by establishing the difference between Eus (Col. 13) and Enom (Col. 9) for night time operation for all requirements on all channels for the particular countries in the sub-regions as defined. Graphs for the three sub-regions and the total Asian and Pacific Region were then drawn showing the relationship of the number of occurrences of interference above Enom and the level above Enom.
3. An average was then established by summing the products of interference occurrences and magnitudes in dB and dividing by the number of interfering occurrences. This average was then drawn on the graphs to establish a figure of usable field strength target.



4. The usable field strength targets were established as :

Sub-region 1	- + 6 dB
Sub-region 2	- + 15 dB
Sub-region 3	- + 18 dB
Asian and Pacific Region	- + 14 dB
5. The results of the work of the group are set out in Tables 1 - 4 and Figures 1 - 4. The sub-region tables and graphs demonstrate the extent of the variation of the interfering situation across the region. As the terms of reference of this regional group specifically define the region and makes no reference to sub-regions it is considered that Table 4 and Graph 4 present the results of most significance.
6. Table 4 shows that there were 4,056 instances of interference of levels above Enom. The "target level" established was 14 dB above Enom. The number of instances of interference above the target was 1,769, which is 44% of the total interferences above Enom. In analyzing the print-outs no account was taken of the fact that in some instances the prime interference source may be from within the country concerned.
7. Note should be taken that the 1,769 instances of interference above the target would be caused by a much smaller number of interfering sources. No attempt to establish the specific sources of interference was made by the working group. It was considered that should it be decided that this method of "reduction of overall requirements" be adopted, a listing of the interfering sources indicating each case where these sources interfere to a level above Enom could be provided by the I.F.R.B. for the purposes of negotiation.
8. The negotiations should aim at reducing the interference effect of each source as listed to a level below the "target level" of +14 dB above Enom in the first instance. Adoption of such techniques as synchronized networks, directional antennae and power reduction would be possible methods of achieving the necessary interference reductions.
9. Once reduction of mutual interference was achieved in the manner outlined above, it would be appropriate to re-analyse the results so achieved in the same manner and establish a new "target level". It may then be considered that reductions should be introduced to achieve this level. This procedure could be repeated until such time as a satisfactory situation is achieved.

10. The work of this group has been limited to the Pacific and Asian Regions. In some cases the source of interference listed in the results will be from the African or European broadcasting areas but no attempt has been made to establish how such interface problems would be resolved.
11. The Convenor wishes to express his appreciation to the representatives of the seven delegations and the five officers of the I.F.R.B. who assisted the work of the group and enabled it to achieve its goals in such a short time period.

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TABLEAU 1 - TABLE 1 - CUADRO 1

NIVEAU AU-DESSUS DE ENOM - SOUS-REGION 1

LEVEL ABOVE "ENOM" SUB REGION 1

NIVEL POR ENCIMA DE "ENOM" SUBREGIÓN 1

Pays Country País	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	>23
AUS	22	19	27	18	24	18	15	15	11	5	4	-	3	1	-	1	-	-	1	1	1	-	1	
BRM																	2							
CBG	-	1	-	1	-	1	1	1	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	
FJI	-	1	-	-	1																			
GUM	1																							
INS	6	2	1	3	-	3	1	-	-	1	1	-	1											
MLA	2	5	3	4	4	-	3	3	1	3	3	3	3	2										
NHB					1						1													
NCL	1						1			1			2											
GIL							1																	
NZL	15	10	16	4	1	3	6	4	1	3	-	3	1	1	1									
PHL	29	22	22	19	16	13	7	7	11	5	4	7	3	1	7	-	2	-	1	-	1	-	-	
PNG	7	2	5	2	4	2	2																	
SLM																								
SNG			1	1																				
THA	7	16	8	16	12	9	11	7	7	6	5	3	2	3	-	3	3	2						
VTN	2	1	1	3					3				1				1	1						
WAK																								
WAL																								
	92	79	84	71	63	49	48	37	34	25	18	17	16	8	8	5	8	3	2	1	2	-	1	-

TOTAL = 671

Valeur
CibleTarget
ValueValor
obje-
tivo

Au-dessus de la valeur cible = 233 = 35%

Above target = 233 = 35%

Por encima del valor objetivo = 233 = 35%

TABLEAU 2 - TABLE 2 - CUADRO 2

NIVEAU AU-DESSUS DE "Enom." SOUS-REGION 2

LEVEL ABOVE "Enom." SUB REGION 2

NIVEL POR ENCIMA DE "Enom." SUBREGION 2

Pays Country País	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
CHN	1	4	2	15	25	29	47	80	116	154	150	145	120	122	100	102	73	81	67	54	46	40	42	29	15	19	10	8	3	5	3	2	2	3	2	1
J					1	2	9	12	11	18	30	22	34	42	30	42	32	29	23	32	25	18	16	2	3	1	1	2								
KOR					1		1	1					1		1	9	11	13	5	9	6	11	9	13	10	11	11	10	4		1				1	1
MNG			1	4			3	1	2	1	4	2	3	5	2	1	7	3	1	1	5			1	2	2		1								
RYU								2	1				1	2	1	1	1	1	3	3	-	1					1	1								
URS	8	5	4	3	8	14	21	24	23	26	25	22	24	32	40	21	22	25	28	31	14	12	13	13	8	7	6	5	4	1	3	4	1	-	2	1
	9	9	7	22	35	45	81	120	153	199	209	193	183	203	182	178	148	146	131	124	102	79	84	55	39	41	27	21	7	6	7	6	3	3	5	3

TOTAL = 2865

Valeur cible
Target value
Valor objetivo

Au-dessus de la = 1215 = 42%
valeur cible
Above target = 1215 = 42%
Por encima del = 1215 = 42%
valor objetivo

TABLEAU 3 - TABLE 3 - CUADRO 3
 NIVEAU AU-DESSUS DE ENOM - SOUS-REGION 3
 LEVEL ABOVE "ENOM." SUB REGION 3
 NIVEL POR ENCIMA DE "ENOM." SUBREGION 3

Pays Country País	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
AFG													1		1	2	1		3	2	2		1	3			2				1								
ARS									1			1		1	3	3	4	3	10	6	1	7	1	4	4	5	4		3	4	3		2	1	2	2			1
BGD					1				1	1	2	3		4	1		1		3	2		2	1																
CLN			1				1	2		5	3	4	2	4	3	3	3	2	1		2	1		1	1	2				1									
IND	4	3	7	3	8	10	8	6	9	12	7	10	6	5	4	13	6	7	3	1	3	3	1	2	3	3		2											
IRN								1			1	3	4	4	1	5	8	5	6	6	6	6	3	7	6	1	8	3	4		3		3	2			1		1
KWT										1								1					1	1	1	1										1			
NPL										1			1			1					2	1				1	1		1		1								
PAK					1		1	1		1	1	3	5	5		6	7	4	3	2	2		3	2	2	3	1	1		1			1						
QAT												1									1	1				1				1									
UAE											1		1		1	1							2	1	1			1			1	1							
YEM																1	1					2	1	1											1		2		
YMS												1		1				1		1	1																		
	4	3	8	3	10	10	10	10	11	21	15	26	20	24	14	38	34	23	29	20	21	24	14	22	19	17	15	8	8	8	8	2	6	4	3	3	3	-	2

TOTAL = 521

VALEUR
CIBLE
TARGET
VALUE
VALOR
OBJETIVO

ABOVE TARGET = 237 = 45%

AU-DESSUS DE LA VALEUR CIBLE = 237 = 45 %

POR ENCIMA DEL VALOR OBJETIVO = 237 = 45%

TABLEAU 4 - TABLE 4 - CUADRO 4

REGION ASIE ET PACIFIQUE - NIVEAU AU-DESSUS DE "Enom"

ASIAN AND PACIFIC REGION - LEVEL ABOVE "Enom"

REGIÓN DE ASIA Y DEL PACÍFICO - NIVEL POR ENCIMA DE "Enom"

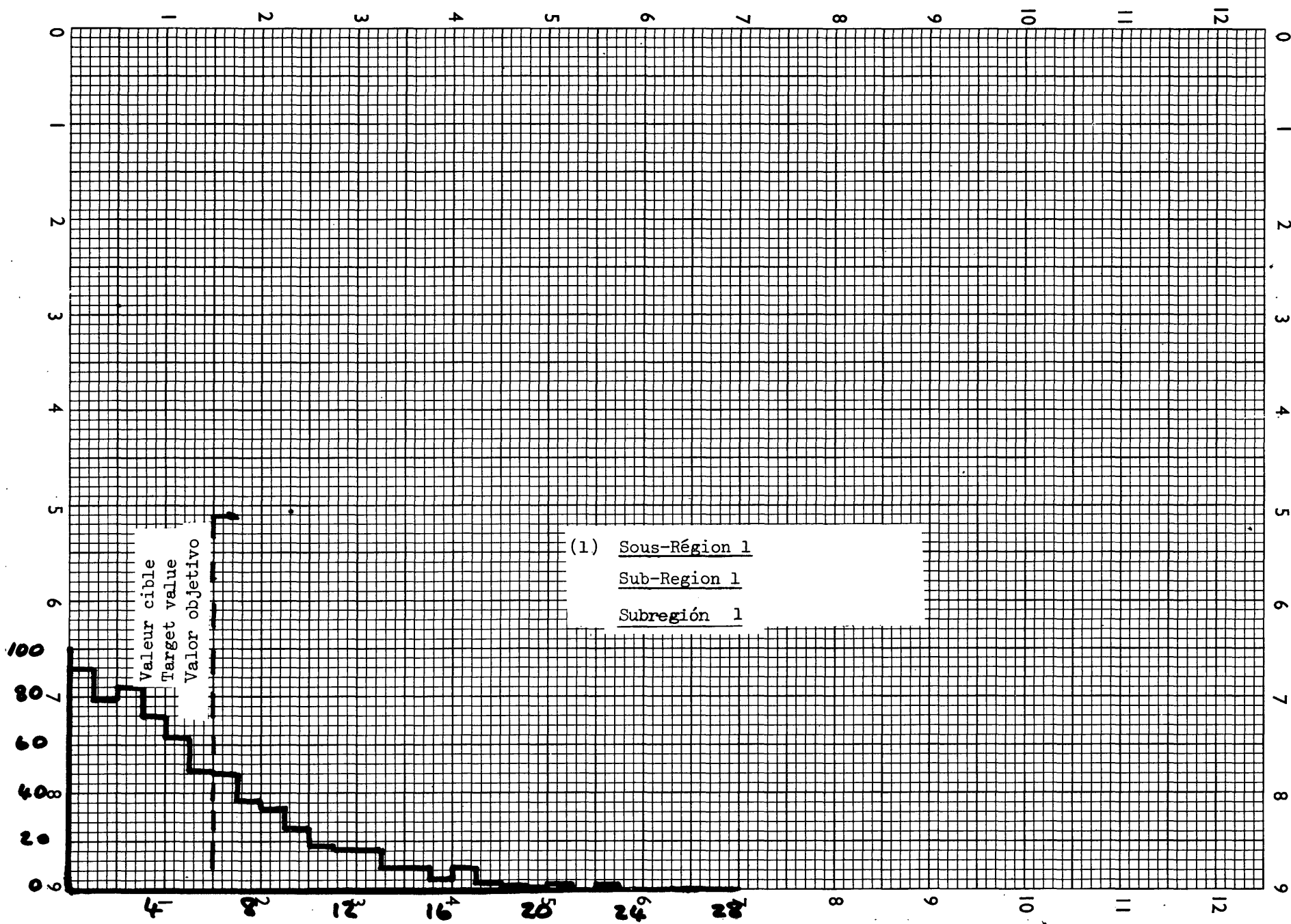
Sous-région Sub-region Subregión	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1	92	79	84	71	63	49	48	37	34	25	18	17	16	8	8	5	8	3	2	1	2	-	1																
2	9	9	7	22	35	45	81	120	153	199	209	193	183	203	182	178	148	146	131	124	102	79	84	55	39	41	27	21	7	6	7	6	3	3	5	3			
3	4	3	8	3	10	10	10	10	11	21	15	26	20	24	14	38	34	23	29	20	21	24	14	23	19	17	15	8	8	8	8	2	6	4	3	3	3	-	2
	105	91	99	96	108	104	139	167	198	245	242	236	219	235	204	221	190	172	162	145	125	103	99	78	58	58	42	29	15	14	15	8	9	7	8	6	3	-	2

TOTAL = 4056

Valeur-cible
Target value
Valor objetivo

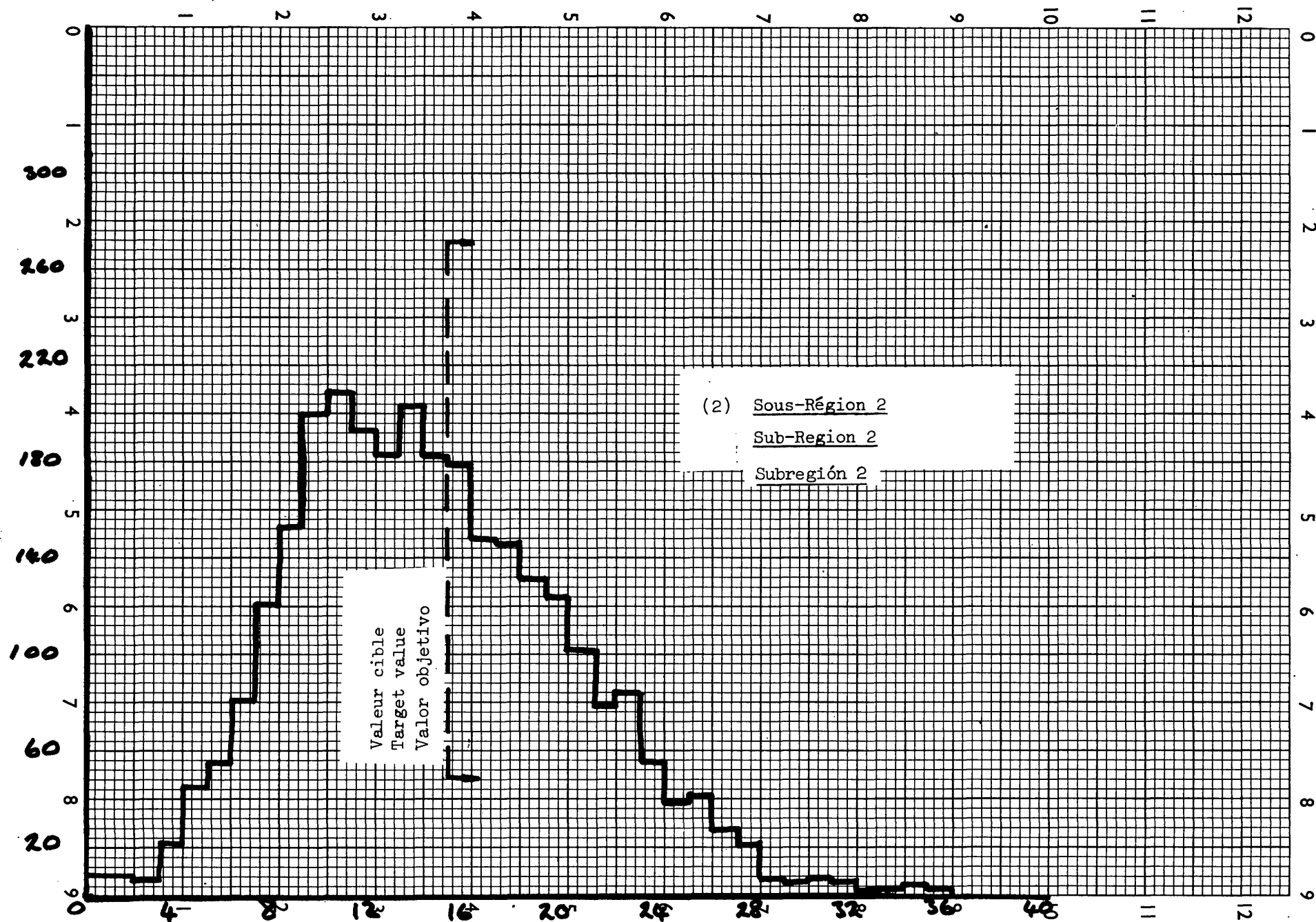
Au-dessus de la valeur-cible = 1769 = 44%
Above target = 1769 = 44%
Por encima del valor objetivo = 1769 = 44%

Nombre de zones de service perturbées
Number of areas affected
Número de zonas afectadas



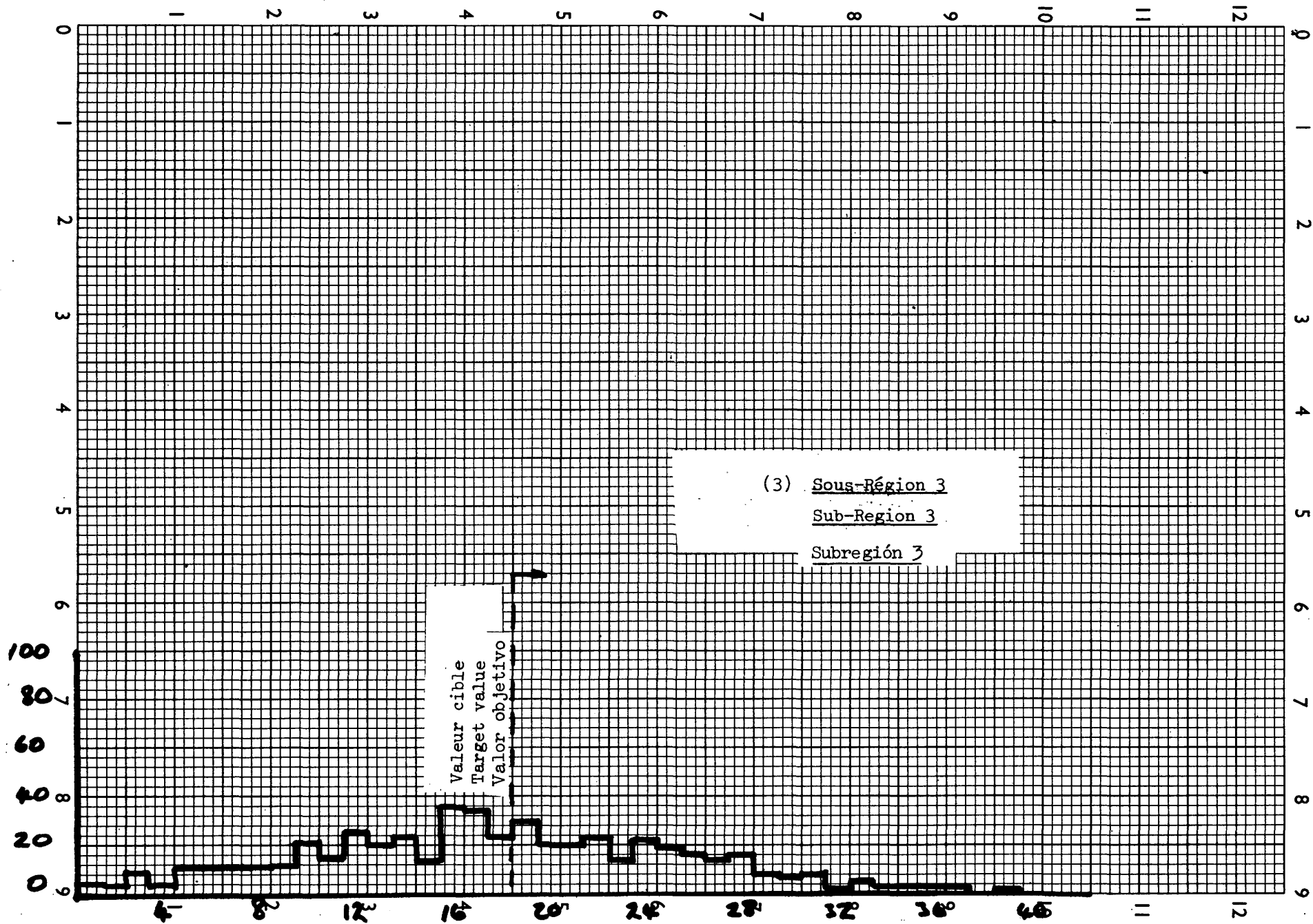
Niveau au-dessus de Enom (dB) - Level above Enom dB - Nivel por encima de E-nom (db)

Nombre de zones de service perturbées
Number of areas affected
Número de zonas afectadas



Niveau au-dessus de E_{nom} (dB) - Level above E_{nom} dB - Nivel por encima de E_{nom} (dB)

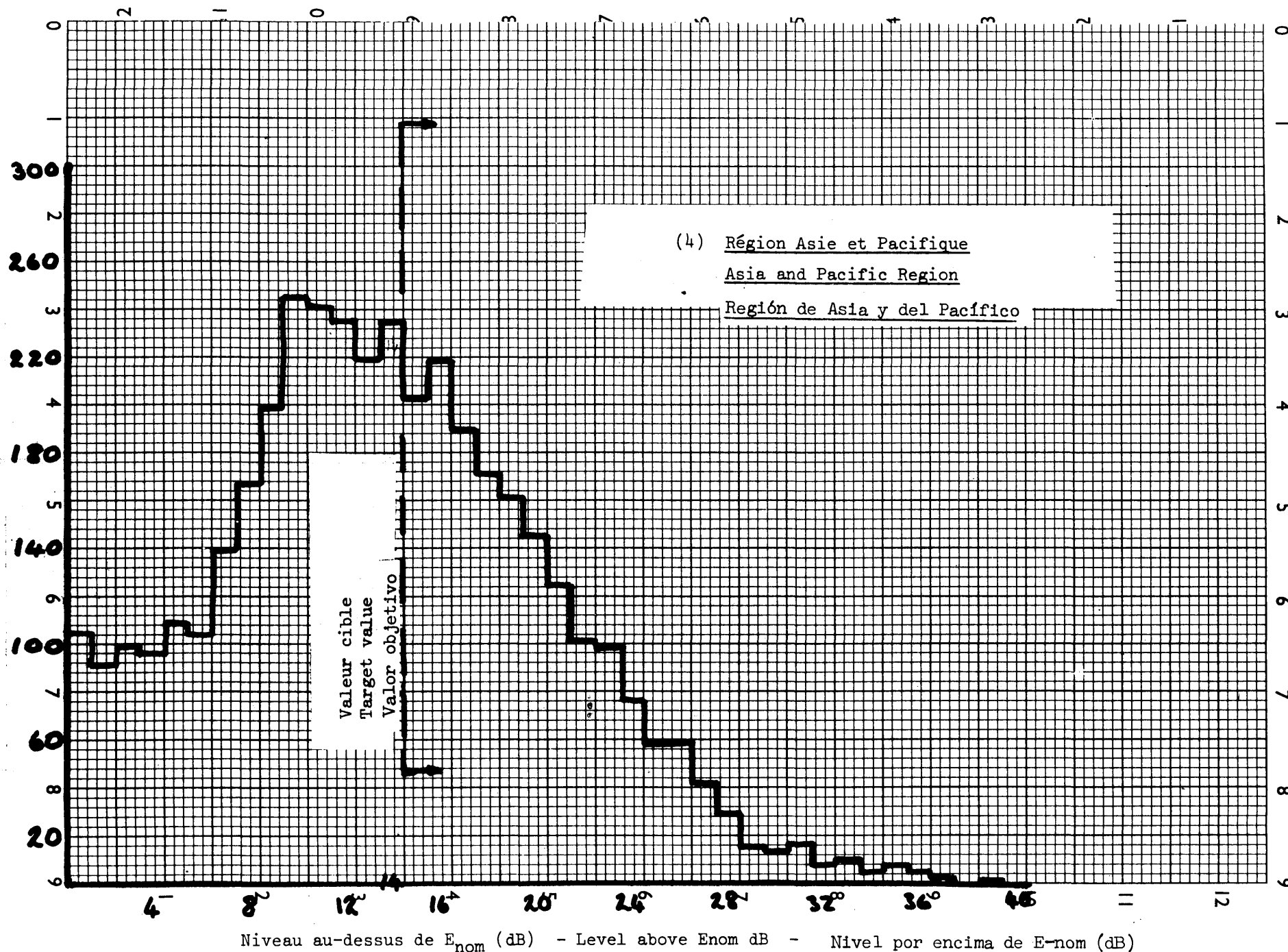
Nombre de zones de service perturbées
 Number of areas affected
 Número de zonas afectadas



(3) Sous-Région 3
Sub-Region 3
Subregión 3

Niveau au-dessus de Enom (dB) - Level above Enom dB - Nivel por encima de E-nom (dB)

Nombre de zones de service perturbées
Number of areas affected
Número de zonas afectadas



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 102-E

28 October 1975

Original : English

COMMITTEE 4

SECOND REPORT BY WORKING GROUP 4C (EUROPE) TO

COMMITTEE 4 (PLANNING)

Reduction of requirements

1. A first approach to this question was made considering possible limitation of power. Among the suggestions made were limitations to 300 kW in the MF band and 500 kW in the LF band. The question of the application of these limitations to requirements concerning new transmitters only was explored. The application of these limitations for night operations only was also suggested.

2. However, on the basis of the above proposals, the Working Group was unable to reach a consensus on a firm proposal to Committee 4 on the reduction of requirements on the basis of power limitation.

3. The Working Group considered different formulae for the assessment of requirements with a view to reaching agreement on a method for reducing the number of requirements. Among these was a suggestion that the needs of countries with a very small territorial surface should be accommodated in the low power channels. However, roughly 50% of the delegations present favoured the following proposal for reduction of requirements. Three different criteria should be used to compare requirements between different countries in order to get substantial reductions by flexible application of these criteria :

- 1) Power density in W/km^2 where the area is taken for the land inclusive of a sea area for countries with a coast line as in Document No. 59 from Italy.
- 2) Ratio between requirements for a country and a figure of possible assignments for the same country in accordance with the formula in Document No. 90 from Italy and Sweden, with the figure 138 shared between countries in relation to their land area.



- 3) Ratio as for 2 above but with the figure 138 shared in relation to their land and sea area as given in Document No. 59.

At the same time Chapter 9 of the report of the First Session shall be taken into consideration. No dissenting voice was raised against judging assignments qualitatively by reference to Watt per km².

Notwithstanding the above majority view the Working Group was unable to reach a consensus on this question.

4. A majority of delegations expressed willingness to consider reducing the number of their requirements provided that a common yardstick could be adopted.

5. The question of the installation of stations in another country or in another Region was raised. However, finally, the Working Group considered the question to be outside its terms of reference. It was agreed that the delegations raising this matter would bring it up in Committee 4, if they so desire.

Elimination of incompatibilities

6. The Working Group made the following suggestions with a view to eliminating the incompatibilities between requirements within the European Broadcasting Area:

- a) practical arrangements should be made so as to indicate on the maps the stations which are already in service;
- b) all other Groups and Committees should stop working for one week so as to give all delegations the possibility to concentrate fully on negotiations regarding the planning work;
- c) in agreement with the terms of reference given to the Planning Groups (Document No. 41), the Co-ordination Group should take the responsibility to establish, on the basis of agreed technical criteria, the draft Frequency Assignment Plans.

7. Therefore each Convenor will take within his Planning Group, the following action:

- co-ordinate the negotiations among delegations;
- assist the administrations in making reductions in their assignments, indicating the cases in which such an action is necessary;
- indicate the possible modifications suitable to make an acceptable Plan.

8. The above mentioned action will be co-ordinated in the Co-ordination Group to assure that all Planning Groups apply uniform criteria. The reductions in requirements would be facilitated if they can be agreed upon in general between groups of countries in order to obtain a uniform result based on the equal rights of all countries.

K. TERÄSVUO
Chairman

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 103-E

28 October 1975

Original : English

COMMITTEE 4

REPORT OF THE CHAIRMAN OF WORKING GROUP 4A

"ASIA AND PACIFIC REGION" TO COMMITTEE 4

Reference : Document No. 86

Paragraph 1 - Reduction of Requirements

The Group agreed that requirements should be reduced and the means of achieving this end are detailed in this document as follows :

Paragraphs 2.1 and 2.5

It is agreed that bilateral and multilateral negotiations should be continued in the most effective manner. Experience gained in this Group proves that it is possible, on the basis of bilateral negotiations to reduce requirements and improve the situation in regard to wanted services.

In addition, a series of further steps for eliminating incompatibilities of requirements are proposed as follows :

1. assessment of the total interference situation in accordance with the procedure set out in Document No. 101 (ex-Document No. DL/20-E);
2. to establish whether the proposed service is essential within the validity period of the Plan. Otherwise efforts should be made to reassess the requirement on the basis of equality of rights with a view to reducing it;
3. to establish whether it is possible to achieve economy in spectrum usage by synchronizing techniques;
4. to investigate :
 - a) the use of an alternative channel;
 - b) a change in antenna characteristics;
 - c) a reduction in power;



- d) an alternative location for the transmitter;
- e) a change in hours of operation or conversion to day-time operation only.

1., 2. and 3. are regarded as being of first priority; in relation to 4., there is no specific priority order.

Paragraph 2.2

It was agreed that planning work should be started taking into account assignments already in use, while at the same time taking due account of the requirements of the developing countries. The principle of equal rights as laid down in the Report of the First Session was endorsed.

In relation to assignments in use it was the interpretation that this meant all existing services (as detailed by Administrations in Box 20 of the forms submitted by them) plus those transmitters which have been brought into regular operation by Administrations since submission of their Forms of Requirements.

It was also the view that, in taking due account of the requirements of developing countries, the principle should be followed of including the projected requirements to the extent of the validity period of the Plan of these countries which will allow them to develop their broadcasting services to the point where the quality and extent of such services are commensurate with the existing services of developed countries.

It was agreed that the actual planning work should take the results of bi-lateral negotiations as a basis and commence by examining services outlined above taking account of power level 20 kW and higher (to determine if a synchronized network should be included the aggregate power of the network should be assessed) on the basis that it is more difficult and more expensive to make a change with high power than low power stations.

Having examined the situation in accordance with paragraph 2.2 and achieving the best possible arrangement, the next step should be to take into consideration all remaining requirements.

Paragraph 2.3

The Regional Group took the view, that in considering remaining requirements, the information in Document No. DT/25(Rev.) could prove useful.

The consensus of the Group was that the requirements submitted by developing countries should be considered for the purpose of making the Plan. Justification of additional requirements submitted should be considered by an ad hoc Group set up for this purpose.

Paragraph 2.4

The Group recommends unanimously that there should be a fixed validity period for the Plan.

The Group further recommends that the period before bringing the existing transmitters in conformity with the Plan should be two years or a maximum of three years from the date of the signing of the Agreement and the Plan.

The majority of the Group feels that the period of validity of the Plan should be ten years from the date of bringing the existing transmitters in conformity with the Plan. However, countries are desirous that additional requirements which should become necessary in the development of their broadcasting services before the end of the validity period, be allowed on a bilateral or multilateral basis.

General

The Group endorsed the "Other Recommendations" made by the ad hoc Group to Committee 4 in Document No. 86.

It was decided to draw the attention of Committee 4 to the requirements of those countries who are not present at the Conference, as this is a very important matter.

There was no time to consider Document No. 91. A note of the Document was taken by the Group and it was decided that this should be considered by Committee 4.

Mediation Group

It was accepted that a mediation group be set up under the Chairmanship of the Chairman of the Asia and Pacific Group and the membership of Iran, Saudi Arabia and the Philippines, with the following terms of reference :

- to assist the Chairman of the Asia and Pacific Group;
 - to serve as mediator in the event of dispute between countries in the Group;
 - to assist Asian and Pacific countries in negotiations concerning cases of regional and inter-regional interference.
-

France

MODIFICATIONS TO THE PLAN

Page 2, point 3 :

The formula should read :

$$\Sigma \Delta F_u = 10 \log \left[n \left(10^{\frac{\Delta F_u}{10}} - 1 \right) + 1 \right]$$

In the Annex, page 4 :

- point 1, second formula :

$$E_u^2 = e_1^2 + e_2^2 + \dots e_i^2 + \dots e_n^2$$

- point 2,

third line : k_1 (in place of K_1)

last line of page 4 : k_1 (in place of K).



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 104-E

28 October 1975

Original : French

WORKING GROUP 5B

COMMITTEE 5France

MODIFICATIONS TO THE PLAN

Calculation of the increase in usable field strength

1. The method advocated by most members of Sub-Group 5BI in order to determine whether modification (or addition) of a transmitter requires coordination is to evaluate the increase in interference which the modification (or addition) causes to other transmitters covered by the Plan. This increase in interference corresponds to an increase in the usable field strength of each transmitter suffering interference. In order not to give priority to the interfering transmitter which is modified first, the calculation is made with reference to the usable field-strength of the transmitter suffering interference, as established by the Plan, without allowing for any increase that may have resulted from previous modifications to other interfering transmitters.
2. If it is assumed that a transmitter (1) can multiply by K the usable field strength of a transmitter A, this transmitter (1) can multiply its radiation (in the direction of A) by k_1 , given by the formula worked out in the annex :

$$k_1 = \sqrt{1 + (K^2 - 1) \frac{E_u^2}{e_1^2}}$$

where E_u (in mV/m) is the total usable field strength of transmitter A as provided for in the Plan, and e_1 (in mV/m) is the usable field strength of A due to interference by transmitter (1) alone.

The following table gives in decibels the value of k_1 for different values of the difference in dB between E_u and e_1 and for different values of K (in dB), denoted by ΔF_u in the table ($\Delta F_u = 20 \log K$).



$\frac{E_u}{e_1}$ (dB)	0	3	6	10	15	20
$\Delta F_u = 0.2$ dB	0.2	0.39	0.75	1.68	3.96	7.57
$\Delta F_u = 0.3$ dB	0.3	0.58	1.09	2.34	5.13	9.11
$\Delta F_u = 0.5$ dB	0.5	0.95	1.72	3.46	6.87	11.21

3. In addition, the total increase in the usable field strength $\Sigma \Delta F_u$ of each transmitter is given (in dB) by :

$$\Sigma \Delta F_u = 10 \log \left[n \left(10^{\frac{\Delta F_u}{10}} - 1 \right) + 1 \right] \quad (\text{see annex})$$

where n is the number of interfering transmitters and ΔF_u is the tolerable increase in the usable field strength of a transmitter from each of the interfering transmitters.

The following table gives the values of $\Sigma \Delta F_u$ (in dB) for different values of n and ΔF_u .

ΔF_u (dB) \n	0.1	0.2	0.3	0.5
3	0.29	0.57	0.84	1.35
6	0.57	1.08	1.55	2.39
9	0.83	1.54	2.16	3.22
12	1.07	1.95	2.69	3.92

4. Conclusion

The value to be specified in the Agreement is ΔF_u . In order to determine this figure, values must therefore be selected for $\Sigma \Delta F_u$ and n .

France considers that a value of 2 dB is acceptable for $\Sigma \Delta F_u$. A smaller value would increase the number of countries that would have to be consulted: a larger value would be likely to entail an impairment in the service of the transmitter suffering interference without any consultation.

For the number n of interfering transmitters to be taken into consideration (i.e. the number of modifications that may contribute to interference which should be allowed for) a value of about 12 would seem to be reasonable, since not only co-channel transmitters but also those in adjacent channels have to be taken into account.

The value of 0.5 dB that has been suggested for ΔF_u gives, for 12 modifications (or additions) of interfering transmitters, a value $\Sigma \Delta F_u = 3.92$ dB. This is relatively high, and France would prefer a value $\Delta F_u = 0.2$ dB, which gives $\Sigma \Delta F_u = 1.95$ dB.

A N N E X

ADDITION OF INTERFERING FIELDS

1. Let e_c, e'_c, e''_c, \dots be the fields (in mV/m) due to co-channel transmitters at a point M. Similarly, let e_a, e'_a, e''_a, \dots be the fields caused at the same point M by adjacent channel transmitters.

The usable field strength at M will be : $E_u = \sqrt{\sum A_c^2 e_c^2 + \sum A_a^2 e_a^2}$

where A_c and A_a are the co-channel and adjacent channel protection ratios (disregarding miscellaneous noise).

The products of the type $A_c e_c$ or $A_a e_a$ represent what the usable field strength at M would be if the only interfering field were e_c or e_a .

We can therefore write $E_u^2 = e_1^2 + e_2^2 + \dots + e_n^2$

where e_1, e_2, \dots, e_n represent the usable field strength due to one of the transmitters 1, 2, ..., i, ..., n, whether they are co-channel or adjacent channel.

2. Suppose now that an increase (in dB) in the field strength E_u at M due to a single transmitter, e.g. transmitter 1, is regarded as tolerable.

That means that e_1 will be multiplied by K_1 . E_u will then be multiplied by K, giving :

$$K^2 E_u^2 = k_1^2 e_1^2 + e_2^2 + \dots + e_n^2$$

or :

$$K^2 E_u^2 = k_1^2 e_1^2 + \sum_2^n e_i^2$$

But :

$$E_u^2 = e_1^2 + \sum_2^n e_i^2$$

hence :

$$K^2 E_u^2 = k_1^2 e_1^2 + E_u^2 - e_1^2$$

which gives :

$$k_1^2 = 1 + (K^2 - 1) \frac{E_u^2}{e_1^2}$$

Thus, for a given value of K (e.g. 0.5 dB), k_1 will be greater than the smaller e_1 is in relation to E_u , i.e. the smaller the contribution of transmitter 1 to the interference. In particular, if one interfering transmitter preponderates ($e_u \neq E_u$), k will be close to K.

3. Increase in all interfering transmitters

Suppose that all transmitters are authorized, each independently, to multiply the total usable field strength E_u by the same amount (in dB).

This gives :

$$\text{For transmitter 1 : } K^2 E_u^2 = k_1^2 e_1^2 + e_2^2 + e_3^2 + \dots + e_n^2$$

$$\text{For transmitter 2 : } K^2 E_u^2 = e_1^2 + k_2^2 e_2^2 + e_3^2 + \dots + e_n^2$$

$$\text{For transmitter i : } K^2 E_u^2 = e_1^2 + e_2^2 + \dots + k_i^2 e_i^2 + \dots + e_n^2$$

.... etc

By addition :

$$\begin{aligned} n K^2 E_u^2 &= k_1^2 e_1^2 + k_2^2 e_2^2 + \dots + k_n^2 e_n^2 + (n-1)(e_1^2 + e_2^2 + e_3^2 + \dots + e_n^2) \\ &= k_1^2 e_1^2 + \dots + k_n^2 e_n^2 + (n-1) E_u^2 \end{aligned}$$

The new usable field strength will be :

$$\begin{aligned} E_u'^2 &= k_1^2 e_1^2 + k_2^2 e_2^2 + \dots + k_n^2 e_n^2 \\ &= n K^2 E_u^2 - (n-1) E_u^2 \\ &= [n(K^2 - 1) + 1] E_u^2 \quad \text{or} \quad K' = \frac{E_u'}{E_u} = \sqrt{n(K^2 - 1) + 1} \end{aligned}$$

Using traditional logarithmic notation in dB, taking :

$$\Sigma \Delta F_u = 20 \log K' \quad (\text{in dB})$$

$$\Delta F_u = 20 \log K \quad (\text{in dB})$$

we have :

$$\Sigma \Delta F_u = 10 \log \left[n \left(10^{\frac{\Delta F_u}{10}} - 1 \right) + 1 \right]$$

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 105-E

28 October 1975

Original : English

COMMITTEE 4

India

PLANNING OF DAYTIME OPERATIONS

1. The need for daytime operations has been brought out in some of the discussions in the Working Groups of Committee 4 as well as in some of the documents. The planning of daytime operations has to be carried out in such a manner as to limit their interference contributions to a value stipulated by the Conference.

Obviously, the hours of the day during which this condition could be met depend on the times of local sunrise and sunset as well as the transmitter power. This daytime period also depends on the length and direction of the transmission path. As the sunrise and sunset times change with season and geographic coordinates of the control point for the transmission path, it would be desirable to plan these daytime operations on the basis of minimum daylight hours during the year i.e., for local winter conditions.

2. The diurnal loss factor given in Figure 5 of Appendix E of the Report of the first session and the local sunrise and sunset timings given in Nautical Almanac, have been used to prepare the following table for appropriate periods for daytime operation for a few typical latitudes in transmission paths of the Indian subcontinent. The hours given in the table refer to the LMT at the mid-point of the transmission path or to the appropriate control point as described in paragraph 4 of Appendix E of the Report of the first session. The latitude indicated also corresponds to that point.



TABLE

Hours of daytime operation

Latitude (North)	Power of the transmitter	Transmission distance		
		300 km	1,000 km	2,000 km
15°	300 kW	0721-1535	0706-1605	0621-1650
	10 kW	0706-1620	0621-1705	0521-1905
25°	300 kW	0742-1515	0727-1545	0642-1630
	10 kW	0727-1600	1642-1645	0542-1845
35°	300 kW	0805-1453	0750-1523	0705-1608
	10 kW	0750-1538	0705-1623	0605-1823

In actual operation, the timing will be rounded up to the nearer quarter hour giving the minimum period of daylight hours.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 106-E

27 October 1975

Original : English

PLENARY MEETING

Note by the Secretary-General

I have the honour to submit to the Conference the text of a letter I have received from the Permanent Mission of the Federal Republic of Germany to the United Nations Office and the other International Organizations at Geneva.

M. MILI

Secretary-General

Annex :1



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A N N E X

Geneva, 22 October 1975

Subject : LF/MF Broadcasting Conference -
list of requirements

Ref. : Letter No. 20/0.1567/75 of
Mr. Berrada, Chairman of the I.F.R.B.,
dated 29 September, 1975

Dear Secretary General,

With reference to the memorandum of the Permanent Mission of the U.S.S.R. dated 19 August 1975, contained in Document No. 10 of the I.T.U. Broadcasting Conference dated 1 October 1975, I wish to state the following :

By letter of 20 October 1975, the Permanent Mission of France answered on behalf of the Governments of France, the United Kingdom of Great Britain and Northern Ireland and the United States of America the memorandum of the Permanent Mission of the U.S.S.R. referred to above. My delegation shares the position set forth in that letter. I would like to confirm that the designations contained in Appendix I of the I.F.R.B. Circular-letter No. 3 II 4 of 23 May 1975, should remain unchanged.

I should be grateful if this letter were brought to the attention of the Conference in the same way as the memorandum of the Soviet Mission and the letter of the French Mission to which it refers.

Accept, dear Secretary General, the assurances of my highest consideration.

(Dr. Axel HERBST)
Ambassador

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 107-E

27 October 1975

Original : French

PLENARY MEETING

Note by the Secretary-General

I have the honour to submit to the Conference the text of a letter I have received from the Permanent Mission of France to the United Nations Office at Geneva.

M. MILI

Secretary-General

Annex : 1.



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A N N E X

Geneva, 20 October 1975

Sir,

With reference to the memorandum of 19 August 1975 from the Permanent Mission of the U.S.S.R., reproduced in Conference Document No. 10 dated 1 October 1975 and circulated on 6 October 1975, I have the honour, on behalf of the Governments of France, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, to inform you that the above Governments, which are parties to the Four-Party Agreement signed at Berlin on 3 September 1971, consider that the designations in Annex 1 to Circular-letter No. 324 dated 23 May 1975 of the International Frequency Registration Board are correct and should not be changed.

I would ask you to circulate this communication as a Conference document.

Accept, Sir, the assurances of my highest consideration.

Jean FERNAND-LAURENT
Ambassador
Permanent Representative of France
to the United Nations Office at Geneva

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 108-E

30 October 1975

Original : French

COMMITTEE 3

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 3

(BUDGET CONTROL)

Thursday, 23 October 1975, at 0930 hrs

Chairman : Mr. M.K. BASU (India)

Subjects discussed :

Document No.

- | | |
|--|----|
| 1. Approval of the summary record of the first meeting of Committee 3 | 68 |
| 2. Statement of expenditure on the Broadcasting Conference as on 15 October 1975 | 75 |
| 3. Date of the next meeting of Committee 3 | |



1. Approval of the summary record of the first meeting of Committee 3
(Document No. 68)

Page 2

The delegate of the United Kingdom observed that in the second paragraph of point 2, reference was made to five weekends during which an outside computer would be used. She had understood from the decisions taken by Committee 4 and the summary record of that Committee's second meeting (Document No. 69) that the outside computer was to be used only for four weeks.

The Chairman replied that the same discrepancy had been noticed by him. He had consulted the Vice-Chairman of Committee 4, who had stated that five weekends of computer use would be required. However, since neither the Chairman nor the Vice-Chairman of Committee 4 had been able to attend the current meeting and since it was important not to leave any doubt on the question raised, he would consult the Chairman of the above Committee again in order to find out exactly for what number of weekends the use of an outside computer was envisaged.

Page 3

Regarding the last sentence of the penultimate paragraph, the Chairman asked the Secretary of the Committee whether the class of contribution chosen by the Democratic People's Republic of Korea had already been notified to the Secretary-General.

The Secretary of the Committee replied in the negative and added that the list in Annex 2 of Document No. 19 would be brought up to date during the preparation of the final report, when he hoped to be in possession of the required information.

Subject to the above comments, Document No. 68 was approved.

2. Statement of expenditure on the Broadcasting Conference as on
15 October 1975 (Document No. 75)

The Chairman briefly introduced Document No. 75, drawing the Committee's attention to the fact that the estimated expenditure on the Conference exceeded by 5,000 Swiss francs the budget approved by the Administrative Council, an amount which could, however, probably be absorbed before the end of the session. He first reviewed the items of the Annex showing some reduction of expenditure and then referred to those for which costs had increased.

The Secretary of the Committee added the following explanations :

Article 1 : despite an increase of 50,000 Swiss francs in expenditure for payment of overtime, it had been possible to make a large saving, i.e. 48,000 Swiss francs.

Article 2 : the difference of nearly 100,000 Swiss francs also comprised credits relating to the use of an outside computer, but since that estimate was based on one week only of the Conference, it was reasonable to hope that the amount could be reduced in the next estimate.

Article 3 : the expenditure on the publication of the Final Acts had been estimated on the basis of a 230-page document, but the exact number of pages to be printed was still quite uncertain. The figure of 103,000 Swiss francs was therefore only given as a tentative guide.

The excess of 5,000 Swiss francs to date could probably be absorbed, unless some major unforeseen expenditure was incurred.

Referring to the tables to be prepared by Committee 5, the Chairman said that the Final Acts could be considerably larger in volume if these were included. He would invite the Chairman of Committee 5 to attend the next meeting of Committee 3 in order to give some information on that point.

In reply to a question by the delegate of the United Kingdom, the Chairman said that the tables referred to would also comprise the Plan proper, which would constitute an Appendix to the Final Acts.

In reply to a further question by the delegate of the United Kingdom, the Secretary of the Committee gave information on the following points :

Item 14.101, salaries and related expenditure

The figures were checked by computer and all posts appearing in the list of personnel were considered occupied unless released in the machine. However, it had already been found during the first weeks of the Conference that certain posts would not need to be filled; they would therefore not be included in the second estimate and it would thus no doubt be possible to save something like 10,000 to 15,000 Swiss francs. During November new estimates would be made, which would perhaps also involve further savings.

Item 14.205, technical installations

The amount provided concerned only the computer and 17,000 Swiss francs had already been spent on the use of an outside computer before the opening of the Conference. Moreover, an amount of 50,000 Swiss francs was foreseen for the use of such a computer for five weekends during the Conference.

Following a remark by the delegate of the United Kingdom and in view of the existing situation, the Secretary of the Committee stressed the need for the Budget Control Committee to meet once a week, since the estimated total expenditure approved by the Administrative Council was nearly exhausted and the Convention provided in number 443 that before reaching that point the Budget Control Committee should present an interim statement of expenditure to the Plenary Meeting..

The Chairman announced that the next statement of expenditure would be prepared around 25 October 1975.

In reply to the delegate of the United Kingdom, who had asked for certain further explanations, the Chairman and the Secretary of the Committee pointed out that the budget prepared by the Administrative Council made allowance for the possibility of overtime work and of night meetings, provided that such meetings took place only exceptionally.

3. Date of the next meeting of Committee 3

The Chairman said that the next meeting would be arranged for 29 or 30 October 1975, in accordance with the decisions adopted by the Steering Committee and the work programme of the Conference's other Committees.

The meeting rose at 1000 hrs.

The Secretary :

R. PRELAZ

The Chairman :

M.K. BASU

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 109-E

28 October 1975

Original : French

BUDGET CONTROL COMMITTEE

Report by the Secretary-General

SITUATION CONCERNING EXPENDITURE FOR THE BROADCASTING
CONFERENCE AT 25 OCTOBER 1975

In accordance with the provisions of Rule 5 of Chapter 11 of the International Telecommunication Convention, Torremolinos, 1973, a report on the expenditure incurred for the Broadcasting Conference up to 25 October 1975 is submitted to the Budget Control Committee for consideration.

According to this statement, expenditure is being kept within the credits allocated by the Administrative Council. In fact, the budget provides for a sum of 3,417,000.- Swiss francs, and expenditure is estimated at 3,415,000.- Swiss francs.

The total expenditure estimated on 15 October 1975 amounted to 3,422,000.- Swiss francs.

M. MILI

Secretary-General

Annex : 1



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A N N E X

No.	Item	Approved budget	Expenditure at 25 October 1975			Total expenditure	Difference	
			Actual	Committed	Estimated			
14.100	1. <u>Staff</u>							
14.101	Salaries and related expenses	2,083,000	265,000	1,637,000	150,000	2,052,000	-	31,000
14.102	Reimbursement of salaries to the ordinary budget	120,000	-	-	120,000	120,000		
14.103	Travel	138,000	26,000	62,000	20,000	108,000	-	30,000
14.104	Insurance	43,000	8,000	35,000	3,000	46,000	+	3,000
		2,384,000	299,000	1,734,000	293,000	2,326,000	-	58,000
14.200	2. <u>Premises and equipment</u>							
14.201	Premises, furniture, machines	610,000	291,000	301,000	30,000	622,000	+	12,000
14.202	Document production	163,000	154,000	-	21,000	175,000	+	12,000
14.203	Office supplies and overheads	19,000	14,000	7,000	4,000	25,000	+	6,000
14.204	Post, telegraph and telephone	24,000	26,000	-	5,000	31,000	+	7,000
14.205	Technical equipment *)	1,000	20,000	2,000	48,000	70,000	+	69,000
14.206	Sundry and unforeseen	10,000	1,000	1,000	3,000	5,000	-	5,000
		327,000	506,000	311,000	111,000	928,000	+	101,000
14.300	3. <u>Other expenses</u>							
14.301	IFRB preparatory work	13,000	4,000	2,000	-	6,000	-	7,000
14.302	Final Acts of the Conference	103,000	-	-	103,000	103,000		-
14.303	Interest credited to the ordinary budget	90,000	-	-	52,000	52,000	-	38,000
		206,000	4,000	2,000	155,000	161,000	-	45,000
	TOTAL	3,417,000	809,000	2,047,000	559,000	3,415,000	-	2,000
=====								
	*) Including cost of computer use							

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 110-E

29 October 1975

Original : English

Note by the Chairman of the Conference

PLANNING METHODS (AS ADOPTED BY THE FOURTH PLENARY MEETING)*)

1. Duration of validity of the plan

Total period from signature to the end of the validity of the plan : 14 years.

2. Starting of the planning work

The plan is based on the equal rights of all countries; however, the planning work will start with stations in service including the African Plan (1966) readjusted on the basis of new requirements, and will take into account the requirements of the developing countries.

Account should also be taken of special cases which are not part of any plan and whose broadcasting services have not been sufficiently developed.

3. Reduction of overall requirements

3.1 Asia (Group 4A)

It is agreed that bilateral and multilateral negotiations should be continued in the most effective manner. Experience gained in this Group proves that it is possible, on the basis of bilateral negotiations, to reduce requirements and improve the situation in regard to wanted services.

In addition, a series of further steps for eliminating incompatibilities of requirements are proposed as follows :

1. assessment of the total interference situation in accordance with the procedure set out in Document No. 101;
2. to establish whether the proposed service is essential within the validity period of the Plan. Otherwise efforts should be made to reassess the requirements on the basis of equality of rights with a view to reducing them;
3. to establish whether it is possible to achieve economy in spectrum usage by techniques using synchronized networks;

*) For more details on the views of individual regional groups, see Documents Nos. 95, 99, 101, 102 and 103 and the minutes of the Fourth Plenary Meeting.



4. it was agreed that the actual planning work should take the results of bilateral negotiations as a basis and commence by examining services outlined above taking account of power level 20 kW and higher (to determine if a synchronized network should be included the aggregate power of the network should be assessed) on the basis that it is more difficult and more expensive to make a change with high power than low power stations;
5. to investigate :
 - a) the use of an alternative channel;
 - b) a change in antenna characteristics;
 - c) a reduction in power;
 - d) an alternative location for the transmitter;
 - e) a change in hours of operation or conversion to daytime operation only.

1,2 and 3 are regarded as being of first priority; in relation to 4, there is no specific priority order.

3.2 Africa (Group 4B)

The Group noted first of all that the requirements submitted for Africa were, in general, very modest from the standpoints both of quality and of power (less than 1000 requirements for a total power of 70 000 kW).

However, in compliance with point 1 of Document No. 86, the Group accepted the principle of the reduction of requirements considered excessive on the assumption that the average duration of the validity of the Plan will be about 15 years.

The principle was adopted of examining new requirements on the basis of the following criteria :

- equality of rights of all countries, large or small;
- priority to developing countries;
- period of validity of the Plan;
- mean power density in Watt/km² (Document No. DT/25(Rev.)).

Cancellations of assignments are being collected by the Group and will be submitted to Committee 4 provided that the principle of the reduction of requirements has also been accepted by the other regional groups.

3.3 Europe (Group 4C)

The power density in W/km^2 should be used to compare requirements between different countries in order to get substantial reductions by flexible application of this criterion (taking into account the particular situations in each country).

At the same time Chapter 9 of the Report of the First Session should be taken into consideration.

4. Elimination of incompatibilities

4.1 Asia (Group 4A)

Same principle as shown in paragraph 3.1 above and in addition :

Mediation group

A mediation group was set up under the chairmanship of the Chairman of the Asia and Pacific Group and the membership of Iran, Saudi Arabia and the Philippines, with the following terms of reference :

- to assist the Chairman of the Asia and Pacific Group;
- to serve as mediator in the event of dispute between countries in the Group;
- to assist Asian and Pacific countries in negotiations concerning cases of regional and inter-regional interference.

4.2 Africa (Group 4B)

Mediation group

A Mediation Group 4B/1 consisting of the Chairmen of Planning Groups 4/1, 4/5 and 4/9 (respectively, Tunisia, Guinea and Zambia) together with representatives of Congo, Ethiopia, Kenya, Libya, Mauritius and Nigeria, was set up under the chairmanship of Mr. Kalisilira (Zambia).

The Group's terms of reference are :

- to assist the Chairman of the Africa Group;
- to serve as mediator in the event of dispute between African countries;

- to study and assert the frequency needs of African countries which have not yet acceded to independence and of those which are not represented at the Conference but which are recognized by the O.A.U.;
- to assist the African countries in negotiations concerning cases of interference between Africa and other Regions.

Interference to the stations of African countries from stations in other Regions

The Group considers that the assignments in use, including all assignments in the Africa Plan, 1966, do not satisfy the development requirements of the various countries in the field of broadcasting.

It would therefore remind countries in other regional groups, in particular those in the European Broadcasting Area, that the Africa Plan, 1966, was established on the protection to be afforded to stations recorded in the I.F.R.B. Master Register on 21 September 1966. That fact considerably reduced the scope of the said Plan.

In view of the principle of equality enunciated in Chapter 9 of the Report of the First Session, the Africa Group hopes to encounter a cooperative attitude in the settlement of cases of interference which takes the special situation of the African countries into account.

4.3 Europe (Group 4C)

Text to be supplied to the Coordinating Group by Regional Group 4C.

Derek C. ROSE
Chairman of the Conference

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 111-E

29 October 1975

Original : English
French

COMMITTEE 4
ALL GROUPS OF
COMMITTEE 4

Note by the Chairman of Regional Group 4C (EUROPE)

Pursuant to paragraph 4.3 of the note by the Chairman of the Conference (Document No. 110), the following text has been agreed in Regional Group 4C (EUROPE) during the evening of Wednesday, 29 October 1975.

Elimination of incompatibilities

1. The Regional Group, with a view to eliminating the incompatibilities between requirements within the European Broadcasting Area, decided that, pursuant to the terms of reference given to the Planning Groups (Document No. 41), a liaison group should summarize the results of negotiations between administrations and help them to find mutually agreed decisions for a Plan.

The Liaison Group will be composed as follows : a representative of Egypt, Ireland and Czechoslovakia; its convenor being the Chairman of the Regional Group 4C (EUROPE).

2. Each convenor is asked to take within his Planning Group, the following action :

- coordinate the negotiations among delegations;
- assist the administrations in making reductions in their requirements, indicating the cases in which such an action is necessary;
- indicate the possible modifications suitable to make an acceptable Plan.

3. The above mentioned action should be coordinated in the Coordination Group to assure that all Planning Groups apply uniform criteria. The reductions in requirements would be facilitated if they can be agreed upon in general between groups of countries in order to obtain a uniform result based on the equal rights of all countries.

K. TERÄSVUO
Chairman



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 112-E

30 October 1975

Original : English

COMMITTEE 4

NOTE BY THE CHAIRMAN OF COMMITTEE 4

At the request of the Head of the Delegation of the Kingdom of Saudi Arabia, the letter addressed to the Chairman of the Mediation Group, Asia and Pacific Region, is presented in the attached Annex.

V. ŽAGAR

Chairman of Committee 4

Annex : 1



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A N N E X

Mr. A. Fadami
The Chairman
Mediation Group, Asia &
Pacific Region
Committee 4

Dear Sir,

The Saudi Arabian delegation, in response to the appeal by the Committee 4 Chairman and your good self, wishes to inform you that we have re-appraised our requirements in the MF band in the light of decisions taken by the Conference contained in Document No. 110. As you know, Saudi Arabia is a vast country with an area of more than 2 million km² with difficult terrain. The population is not uniformly distributed. Considering these and all other factors, Saudi Arabia has submitted a modest requirement of frequencies and power. The power density, taking into account all our 87 requirements (including those already in use) is only 15 watts/km².

However, in view of the difficulties being experienced by this Conference and respecting its decisions and appeals, this delegation is prepared to reduce its requirements by about 15% both in the number of frequencies and in power. The exact situation will be determined after our bilateral and multilateral negotiations with other delegations of this and adjoining Regions. These negotiations are now seriously in progress to remove incompatibilities. Kindly note that the proposed reduction is subject to co-operation from other delegations. If necessary, we are prepared to consider reducing the power requirement still further. The exact position will be intimated to you next week.

With regards,

Yours faithfully,

(A.R. DAGHASTAIN)
Chief, Saudi Arabian Delegation

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 113-E

31 October 1975

Original : French

COMMITTEE 4

NOTE BY THE CHAIRMAN OF COMMITTEE 4

At the request of the Head of the Delegation of the People's Republic of Albania, the letter addressed to the Chairman of Committee 4 is presented in the attached Annex.

V. ŽAGAR

Chairman of Committee 4

Annex : 1



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A N N E X

Mr. V. Žagar
Chairman of Committee 4

Dear Mr. Chairman,

The Delegation of the People's Republic of Albania considers that it should draw your attention to its views on the establishment of the LF/MF Frequency Assignment Plan, which constitutes the most important problem at the Second Session of the Broadcasting Conference.

On the basis of the well-known principles of the open policy followed by the Albanian Government in the international arena, which consists in promoting collaboration and understanding between peoples and the respect of mutual interests without interference in their internal affairs, our delegation has always been ready to make its modest contribution to the implementation of the just principles approved at the First Session of the Conference, particularly the principle whereby all countries, large or small, enjoy equal rights in the matter of frequency planning.

Pursuant to the decisions of the Planning Committee, our delegation has engaged in consultations with the delegations of various countries to resolve the problems of common interest on a footing of equality and mutual respect. The results of these consultations are to be found in the respective documents relating to planning requirements.

Unfortunately, we are bound to state that it has not proved possible to overcome all the problems encountered.

As you are already aware, the frequencies 1 088 kHz and 1 358 kHz (exclusive to Albania), on which our main national programme transmitters operate, were assigned to the People's Republic of Albania under the Copenhagen Plan. Nevertheless, we find that these frequencies suffer interference from certain foreign stations which broadcast arbitrarily in the same channels, thus considerably reducing the service area of our transmitters.

Therefore, our delegation, in drawing the particular attention of the Conference and the Planning Committee to this situation, requests them to take all the necessary steps to ensure that the foreign administrations concerned do not use these frequencies.

In view of the geographical configuration of the Albanian terrain, most of which is mountainous, the low conductivity of its soil, coupled with the high level of interference caused by the stations of other countries, and to increase the service area which, in present conditions according to I.F.R.B. estimates, covers only about 7% of our territory during the night, we have submitted modest requests for MF assignments better suited to the Albanian terrain. Our delegation has already presented its arguments in support of its requests during the discussions in the Committees and Working Groups of the Conference, providing all the necessary explanations regarding these frequency assignments. We therefore request that our requests be met in the establishment of the final Plan.

Our delegation will certainly endorse all the just decisions of this Conference. At the same time, it wishes to state that, should our interests be affected, we shall take all the necessary steps to ensure a normal broadcasting service within the limits of our territory in keeping with the well-known rules of law, namely, full national sovereignty and non-interference in the internal affairs of other countries.

I should be glad, Mr. Chairman, if you would publish this letter as a Conference document.

Yours sincerely,

Thanas NANO

Head of the Delegation of the
People's Republic of Albania

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 114-E

4 November 1975

Original : French

COMMITTEE 5

FIRST REPORT OF WORKING GROUP 5A

The terms of reference of Working Group 5A are given in Document No. 40 as follows :

1. To determine the data relating to a frequency assignment to be included in the Plans,
2. To determine the technical data to be used in the application of the Agreement.

This Report is concerned with the results achieved by the Working Group on the first part of its terms of reference.

The discussions on the presentation of technical data on a station in the Plans brought out the following general points :

- a) the data given in the Plans should be reduced to the minimum necessary in order to calculate the usable field-strength; this would simplify the layout of the Plans and make them easier to use;
- b) the Plans will include a "ground conductivity" column, in which the value of the ground conductivity in the service zone can be inserted when the Administration wishes to enter this characteristic in the Plans. When it does not, the I.F.R.B. will use the value given in the requirement forms for the purposes of applying the Agreement. Any Administration will retain the right to insert this value in the Plans after they have come into force. The Conference could adopt a recommendation to the latter group of Administrations, inviting them to proceed with ground conductivity measurements in their territories so that the Plans can quickly be brought up to date as far as this parameter is concerned;
- c) in addition to the power, it was considered desirable for the Plans to include the effective radiated power (columns 7 and 8). Furthermore, in view of the number of stations and their characteristics, it is important that the Plans should indicate the restrictions on radiation imposed by stations for each other's benefit when directive antennae are used (columns 9 and 10);



- d) an annex to the Plan will give, when the Administration so wishes, detailed information on the antenna gain for different azimuths and different angles of elevation, as shown in Annex 3. In the event of a modification, when an Administration proposes to introduce an antenna other than a simple vertical one, it will have to provide the diagrams for different azimuths and angles of elevation, as shown in Annex 3. When the antenna system corresponds to one of those in the C.C.I.R. documents, a reference to that system is considered sufficient. The Group is of the opinion that a recommendation should be adopted requesting the C.C.I.R. to publish a document giving the antenna diagrams (see Document No. DT/5);
- e) the question of giving values of E_u and D_u for several azimuths gave rise to lengthy discussions. Some Administrations do not want to include these figures, in order not to overload the Plan. Others could accept that view if information enabling the service area to be demarcated was included. One delegation requested that the secondary service area should also be protected in all cases. The I.F.R.B. might be asked to prepare a document for the information of Administrations (see Draft Resolution in Annex 7) which would show the contour of the service area of each station appearing in the Plans according to the situation resulting from the Plans themselves, on the basis of the information contained in Annex 5 to this Report.

On the basis of the arguments discussed above, Working Group 5A decided to propose to Committee 5 the table contained in Annex 1 to this Report, which gives the data relating to a frequency assignment that should be included in the Plans (if the Conference decides to include low-power channel assignments in the Plans, Annex 1 will apply with the exception of Columns 7, 8, 9 and 10, which will be replaced by a single column giving the effective radiated power).

In order to deal with the complex problems presented by the characteristics of antennae other than simple vertical ones that should be included in the Plans, Working Group 5A set up Sub-Group 5A/1 under the chairmanship of Mr. Lacharnay of the French delegation, the other members coming from the delegations of Iran, Nigeria, the United Kingdom and the U.S.S.R., joined by representatives of the C.C.I.R. and the I.F.R.B. Working Group 5A appreciated the remarkable results achieved by Sub-Group 5A/1, which are to be found in Annex 1.

M. LO
Chairman of Working Group 5A

ANNEXE 1 - ANNEX 1 - ANEXO 1

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	- Rayonnement autorisé - Authorized radiation - Radiación autorizada		- Limitations de rayonnement - Restrictions on radiation - Limitaciones de radiación (Pour antennes directives seulement) (For directive antennae only) (Para antenas directivas sólo)		- Antenne - Antenna - Antena		Conductivité du sol (S/m)	Horaire de fonctionnement (TWG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	- Rayonnement maximal - Maximum radiation	- Azimut de rayonnement maximal - Azimuth of maximum radiation	- Azimuts définissant le secteur à rayonnement limité - Azimuths defining the sector in which limitations exist	- Rayonnement maximal dans le secteur - Maximum radiation in the sector	Type	- Hauteur - Height	Ground Conductivity (S/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo designativo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	- Radiación máxima (dB)	- Acimut de radiación máxima	- Acimuts que definen el sector con limitaciones	- Radiación máxima en el sector (dB)		- Altura (m)	Conductividad del suelo S/m)	Horario de funcionamiento (TWG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

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A N N E X 2DATA TO BE ENTERED IN THE COLUMNS OF THE TABLE IN ANNEX 1

- Column 1 : Channel frequency (kHz).
(Channel number)
- Column 2 : Name of transmitting station
- Column 3 : Country symbol
- Column 4 : Geographical coordinates of the transmitting station
- Column 5 : Necessary bandwidth (kHz)
- Column 6 : Carrier power (kW)
- Column 7 : Maximum radiation in dB referred to 300 V c.m.f. or
1 kW e.m.r.p.*)
- Column 8 : Azimuth of maximum radiation in degrees*)
- Column 9 : Azimuths defining limited radiation sector, in degrees**)
- Column 10 : Maximum radiation in dB referred to 300 V c.m.f. or
1 kW e.m.r.p.**)
- Column 11 : Type of antenna. It is suggested that the symbol A, followed
by the antenna height, should be used to indicate a simple
vertical base-fed antenna; and the symbol B (followed by a
number) to indicate any other type of antenna described in
the Annex to the Plan under the number indicated by the
figures following the symbol B.

*) Where these values differ, e.g., in day-time and night-time, they
should be entered on two separate lines.

**) In some cases where these values differ for different sectors, they
should be entered on two or more lines.

Column 12 : Height for a simple vertical antenna (metres)

Column 13 : Ground conductivity (s/m)

Column 14 : Hours of operation (GMT); use the symbol H24 for 24 hour transmission, and indicate a particular schedule by the time of the beginning and the end of transmission (e.g. 00 - 18) in other cases.

Column 15 : Comments

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page 7

6

7A

7B

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350

1377

• • • • •

AZIM	10	20	30	40	50	60	70	80	90
0	2 -14	-7	-4	-5	-8	-14	-20	-30	
10	2 -14	-7	-4	-5	-8	-14	-20	-30	
20	2 -14	-7	-4	-5	-8	-14	-20	-30	
30	2 -14	-7	-4	-5	-8	-14	-20	-30	
40	2 -14	-7	-4	-5	-8	-14	-20	-30	
50	2 -14	-7	-4	-5	-8	-14	-20	-30	
60	2 -14	-7	-4	-5	-8	-14	-20	-30	
70	2 -14	-7	-4	-5	-8	-14	-20	-30	
80	2 -14	-7	-4	-5	-8	-14	-20	-30	
90	2 -14	-7	-4	-5	-8	-14	-20	-30	
100	2 -14	-7	-4	-5	-8	-14	-20	-30	
110	2 -14	-7	-4	-5	-8	-14	-20	-30	
120	2 -14	-7	-4	-5	-8	-14	-20	-30	
130	2 -14	-7	-4	-5	-8	-14	-20	-30	
140	2 -14	-7	-4	-5	-8	-14	-20	-30	
150	2 -14	-7	-4	-5	-8	-14	-20	-30	
160	2 -14	-7	-4	-5	-8	-14	-20	-30	
170	2 -14	-7	-4	-5	-8	-14	-20	-30	
180	2 -14	-7	-4	-5	-8	-14	-20	-30	
190	2 -14	-7	-4	-5	-8	-14	-20	-30	
200	2 -14	-7	-4	-5	-8	-14	-20	-30	
210	2 -14	-7	-4	-5	-8	-14	-20	-30	
220	2 -14	-7	-4	-5	-8	-14	-20	-30	
230	2 -14	-7	-4	-5	-8	-14	-20	-30	
240	2 -14	-7	-4	-5	-8	-14	-20	-30	
250	2 -14	-7	-4	-5	-8	-14	-20	-30	
260	2 -14	-7	-4	-5	-8	-14	-20	-30	
270	2 -14	-7	-4	-5	-8	-14	-20	-30	
280	2 -14	-7	-4	-5	-8	-14	-20	-30	
290	2 -14	-7	-4	-5	-8	-14	-20	-30	
300	2 -14	-7	-4	-5	-8	-14	-20	-30	
310	2 -14	-7	-4	-5	-8	-14	-20	-30	
320	2 -14	-7	-4	-5	-8	-14	-20	-30	
330	2 -14	-7	-4	-5	-8	-14	-20	-30	
340	2 -14	-7	-4	-5	-8	-14	-20	-30	
350	2 -14	-7	-4	-5	-8	-14	-20	-30	

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A N N E X 4

DATA ON THE CHARACTERISTICS OF TRANSMITTING ANTENNAE
OTHER THAN SIMPLE BASE-FED ANTENNAE

Explanatory notes referring to each column of Annex 3

Column 1 : Country symbol

Column 2 : Frequency (kHz)

Column 3 : Name of the transmitting station

Column 4 : Number following the symbol B in column 11 of the Table in Annex 1

Column 5 : The letter D in this column that indicates the gains given in columns 6 and 7 of this Annex were derived by the I.F.R.B. from a radiation diagram supplied by the administration.

The letter E in this column indicates that the administration filled in boxes 16 and 17 of the requirement form; the I.F.R.B. then extrapolated the corresponding gain values for purposes of calculation.

Column 6 : Gain in the horizontal plane (dB)

This column shows the gain (dB) in the horizontal plane in azimuthal directions each 10° from true North.

Columns 7A and 7B : Gain in a vertical plane (dB)

Column 7B shows the gain (in dB) for angles of elevation varying in steps of 10° in the vertical plane containing the axis of the maximum radiation lobe, the azimuth of which is given in column 7A. Where the administration supplied a diagram showing the gain in more than one vertical plane, this gain is indicated in the same way, each line entry beginning with the azimuth of the plane in column 7A and the gain at each 10° in this plane in column 7B.

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A N N E X 6

EXPLANATORY NOTES ON THE COLUMNS IN ANNEX 5

Column 1 : I.F.R.B. serial number

Column 2 : Symbol indicating the source of the frequency requirement for a wanted transmitter (see Appendix 2 of I.F.R.B. Circular-letter No. 327)

Column 3 : Carrier frequency (kHz)

Column 4 : Symbol designating the country or region in which the station is situated

Column 5 : Name of transmitting station

Column 6 : Power of carrier wave (kW)

Column 7 : For each assignment, the letters D, N and S, placed on separate lines in this column, indicate that the figures given in Column 9 relate to :

D : the ground wave by day

N : the ground wave by night

S : the sky wave

Column 8 : Usable field strength, E_u , in dB ($\mu\text{V/m}$) and corresponding usable distance, d_u , in km;

Column 9 : Contains 18 sub-columns for the azimuths, at 20° intervals from 0° to 360° , of the wanted station, for each of which the values of E_u and d_u , calculated by means of the I.F.R.B. computer programme, are given.

A N N E X 7

RESOLUTION No.

on determining the service areas of
the stations in the Plan

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva, 1975,

noting

that the work of the Conference is based on calculations made of
the usable field strength of each frequency assignment in the direction of
the main interfering transmitter;

considering

- that it may be useful to know the contours of the service areas
resulting from the Plan;
- that, owing to the time required, it will be impossible to
calculate such contours during the Conference;

instructs the I.F.R.B. :

to prepare for publication by the Secretary-General a document
in accordance with Annex 5 indicating the values of the usable field strength
and usable distance in 18 azimuths around each of the stations included
in the Plan when its power is equal to or greater than 50 kW or when a
directive antenna is used with a power of less than 50 kW.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 115-E

4 November 1975

Original: English

COMMITTEE 4

REPORT BY WORKING GROUP 4/AD-HOC TO COMMITTEE 4 (PLANNING)

Definition of daytime hours of operation

1. More efficient use of the frequency spectrum could be made and additional coverage obtained if transmitters for daytime operation are included in the Plans. In order to enable their inclusion it is desirable to establish a definition of that part of the day during which such operation would lead to improved coverage without causing unacceptable interference to stations operating both day and night. Such a definition should be at the same time simple and unambiguous.

2. From the physics of wave propagation daytime can be considered to be that part of the day when the absorbing effect of the ionospheric D-region is sufficiently high to prevent sky-wave interference. Since this effect is closely linked to the hours between sunrise and sunset the period of daytime, when expressed in local time at a reference point, varies with geographic latitude and with the season of the year.

3. For operational reasons, however, it is desirable and it is also practicable to substantially reduce the great variety of individual cases by adopting a simplified model. It is therefore, proposed:

- i) to use local mean time (LMT) rather than local time;
- ii) to use the site of the day time transmitter as the reference point;
- iii) to subdivide the latitudinal range of the whole planning area into a limited number of parts throughout which daytime can be considered as being uniform, when expressed in LMT.

In this respect three different zones have been envisaged:

the equatorial zone (between 30°N and 30°S),
the temperate zones (between 30° and 60° , N or S),
the polar zones (North or South of 60°).

The proposals made above would enable transmitters both in small countries and in reasonable parts of large countries to operate according to the same time schedule.



4. In view of the fact that in the polar zones there is practically no daytime in winter, it is proposed that no daytime transmitters be included in the Plans for that part of the planning area..

5. In the temperate zones daytime is defined to be that period of the day when, throughout the year, the level of the ionospheric field strength is at least 20 dB below its maximum nighttime value in an area limited by the reference latitudes. In order to avoid both undue restriction of the period of daytime and unacceptable interference the latitudes 50° (in winter) and 30° (in summer) have been selected as a reference so as to fulfill the attenuation condition beyond 50° in winter and in the whole area during the rest of the year. The dependence of daytime on the season of the year within the temperate zones is shown in Figure 1. In the Figure daytime is centred around noon and separated from nighttime by two limiting curves.

Attention is drawn to the fact that in the temperate zones relatively low attenuation values have been experienced in winter at the higher frequencies of the MF-broadcasting band. It is, therefore, recommended to avoid the use of frequencies in excess of approximately 1300 kHz for daytime operation.

6. In the equatorial zone daytime is defined correspondingly with the latitude 15° serving as a reference. The dependence of daytime on the season of the year within the equatorial zone is shown in Figure 2 by the solid lines which correspond to an attenuation value of 20 dB. The dotted line in the same Figure corresponds to an attenuation of 40 dB.

7. It is proposed that administrations select operational hours for their daytime transmitters according to their needs provided that the limitations set out above are respected. In particular, they shall be free to use the same schedule throughout the year or adapt the hours of operation to the periodically changing limits of daytime. However, such an adaptation would have its main advantage in the temperate zones. Examples of uniform and periodically changing hours of operation are included in Figure 1.

8. Transmitters operating with different technical characteristics during day and night should not operate with daytime characteristics at any time beyond the limits shown in Figures 1 or 2, respectively.

9. In interference calculations daytime transmitters should be taken into account in such a way that their sky-wave field strengths are reduced by 20 dB. The resulting amount of interference will then not be exceeded during daytime as defined above.

Due to lack of time it will be impracticable to amend the existing computer program of the I.F.R.B. before the end of the Conference. However, in cases of interference caused by daytime transmitters delegations may correct the computer print-outs manually by 20 dB (or 40 dB, as the case may be - see Figure 2) and estimate the resulting value of usable field strength accordingly.

10. It should be noted that daytime transmitters, even when operating in conformity with the definition given above, are nevertheless to be coordinated among administrations concerned both during the Conference and, in cases of modification, after the end of the Conference.

H. EDEN
Chairman

Working Group 4/Ad Hoc

HEMISPHERE DU NORD
NORTHERN HEMISPHERE
HEMISFERIO NORTE

Jan. Fev. Mar. Avr. Mai Juin Juil. Août Sept. Oct. Nov. Dec.
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
En. Feb. Mar. Abr. May. Jun. Jul. Ag. Sept. Oct. Nov. Dec.

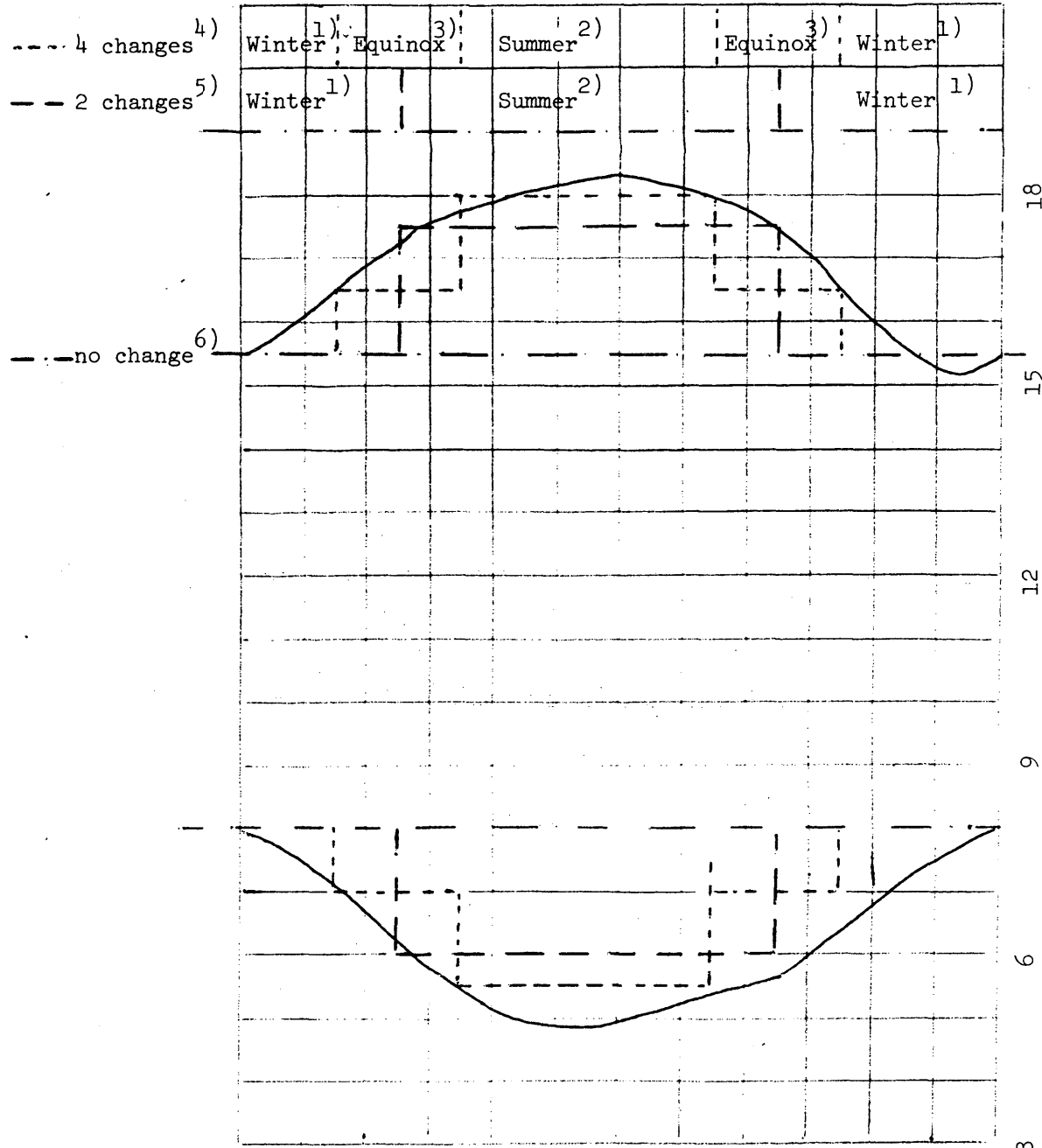


FIGURE 1 - FIGURA 1

Limites de la journée aux latitudes tempérées (30° - 60°)

Daytime limits at temperate latitudes (30° - 60°)

Límites de las horas diurnas en latitudes templadas (30° - 60°)

Juil. Août Sept. Oct. Nov. Dec. Jan. Fev. Mar. Avr. Mai Juin
Jul. Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
Jul. Ag. Sept. Oct. Nov. Dic. En. Feb. Mar. Abril May. Junio

HEMISPHERE DU SUD
SOUTHERN HEMISPHERE
HEMISFERIO SUR

- | | |
|-------------------------|---------------------------------|
| 1) Hiver/Invierno | 4) 4 changements/4 cambios |
| 2) Eté/Verano | 5) 2 changements/ 2 cambios |
| 3) Equinoxe/Equinoccios | 6) pas de changement/sin cambio |

HEMISPHERE DU NORD
NORTHERN HEMISPHERE
HEMISFERIO NORTE

Jan.Fev. Mar. Avr. Mai JuinJuil.Août Sept.Oct.Nov. Dec.
Jan.Feb. Mar. Apr. May JuneJuly Aug. Sept.Oct.Nov. Dec.
En. Feb. Mar. Abr. Mayo Jun.Jul. Ag. Sept.Oct.Nov. Dic.

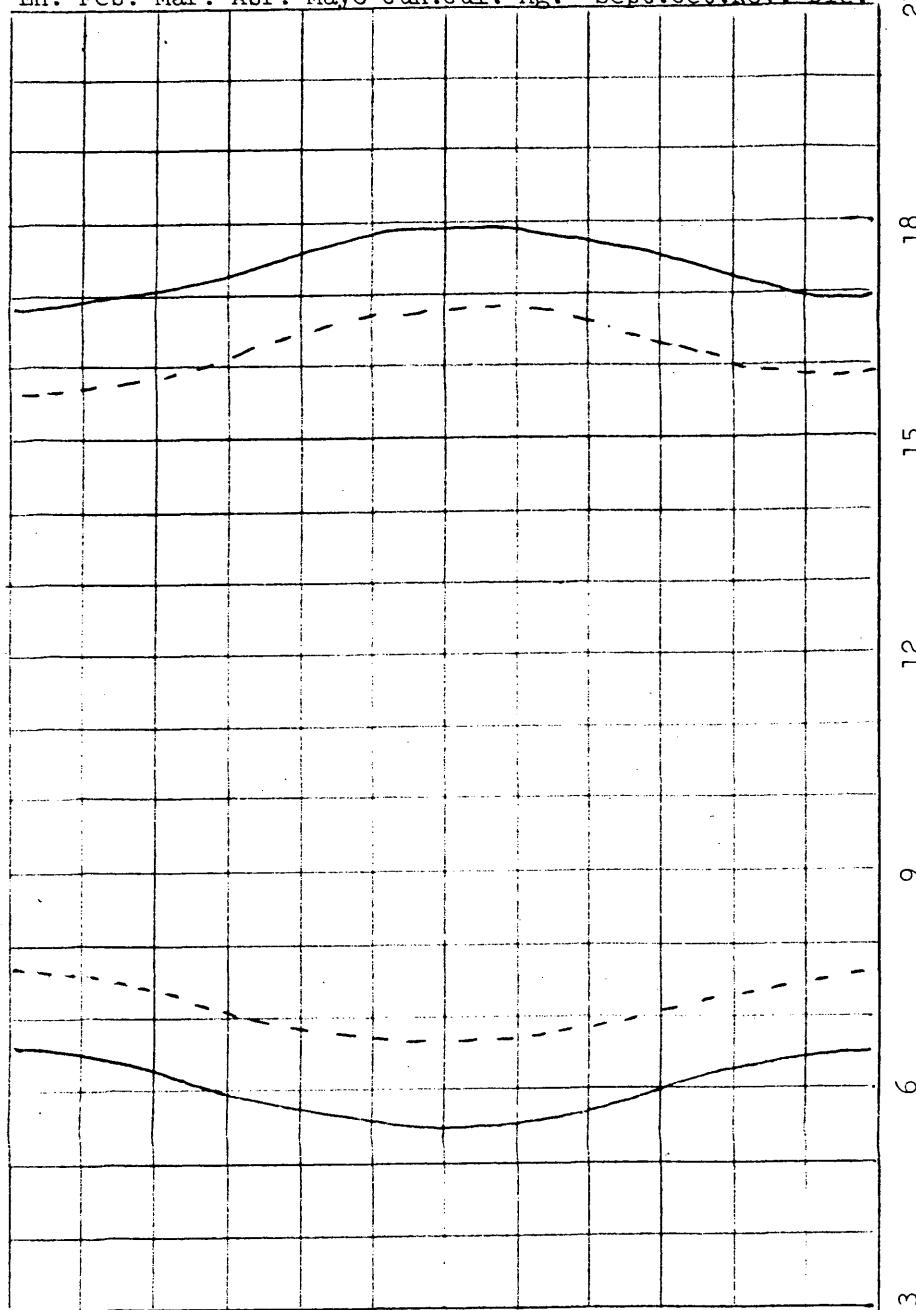


FIGURE 2 - FIGURA 2

Heure
Time of day
Hora diurna
(LMT)

Limites de la journée aux latitudes équatoriales ($0^{\circ} - 30^{\circ}$)
Daytime limits at the equatorial latitudes ($0^{\circ} - 30^{\circ}$)
Límites de las horas diurnas en latitudes ecuatoriales ($0^{\circ} - 30^{\circ}$)

Juil.Août Sept.Oct.Nov. Dec. Jan. Fev. Mar.Avr. Mai Juin
July Aug. Sept.Oct.Nov. Dec. Jan.Feb. Mar.Apr. May June
Jul. Ag. Sept.Oct.Nov. Dec. En. Feb. Mar.Abr. Mayo Junio

HEMISPHERE DU SUD
SOUTHERN HEMISPHERE
HEMISFERIO SUR

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 116-E

3 November 1975

Original : English

COMMITTEE 4 AND

PLENARY MEETING

India

REDUCTION OF REQUIREMENTS AND POWER

Pursuant to the decision of the Conference on the validity period for the Plan, the Indian Administration has reduced the number of its requirements by 352. This is approximately a reduction by 30 per cent of the total requirements originally projected by India to the I.F.R.B. Consequently there is a reduction of the total power by about 3 500 kW.

In addition to the above reduction, the Indian Administration has also reduced, during bilateral negotiations, the power in respect of several of its assignments in order to reach satisfactory solution, as desired in paragraph 3.1 of the note by the Chairman of the Conference given in Document No. 110, which reflects the decisions of the 4th Plenary meeting. This additional power reduction works out to be 4 500 kilowatts approximately. The Indian Administration has also agreed to adopt other technical means like directional aeri-als, bandwidth compression etc. to avoid interference to other Administrations, wherever considered necessary.

The action taken by the Indian Administration, as indicated above, is a step forward towards the preparation of a satisfactory plan for broadcasting service in HF band.

The Indian delegation wishes to bring the above information to the notice of the Conference.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 117-E(Rev.1)

10 November 1975

Original : English

COMMITTEE 2

Note by the Secretary-General

TRANSFER OF POWERS

TONGA (KINGDOM OF)

By telegram dated 31 October 1975, the Government of the Kingdom of Tonga has appointed the delegation of New Zealand to vote and sign on its behalf at the Conference.

M. MILI

Secretary-General

Note by the Secretariat : See also Document No. 16(Rev.3), according to which the Kingdom of Tonga has not yet acceded to the Convention and therefore does not have the right to vote.



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 117-E

3 November 1975

Original : English

COMMITTEE 2

Note by the Secretary-General

TRANSFER OF POWERS

TONGA (KINGDOM OF)

By telegram dated 31 October 1975, the Government of the Kingdom of Tonga has appointed the delegation of New Zealand to vote and sign on their behalf at the Conference.

M. MILI

Secretary-General



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 118-E

4 November 1975

Original : English

COMMITTEE 5

FIRST REPORT OF WORKING GROUP 5C TO COMMITTEE 5

1. The terms of reference of Working Group 5C, as contained in Document No. 40, read as follows :

"To establish the provisions of the Agreement excluding those relating to :

- the procedure for modification to the Plans;
- the criteria for determining whether or not a modification to the Plans requires coordination;
- the notification of frequency assignments;
- the abrogation of the previous Convention and agreement;

but including those relating to the status and the validation of the Agreement."

2. The Working Group held six meetings during which were established the texts of the articles coming under its terms of reference and recommends the adoption of these texts which appear in the Annex to the present report.

3. The Working Group set up a drafting group composed of delegates from the English, the French and the Spanish delegations. However, time did not permit the Working Group to refer the annexed texts to this drafting group before submission to Committee 5.

4. After lengthy discussions on the principles which should be contained in the Preamble to the Agreement, and in order to establish a text which could be acceptable by all delegations, the Working Group set up a drafting group under the chairmanship of Mr. Bundle of the New Zealand delegation, the other members coming from the delegations of Algeria, France, Italy, Pakistan and the U.S.S.R. This drafting group proposed a text with two alternatives on which no agreement could be reached.



The text is reproduced in the Annex and the two alternative texts (second and fifth paragraph) have been left in square brackets for consideration by Committee 5.

In this connection and since time did not permit the Working Group to examine Document No. 64 which contains the proposed text of an article dealing also with questions of principle, Committee 5 is requested to take this document into consideration when discussing the text of the Preamble.

5. With respect to Article [D] agreement could not be reached on the question as to whether the accession to the Agreement by Members should be made without reservations. An alternative text was included which contains the ideas expressed in paragraph 2 of Article [H]. Both alternative texts are in square brackets for consideration by Committee 5.

6. As a result of a decision taken by the Conference, an article was added concerning the validity period of the Agreement. Since no agreement could be reached on the text of this article in the Working Group, the matter is referred to Committee 5.

7. A certain number of delegates expressed their grave concern about the fulfilment of the needs of non-participating Members of the Union, those of countries which are non-Members of the Union and those of countries which will become independent and asked for discussions of these problems in Committee 5.

S.Y. CHONG
Chairman Working Group 5C

Annex : 1

A N N E X

REGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

PREAMBLE

With the object of facilitating relations, understanding and mutual cooperation in the field of LF/MF broadcasting;

with a view to improving the use of the frequency bands allocated to the broadcasting service in order to ensure satisfactory reception of the broadcasting service for all countries;

/ Recognizing the principle that all countries large and small have equal rights and bearing in mind the needs of all countries and in particular those of the developing countries_/,

The delegates of the following Members of the I.T.U., meeting in Geneva for a Regional Administrative Conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos 1973), have adopted, subject to the approval of their respective competent authorities, the following special arrangements relating to the broadcasting service in Regions 1 and 3 for the medium frequency bands and in Region 1 for the low frequency bands.

/ It is recognized that all countries large and small have equal rights and that the needs of all countries and in particular the needs of the developing countries are to be fulfilled in the implementation of this agreement_/.

.....

ARTICLE [A]

Frequency bands

The provisions of the present Agreement apply to the frequency bands between 150 and 285 kHz and between 525 and 1605 kHz allocated to the broadcasting service under Article 5 of the Radio Regulations.

ARTICLE [B]

Definitions

For the purposes of the present Agreement, the following terms shall have the meanings defined below:

Union: The International Telecommunication Union;

Secretary-General: The Secretary-General of the Union;

I.F.R.B.: The International Frequency Registration Board;

C.C.I.R.: The International Radio Consultative Committee;

Convention: The International Telecommunication Convention;

Radio Regulations: The Radio Regulations, Geneva, 1959;

Regions 1 and 3: The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations;

Agreement: The whole of the present Agreement including the Plan and the other annexes;

Plan: The Plan forming Annex to the Agreement;

Participating Member: Any Member of the Union which has approved or acceded to the Agreement;

Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Convention and the Radio Regulations.

ARTICLE [C]

Execution of the Agreement

1. The Participating Members shall adopt for their broadcasting stations operating in Regions 1 and 3 in the frequency bands referred to in the Agreement, the characteristics specified in the Plan.
 2. The Participating Members shall not put assignments complying with the Plan into use, change the technical characteristics of stations specified in the Plan, or put into use new stations, except under the conditions provided for in Articles and of the present Agreement.
 3. The Participating Members shall endeavour to agree on the action required to reduce any harmful interference caused by the application of the Agreement.
-

ARTICLE [D]

Accession to the Agreement

1. Any Member of the Union in Regions 1 and 3 which has not signed this Agreement may accede thereto at any time. Such accession shall extend to the Plan as amended at the time of the accession [and shall be made without reservation]. The Secretary-General shall be notified thereof, and he shall inform the other Members of the Union.
[If a Member which accedes to the Agreement makes reservations with regard to any provision of the present Agreement, other Participating Members shall be free to disregard the said provisions in their relations with the Member which has acceded and which has made such reservations.]
2. Accession to the Agreement shall take effect on the date on which the notification of accession is received by the Secretary-General.

ARTICLE [E]

Termination of participation in the Agreement

1. Any Participating Member shall have the right at any time to terminate its participation in the Agreement by a communication sent to the Secretary-General, who shall inform the other Members of the Union.
2. Such termination of participation shall take effect after a period of one year from the date of receipt, by the Secretary-General, of the said communication.

ARTICLE [F]

Revision of the Agreement

No revision of the Agreement will be undertaken except by a competent Conference of the Members of the Union in Regions 1 and 3 convened in accordance with the procedure laid down in the Convention in force.

ARTICLE [G]

Effective date of the Agreement

The Agreement shall enter into force on at
.... hours G.M.T.

.....

ARTICLE [H]

Scope of application of the Agreement

1. The present Agreement shall bind Participating Members in their relations with one another but does not bind those Members with non-Participating countries.
2. If a Member makes reservations with regard to any provision of the present Agreement, other Members shall be free to disregard the said provision in their relations with the Member which has made such reservations.

ARTICLE [I]

Approval of the Agreement

Members shall notify their approval of this Agreement, as promptly as possible, to the Secretary-General who shall at once inform the other Members of the Union.

ARTICLE [J]

Validity period of the Agreement

[.....]

In witness whereof, the undersigned Delegates of the Members of the Union mentioned above have, on behalf of their respective competent authorities, signed the present Agreement in a single copy in the Chinese, English, French, Russian and Spanish languages, in which, in case of dispute, the French text shall be authentic. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each signatory Member.

Done at Geneva,

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 119-E

4 November 1975

Original : French/English

PLENARY MEETING

MINUTES

OF THE

FOURTH PLENARY MEETING

Tuesday, 28 October 1975, at 2000 hrs

and

Wednesday, 29 October 1975, at 0950 hrs

Chairman : Mr. D.C. ROSE (New Zealand)

Subjects discussed

Document No.

- | | |
|--|------------|
| 1. Approval of the Minutes of the first,
second and third Plenary Meeting | 46, 51, 72 |
| 2. Situation with regard to countries not
present at the Conference | 79, 96 |
| 3. Reports of Committees | DL/32 |



1. Approval of the Minutes of the first, second and third Plenary Meetings
(Documents Nos. 46, 51, 72)

The Minutes of the first Plenary Meeting (Document No. 46) were approved.

The Minutes of the second Plenary Meeting (Document No. 51) were approved, subject to drafting amendments to be submitted directly to the Secretariat by the Chairman of the I.F.R.B. and the delegate of France.

The Minutes of the third Plenary Meeting (Document No. 72) were approved, subject to an amendment by the delegate of Australia to replace the third paragraph on page 2 by the following :

"The Australian proposal in Document No. 17 and its Addendum regarding the sky wave propagation curve for Region 3 south of 11°S was not acceptable to the Group. The Australian delegation then withdrew Document No. 17."

2. Situation with regard to countries not present at the Conference
(Documents Nos. 79, 96)

The Chairman reminded the Meeting that discussions had taken place in the Steering Committee and Committee 4 on the situation with regard to countries not present at the Conference and that Committee 4 had had before it a draft resolution (Document No. 79) inviting a series of Member countries not represented at the Conference - listed in Document No. 96 - to submit their frequency requirements as soon as possible and to take part in the negotiations.

With the approval of the Steering Committee and Committee 4, telegrams of various kinds had been sent in that connection to Member countries of the I.T.U. and to certain other countries non-Members of the Union but Members of the United Nations. Replies had already been received from Sri Lanka, Tonga, Mozambique and Liberia.

Moreover, the arrival of the delegate of Nepal had been announced for 31 October. Iraq had stated of its own accord that it would be represented, but its delegate had not yet arrived.

3. Reports of Committees (Oral reports for Committees 2 and 3, Document No. DL/32 for Committee 4 and oral reports for Committees 5 and 6)

Committee 2

The Vice-Chairman of Committee 2 said that 70 credentials had already been examined and that the remaining 15 would be examined very shortly.

Committee 3

The Chairman of Committee 3 said that the Committee had held one meeting at which it had considered the financial situation of the Conference up to 15 October. At that date, the excess expenditure had been approximately 5,000 Swiss francs. There had also been excess expenditure of 50,000 Swiss francs for work done by the computer which had not been originally foreseen by the Administrative Council, but that surplus had been offset by savings on other budget items.

The only outstanding question was that of estimates for the production of the Final Acts. The credit allowed for a little over 200 pages amounted to 103,000 Swiss francs, but according to indications that would be given in the report of Committee 5, the Final Acts were likely to be more voluminous than it had been foreseen, thus probably entailing an increase in expenditure.

Committee 4 (Document No. DL/32)

The Chairman of Committee 4 introduced Document No. DL/32 (annexed to these minutes) and summarized its contents.

In the first place, a consensus had been reached on A. Duration of the validity of the Plan, namely, 10 years from the date of entry into force, which would be fixed at 2 to 4 years after the date of the signature of the Agreement.

The situation was, however, less clear with regard to the four other subjects - B. Starting the planning work, C. Reduction of overall requirements, D. Elimination of incompatibilities and E. Other recommendations.

B. Start of the planning work

Working Group 4A "Asia and the Pacific Region" proposed that planning should start by taking into account assignments already in use and the requirements of the developing countries on the basis of the principles set forth in the Report of the First Session.

Working Group 4B "Africa" proposed that a start should be made by taking into account assignments already in use and those in the African Plan, 1966. However, the Group emphasized that owing to developments in the situation between 1966 and 1975 the African Plan had serious shortcomings. Any revision should take account of those important developments.

Working Group 4C "Europe" envisaged two stages of planning. In the first stage, account would be taken of requirements submitted in time and of certain additional requirements from developing countries which had been received later, as well as of certain late requirements. Supplementary or additional requirements would be taken into consideration at a later stage.

C. Reduction of overall requirements

As regards the position of the "Asia and Pacific Region" Group, reference should be made to Document No. 103.

The African Group had stressed the fact that requirements from countries in the African Region were modest and that special attention should be given to the risks of interference from stations situated outside Africa.

The European Group did not appear to have reached agreement on the various questions it had had to consider, but some interesting suggestions would be found on page 6 of Document No. DL/32.

D. Elimination of incompatibilities

A series of useful suggestions on that subject would be found on pages 7, 8 and 9 of Document No. DL/32.

E. Other recommendations

It had been suggested, inter alia, that work should be interrupted for a few days to enable delegations to devote themselves entirely to negotiations in the hope of solving the various problems which were of concern to them.

In conclusion, it appeared that although half the time available to the Conference had already elapsed, Committee 4 had not yet succeeded in fulfilling its terms of reference. It was evident therefore that new directives had to be issued to Committee 4 to enable it to pursue its task.

Committee 5

The Chairman of Committee 5 described the organization of work of the various groups set up within the Committee and noted that, as a result of the delays which had occurred, the established timetable would have to be revised if the Agreement were to be drawn up in time.

Committee 6

The Chairman of Committee 6 said that the Drafting Committee was accustomed to working with some delay but at considerable speed. Hard-working as it was, however, the Committee needed a modicum of time to complete its task. It was essential, therefore, that from the second week of November it should have a sufficient number of pages to work on, since otherwise the texts would not be ready by the end of the Conference.

Detailed examination of Document No. DL/32 (Annex 1)

Section A : Duration of validity of the Plan

After a discussion in which the delegates of Norway, Pakistan, Japan, the U.S.S.R., Algeria, New Zealand, the German Democratic Republic, Singapore, Afghanistan and Indonesia took part, it was agreed that the total duration of the transitional period (from the date of the signing of the Agreement to the entry into operation of the Plan) and the period of application (from the entry into operation until the date of expiry of the Plan) should not exceed 14 years. The respective duration of each of the above-mentioned periods remained to be determined at a later stage in the work.

Section B : Considerations in starting the planning work

The Chairman recalled the suggestion that the work should start by taking into account assignments already in use while taking due account of the requirements of developing countries and applying the principle of equal rights as laid down in the Report of the First Session.

The delegate of Norway, supported by the delegates of Sweden and the German Democratic Republic, observed that the Asia and Pacific Regional Group had pronounced itself clearly in favour of such a course while the Europe Group had been less certain because some countries in that Region would find it difficult to apply strictly such directives, particularly as regards giving priority to assignments already in use at very high powers compared to stations of other countries which had observed the provisions of the Copenhagen Plan and had refrained from increasing their transmitter power.

The delegate of Spain agreed with what had been said but expressed doubts about the way in which it was proposed to apply the principle of equal rights if, in general, the existing situation were taken as a starting point.

The delegate of Ireland said that Working Groups 4A and 4B had sought to define the meaning of the term "equal rights" by stating that the future requirements of developing countries within the Plan's period of validity should be taken into account to enable them to develop their broadcasting services to the point where the quality and extent of such services were commensurate with the existing services in developed countries.

Following a discussion on the procedure which Committee 4 should follow in the planning work, the Chairman read out the following terms of reference :

"The Plan is based on the equal rights of all countries, however, the planning work will start with consideration of stations in service including the Africa Plan and will take into account the requirements of the developing countries."

The delegate of Norway said that he was prepared to accept that text as a provisional one but emphasized that the difficulties arising in the European zone did not relate solely to some difficult cases but to the area as a whole. That was why, as had been often repeated in the regional groups, the problem to be solved was that of the scale of requirements as a whole, i.e., the inflated number of assignments and excessive powers.

The delegate of Japan supported the Chairman's text.

The delegate of Spain was ready to accept the proposed text but pointed out on the one hand that the principle itself of equal rights was somewhat hazy and did not correspond to any rule and on the other hand that the text did not cover certain special cases such as that of Spain which had not taken part in the drawing up or the adoption of the Copenhagen Convention.

The delegate of Ireland also made a reservation because the reference to equal rights in the text was vague.

The delegate of Mauritania, referring to the third paragraph of section 2.2 in Document No. 103, was in favour of adopting the proposed text subject to inserting the words "revised in accordance with new requirements" after the words "including the Africa Plan".

In reply to a request for clarification by the delegate of Italy, the Chairman explained that the Africa Plan had been launched in 1966, i.e., nine years previously. However, the African countries had realized that certain changes would need to be made in it in respect of frequencies and transmitter power.

It was decided to insert in the text the words proposed by the delegate of Mauritania.

The delegate of Spain proposed that a sentence be added as follows :

"Account should also be taken of the special case of Spain which is not part of any plan and whose broadcasting services have not been sufficiently developed."

The delegate of Papua New Guinea suggested that the Conference follow the guidelines of the Chairman, who was endeavouring to concentrate on broad principles. The delegate of the United Kingdom, agreeing with that view, objected to the mention of specific countries as several other countries would feel obliged to make similar provisions. He further agreed with a comment by the delegate of Zambia to the effect that strict application of the "equal rights" principle should cover the kind of special case mentioned.

The delegate of Spain, replying to an appeal by the Chairman, said he could accept a text from which the name of Spain was deleted, provided his reservation was duly recorded.

Those comments were supported by the delegate of Portugal, whose country was in a similar situation to that of Spain, although he felt the case could be covered by the text as it stood, with the statement regarding equal rights.

The Chairman considered that the proposed text should be taken into account by Committee 4 as it would no doubt apply to several other countries.

The Spanish proposal, as amended by the Chairman (deletion of specific reference to Spain) was approved.

The Chairman pointed out that it was at the next stage of the procedure that the regional groups diverged; the criteria determined were listed in Document No. DL/32.

Section C : Reduction of requirements

The Chairman reviewed the procedures agreed by Regional Group 4A and 4B (as contained in the document) and noted that Group 4C had been unable to reach a consensus on most points. He felt it would be appropriate to consider the instructions which would be given to Committee 4 for specific regions as it was obvious that requirements differed from region to region. Each group had gone some way to determining criteria and he proposed to proceed on a regional basis.

The delegate of Papua New Guinea said he felt the Conference was moving towards a practical solution and that a device must be worked out to put the ideas into practice; he suggested that an extract from paragraph 2.2 ("It was agreed that the actual planning work should take the results of bilateral negotiations as a basis and commence by examining services outlined above taking account of power level 20 kW and higher") be inserted as appropriate in page 4.

It was so agreed.

Similarly, the delegate of Algeria referred to the four principles listed on page 3 under "Introduction of new requirements" which should be inserted on page 5, under "Reduction of requirements" as the problem was the same.

It was so agreed.

The Chairman pointed out that although Group 4C had considered many suggestions and solutions there was a consensus on only one point ("No dissenting voice was raised against judging assignments qualitatively by reference to Watt per km²"), and that device could therefore be used for the European area.

There was some discussion about the place of that sentence - which represented the only point of agreement - and it was finally agreed that it would be placed immediately after point 3) on page 6.

The delegate of Spain referred to the sources of the difficulties in the region, principally congestion both with reference to the existing and the planned situation.

The delegate of Italy pointed out with respect to the limitation of power that although no consensus was arrived at on 300 kW and 500 kW for the MF and LF band respectively, no other proposal had been put forward.

The delegate of Yugoslavia brought up the point described in paragraph 5 on page 6, but the Chairman suggested that it be deferred for further discussion by Committee 4.

The delegate of Zambia wondered whether it would not be possible to test the formulae in Documents Nos. 59 and 90 to see if they could be used as a yardstick for reduction of power and equitable distribution of assignments.

The delegate of the United Kingdom said that, unless agreement could be reached on a yardstick for the reduction of requirements at that stage of the Conference, no progress at all could be made. He therefore proposed that sub-paragraph 1) on page 6 should merely read "Power density in W/km²" and that the rest of that text should be deleted. That would allow for a flexible qualitative evaluation of assignments.

The delegate of Greece objected to the proposal. His country could not envisage a plan which did not refer specifically to the sea area, since its territory comprised a large number of islands.

The Chairman drew the Greek delegate's attention to No. 423 of the Radio Regulations.

The delegate of Sweden supported the United Kingdom proposal.

The meeting was suspended at 2320 hours on Tuesday, 28 October, and resumed at 0950 hours on Wednesday, 29 October 1975.

The delegate of Belgium made the following statement :

"I fully understand the wish of the United Kingdom delegation and many other delegations to have a criterion for comparison between the requirements of various countries. I also understand their anxiety to adopt a simple criterion which will remain simple, such as evaluation in Watts per km² of the area of a country. It seems to me, however, as the delegate of France pointed out in Working Group 4C, that the application of this criterion must remain flexible enough to take the specific conditions of each country into account. These basic considerations are, moreover, set out in point 9.2.1, particularly in point 9.2.1.d, of the Report of the First Session and were approved by all delegations at the very outset of this Session. I take it that this flexible application is taken into consideration in the United Kingdom delegate's proposal when he spoke of a 'qualitative' basis for comparison. On that understanding, I can endorse the proposal of the delegate of the United Kingdom".

The delegate of Cyprus associated himself with that statement.

In reply to the delegate of Yugoslavia, the delegate of the United Kingdom said that no specific sea area would be mentioned in the criterion, on the assumption that the relevant problems would be discussed during the negotiations that would take place in each individual case.

The delegate of Iceland, supported by the delegate of the Philippines, said that the deletion proposed by the United Kingdom was

unacceptable to a country like his own, which was an island with many inlets. On the other hand, the definition in Document No. 59 was also unacceptable to a number of countries. He therefore proposed that the words that the United Kingdom proposed to delete should be replaced by something along the lines of "including territorial waters in the calculation of the area", since the concept of territorial waters was a legal one, giving the country concerned total jurisdiction over the adjacent sea area.

The delegates of the Federal Republic of Germany and Roumania pointed out that it was not at all clear what was meant by the term "territorial waters".

The delegate of Malta said he wished to draw the attention of the Conference to the difficulties that very small countries would have in applying the criterion of power density in Watts per km².

The delegate of Denmark said it seemed clear that the criterion envisaged in the United Kingdom proposal did not set any fixed number of Watts per km². Accordingly, application of that criterion must be regarded as a relative measure, to be used in negotiations between two or three countries. If that interpretation were adopted, there would be no need to refer to such matters as territorial waters, since it was perfectly obvious that, of two countries with an equal land mass, the one which was split up into many islands must have the higher figure of Watts per km², given the same coverage conditions.

The delegate of the U.S.S.R. endorsed that view, drawing attention to the penultimate sentence of paragraph 3 on page 6. Moreover, a country comprising many islands did not necessarily need a transmitter on every island, since the territory could be covered by high power transmitters where economically feasible. The qualitative parameters entailed by the United Kingdom proposal must be stressed.

The delegate of Iceland said that, in the light of the views expressed, he would be prepared to change his proposed addition to read :

"consideration should be given to countries with numerous islands and countries which are islands".

The delegates of the United Kingdom and Sweden said that they had no objection to that addition.

The delegate of Luxembourg made the following statement :

"I do not wish to add new difficulties to those you are experiencing in trying to make work in the European Region more effective.

Accordingly, I shall try not to oppose criteria for a qualitative evaluation of assignments. Nevertheless, these rigid and mathematical parameters should not, in our opinion, lead to strict automatism at the selection stage. While it is true that the proposed text refers to flexible application, the concept is too elastic for me to refrain at this point from voicing my specific anxiety in this connection.

Yesterday evening the delegate of Spain mentioned specific situations which might arise for certain countries whose stage of development in broadcasting implies a need for catching up which should be open to them. I fully understand and endorse this legitimate anxiety.

Yet other specific situations may arise which go, so to speak, to the other extreme, those of smaller countries, possessing high power transmitters as the result of long-established circumstances, which may originally have been pioneers in the matter; moreover, these situations have been fully accepted by or are acceptable to the neighbouring countries, provided they are not a source of harmful interference.

I should like the concept of flexibility to which I have referred to cover these situations and I should be glad if the Conference would accept the possibility of such an interpretation on the basis of this concept of flexibility.

To this end, Mr. Chairman, I should like to submit an amendment to the end of the introductory part of paragraph 3 on page 6 of Document No. DL/32, so that it should read '... in order to get substantial reductions by flexible application of these criteria, taking into account existing specific and acceptable situations'.

In making this proposal, Mr. Chairman, I think that I am conforming fully with the conclusions of Chapter 9 of the Report of the First Session of the Conference".

The delegate of Albania said that he could not endorse the United Kingdom proposal, since power density was by no means the only factor involved. Such considerations as geographical configuration, ground conductivity, the level of existing interference and, above all, the technical capacities of a country must be taken into account.

The delegate of France, supported by the delegate of Belgium, said that the positions of many delegations might be met by adding a more general formula to the words "Power density in W/km^2 ". He proposed that that addition should be "taking into account the specific situation of every country".

The United Kingdom proposal, as amended by the delegate of France, was approved.

The delegate of Austria made the following statement :

"The Austrian Administration agreed with the principle of adopting a common and just yardstick in reducing the requirements. In our minds the fairness of such a yardstick could prove much better by comparing the resulting percentages of service area within the different countries than by reference to power density in Watts per km². This is due to the fact that the service range not only depends on power but also on wavelength and ground conductivity. It has been this problem which led to the fact that Austria could not sign the Copenhagen Convention, as may be found in the Austrian statement annexed to the Final Protocol.

However, in order to reach full agreement, the Austrian delegation is prepared to follow the procedure of judging assignments in a flexible manner by reference to power density. In doing so, the Austrian delegation takes it that considerations regarding the resulting service area are within the scope of the term 'judging assignments qualitatively'. Furthermore, the Austrian delegation strongly expects that in case reduction is done generally, the reduction of usable field strength for the remaining Austrian requirements will be at least as considerable as the reduction of Austrian requirements".

The delegate of Sweden, supported by the delegates of Spain and Italy, associated himself with the suggestion made earlier in the meeting by the delegate of Zambia concerning Document No. 90, and proposed that the criterion contained in sub-paragraph 2) should be adopted as an additional yardstick.

The delegates of Czechoslovakia, the U.S.S.R., the German Democratic Republic and the United Kingdom opposed that proposal.

Replying to a question by the delegate of Zambia, the Chairman said that Appendix G of the Report of the First Session concerned planning technicalities and, in particular, lattice planning. In his view, acceptance of the concept of power density in W/km² as a criterion for the comparison of requirements did not constitute a departure from any of the decisions or recommendations of the First Session.

Having called for a show of hands in order to ascertain the feeling of the meeting, he said that the Swedish proposal appeared to generate more opposition than support. Consequently, he suggested that the meeting should proceed to consideration of Section D.

Section D : Elimination of incompatibilities

The Chairman drew attention to the fact that the text produced by Working Group 4A under the heading "Paragraphs 2.1 and 2.5" on page 7 was the same as that appearing under the same heading on pages 4 and 5. He noted that mediation groups had been set up by Working Groups 4A and 4B for the purpose of tackling any difficulties that might be encountered in overcoming problems of interference. He also drew attention to the text produced by Working Group 4B on the question of interference to stations in Africa from stations in other regions, and particularly to the last two paragraphs on page 8.

Replying to a question by the delegate of Pakistan concerning the proposal in sub-paragraph 1) on page 7, the Chairman of the I.F.R.B. said that to follow exactly the procedure set out in Document No. 101 would give rise to certain difficulties. However, the I.F.R.B. had an alternative solution to propose to Working Group 4A, and would bring the matter up at the appropriate time in Committee 4.

The Chairman of Working Group 4C said that the text on page 9 had been placed between square brackets because the Working Group had not had time to take a decision on the suggestions put forward concerning elimination of incompatibilities.

The delegate of Sweden, supported by the delegate of Italy, proposed that the text on page 9 should be accepted subject to the deletion of sub-paragraph b).

The delegate of the U.S.S.R. said that he would be able to support the Swedish proposal if sub-paragraph c) was deleted as well.

The delegate of the United Kingdom considered it would be proper to refer sub-paragraph b) to the Steering Committee. With regard to sub-paragraph c), the text might be acceptable if the words "take the responsibility" were replaced by the word "attempt".

The delegate of the U.S.S.R. said he was unable to accept the amendment suggested by the United Kingdom delegate.

The delegates of Sweden and the United Kingdom said they would be prepared to accept the deletion of sub-paragraph c).

The delegate of Italy opposed the deletion of sub-paragraph c).

The delegate of Iceland objected to the suggestion in sub-paragraph a) because he considered that the work of the planning groups should be guided first and foremost by the principle of equal rights of all countries.

The Chairman proposed that the text on page 9 should be referred back to Working Group 4C for such action as the latter deemed fit.

It was so agreed.

Section E : Other recommendations

The delegate of Pakistan, referring to the third paragraph under the heading "General", said that Document No. 91 dealt with an important means of reducing requirements and should be discussed as soon as possible, preferably before the deadline for submission of data for the next computer run.

The Chairman of Working Group 4B said that the part of the terms of reference of Mediation Group 4B/1 (page 8, paragraph 5) relating to African countries which had not yet acceded to independence and those which were not represented at the Conference but which were recognized by the O.A.U. should be reproduced in Section E under the heading "WORKING GROUP 4B".

The Chairman said that if he heard no objection he would take it that the outcome of the discussion on Document No. DL/32 could be summed up in the following way :

Section A - Agreement on the texts produced by all three Working Groups.

Section B - Agreement on the texts produced by Working Groups 4A and 4B.

Section C - Agreement on the texts produced by Working Groups 4A and 4B.
In the case of the text produced by Working Group 4C, agreement on flexible application of the criterion of power density in W/km² taking into account the specific situation of every country, and on the paragraph reading "At the same time Chapter 9 by reference to Watt per km²".

Section D - Agreement on the texts produced by Working Groups 4A and 4B.
Referral of the text produced by Working Group 4C back to that Group for further action.

Section E - Noted, subject to the amendment requested by the
Chairman of Working Group 4B.

It was so agreed.*)

Replying to a question by the delegate of Spain concerning the future of the regional Working Groups, the Chairman said that those Groups had a significant role to play alongside the Planning Groups in the drawing up of the Plan; they had proved their worth and even though they might not all need to meet with great frequency their coordinators and mediation groups were important parts of the Conference.

The meeting rose at 1155 hours.

The Secretary-General :

M. MILI

The Chairman :

D.C. ROSE

*) See Document No. 110 - Planning methods adopted at the 4th Plenary Meeting.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 120-E
24 November 1975

This number has not been used.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 121-E

4 November 1975

Original : French

COMMITTEE 6

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 6

(EDITORIAL COMMITTEE)

Friday, 31 October 1975, at 0930 hrs

Chairwoman : Miss M. HUET (France)

Subjects discussed :

Document No.

1. Terms of reference of the Editorial Committee
(No. 527 of the Malaga-Torremolinos
Convention)
2. Composition of the Committee



1. Terms of reference of the Editorial Committee (No. 527 of the Torremolinos Convention)

The Chairwoman said that since everyone was familiar with the provisions of No. 527 of the Malaga-Torremolinos Convention defining the Editorial Committee's terms of reference, there was no need to read out the text.

2. Composition of the Commission

It was decided that the Committee should consist of the following members :

- in addition to the Chairwoman and Vice-Chairmen, Mr. Bisner (France), assisted by other French delegates when highly technical questions arose, Mr. Carter, Miss West and Mrs. France (United Kingdom), and Mr. Quintas (Spain);
- the heads of the three language sections of the General Secretariat or their representatives.

The Executive Secretary of the Conference explained that the Committee would have to study the presentation of the Final Acts. There would be a text of about 115 pages and 500-600 pages of tables, for which the Committee would merely have to draft the headings. As for the text proper, the first instalment would be made available by Committee 5 towards 5 November, so that the Editorial Committee could meet on 6 or 7 November. A second series of texts from Committee 5 would be ready about 8 November, which would enable the Committee to meet again on 10 November, for example. After consideration by the Editorial Committee, the texts would be submitted to a Plenary Meeting as usual. Early in the last week of the Conference, various Resolutions and Recommendations would no doubt be made, but it was not possible to foresee what the situation would be at that time.

The Chairwoman pointed out that the work of the Editorial Committee would have to be completed around 15 November and that the first item to be dealt with would be the title of the Final Acts.

It was proposed that the following title should be adopted :

"Final Acts of the Regional LF/MF Broadcasting Conference

(Regions 1 and 3)

(Geneva, 1975)"

One of the Vice-Chairmen (United Kingdom) thought that, while taking the above suggestion into account, the Editorial Committee should use some of the information provided by Committee 5.

In reply to an observation by the Chairwoman, the Executive Secretary of the Conference said that it was for the Editorial Committee to decide under what title the Final Acts containing the conclusions of the Conference should be published.

The Committee endorsed that view and it was agreed that the question should be considered as soon as possible.

The meeting rose at 0950 hours.

The Secretary :

R. MACHERET

The Chairwoman :

M. HUET

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 122-E

3 November 1975

Original : French

BUDGET CONTROL

COMMITTEE

Report by the Secretary-General

SITUATION CONCERNING EXPENDITURE FOR THE BROADCASTING CONFERENCE

AT 31 OCTOBER 1975

In accordance with the provisions of Rule 5 of Chapter 11 of the International Telecommunication Convention, Torremolinos, 1973, a report on the expenditure incurred for the Broadcasting Conference up to 31 October 1975 is submitted to the Budget Control Committee for consideration.

M. MILI

Secretary-General

Annex : 1



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No.	Item	Approved budget	Expenditure at 31 October 1975			Total expenditure	Difference
			Actual	Committed	Estimated		
14.100	1. <u>Staff</u>						
14.101	Salaries and related expenses	2,083,000	265,000	1,634,000	175,000	2,074,000	- 9,000
14.102	Reimbursement of salaries to the ordinary budget	120,000	-	-	120,000	120,000	-
14.103	Travel	138,000	25,000	62,000	10,000	97,000	- 41,000
14.104	Insurance	43,000	8,000	-	38,000	46,000	+ 3,000
		2,384,000	298,000	1,696,000	343,000	2,337,000	- 47,000
14.200	2. <u>Premises and equipment</u>						
14.201	Premises, furniture, machines	610,000	291,000	301,000	30,000	622,000	+ 12,000
14.202	Document production	163,000	160,000	-	18,000	178,000	+ 15,000
14.203	Office supplies and overheads	19,000	14,000	7,000	3,000	24,000	+ 5,000
14.204	Post, telegraph and telephone	24,000	27,000	-	4,000	31,000	+ 7,000
14.205	Technical equipment *)	1,000	21,000	2,000	47,000	70,000	+ 69,000
14.206	Sundry and unforeseen	10,000	1,000	1,000	3,000	5,000	- 5,000
		827,000	514,000	311,000	105,000	930,000	+ 103,000
14.300	3. <u>Other expenses</u>						
14.301	IFRB preparatory work	13,000	4,000	2,000	-	6,000	- 7,000
14.302	Final Acts of the Conference	103,000	-	-	103,000**)	103,000	-
14.303	Interest credited to the ordinary budget	90,000	-	-	49,000	49,000	- 41,000
		206,000	4,000	2,000	152,000	158,000	- 48,000
	TOTAL	3,417,000	816,000	2,009,000	600,000	3,425,000	- 8,000
	*) Including cost of computer use						
	**) Initial estimate						

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 123-E

4 November 1975

Original : French

BUDGET CONTROL
COMMITTEE

Report by the Secretary-General

COST OF PRINTING THE FINAL ACTS

Administrative Council Resolution No. 83 (amended) entitled :

ORGANIZATION, FINANCING AND LIQUIDATION
OF THE ACCOUNTS OF CONFERENCES AND MEETINGS

contains the following provisions concerning the publication of the Final Acts of conferences or meetings :

"20.1 If a conference ... prints, for its own use, documents of which typographical composition can subsequently be used, in whole or in part, for the printing of the Final Acts, it must bear a percentage of the composition costs and the whole of the printing costs of the said document :

20.2

20.3 The percentage of the composition cost mentioned in 20.1 above ... shall be decided by the Plenary Assembly of the Conference ...".

The blue pages of the first reading, the pink pages of the second reading and the white pages of the document for signature are to be produced by the internal reproduction services of the Union. It is also planned to have the definitive edition of the Final Acts (publication for sale) printed by other installations of the Union's reproduction services. Hence the question of sharing costs between the conference budget and the publications budget does not arise.

M. MILI
Secretary-General



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 124-E

5 November 1975

Original : English

COMMITTEE 5

SECOND AND LAST REPORT OF WORKING GROUP 5C TO COMMITTEE 5

This Report relates to matters discussed in the seventh and final meeting of Working Group 5C.

Reference was made in paragraph 5 of the First Report of Working Group 5C that with respect to article D, agreement could not be reached on whether accession to the Agreement should be made without reservation.

At the request of Working Group 5C, the Secretary General produced a note (DL 27) (Annex 3) distinguishing the considerations applying (a) to Members participating in the Conference and who sign any resulting agreement and (b) to Members who accede thereafter. The Working Group, while welcoming the information provided by the Secretary General, nevertheless preferred that, as stated in the First Report, this important question should be referred to Committee 5.

On the basis of a draft text for an article dealing with the Duration and Revision of the Agreement the Working Group reached the conclusion that the proposed agreed text in Annex 1 to this Report would allow Article F, one of the texts included in the annex to the First Report, to be deleted.

During this discussion the Working Group recognized that (in formulating a reference in this article to a specific period of validity) as the present Conference was not competent to determine when any further conference should be called to review the Agreement, it would be appropriate to include in the Agreement a recommendation that a conference be called at an appropriate date relative to the validity period of the Agreement with a view to revising the Agreement and the annexed Plan. A draft text of a suggested Recommendation is at Annex 2.



The text of a further Article, to provide for special arrangements between Members, as a complementary feature to the procedures being devised for modifying the Plan, was also agreed by the Working Group and is included in Annex 1.

The Working Group concluded that it had completed consideration of the items which came within its terms of reference.

A.O. CARTER
Chairman of Working Group 5C

ANNEX 1

ARTICLE [J] ¹⁾

Duration of the Agreement

The Agreement and the annexed Plan have been established with a view to meeting the requirements of the broadcasting services in the bands concerned for a period of .. years after the Agreement enters into force.

The Agreement shall remain in force until it is revised by a competent Conference of the Members of the Union of Regions 1 and 3, convened in accordance with the procedure specified in the Convention in force.

ARTICLE []

Special Arrangements

In addition to the procedures provided for in article [] of the Agreement and with a view to facilitating the application of these procedures for improving the utilization of the Plan, Members may conclude special arrangements in accordance with the pertinent provisions of the Convention and of the Radio Regulations.

¹⁾ Article [F] which is contained in Annex to the First Report of the Working Group 5C (Document No. 118) shall be deleted.

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A N N E X 2

RECOMMENDATION No. ...

[]

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva, 1975,

considering

that it has not been possible to accommodate in a satisfactory manner in the frequency bands allocated to LF/MF broadcasting all the requirements that have been submitted;

that it has been found necessary to limit the period of validity of the Agreement and the Plan annexed to it, so that no account has been taken of requests for frequencies to be brought into service at the end of the period of validity of the Plan;

that new or developing countries may consider a revision of the Plan desirable after a relatively short period;

that it is absolutely essential for the Agreement and the annexed Plan to be revised not later than;

recommends that the Administrative Council:

should arrange for a Regional Administrative Conference (Regions 1 and 3) to be held in with a view to revising the Agreement and the annexed Plan.

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ANNEX 3

RESERVATIONS

The Secretariat has been asked by Committee 5C to prepare notes on the general practice in the I.T.U. with regard to the rights of Members to make reservations.

The international law with regard to rights of States to make reservations in acceding to a treaty is undergoing certain evolution. Without affecting the basic provisions and purpose of a treaty acceptance of reservations is becoming more feasible. Nevertheless, the international law provides for this matter to be governed by the Rules of the particular Institution or Treaty - these Rules are normally found in the Basic Instrument (for the I.T.U. - the International Telecommunication Convention).

Competence of LF/MF Conference (1966)

This Conference seems free to decide whether or not accession by Members that are not signatories to the Agreement may make reservations or are excluded from making reservations at the time of accession. If the Conference decided to allow such reservations, provision would have to be made to see that late comers did not enjoy preferential rights over signatories.

As regards procedure for the Conference, it is useful to distinguish the situation of :

- Members whose delegates sign the Agreement, and which, consistent with the I.T.U. legislative provisions, would normally be obliged to approve the Agreement without any right to increase the scope of their reservations;
- Members which observe the Accession Procedure (i.e. non-signatories and non-participants in the Conference).

I.T.U. legislative provisions and practice

Under I.T.U. practice, and taking account of the detailed operational character and influence of legislative provisions on operational relationships, reservations in the past have been limited to declarations presented during a Conference and taken into account by other Members' Delegations at the particular Conference, as provided for in the International Telecommunication Convention :

CHAPTER XI

Rules of Procedure of Conferences and other Meetings

Rule 17. Reservations

512 1. As a general rule, any delegations whose views are not shared by the remaining delegations shall endeavour, as far as possible, to conform to the opinion of the majority.

513 2. However, if any decision appears to a delegation to be of such a nature as to prevent its government from ratifying the Convention or from approving the revision of the Regulations, the delegations may make reservations, final or provisional, regarding this decision.

(Note the words "final" or "provisional" - no specific provision exists for additional reservations to be made.)

ARTICLE 42

Administrative Regulations

148 2. Ratification of this Convention in accordance with Article 46 involves acceptance of the Administrative Regulations in force at the time of ratification*) or accession.

*) note in practice subject to 513.

Thus, the same concepts (i.e. no post Conference reservations) have been usually

- i) observed in regard to the "approval" of revision of Regulations by Members participating in the Competent Conferences - and as well non-signatory Members when they have ratified or acceded to the particular International Telecommunication Convention in force and annexed Regulations at the particular time;

ii) provided for in the Regional Agreements :

European Broadcasting Agreement	(VHF/UHF)	Stockholm	1961
African Broadcasting Agreement	(VHF/UHF)	Geneva	1963
African Broadcasting Agreement	(LF/MF)	Geneva	1966

Equal rights between Members

As regards equal rights, it is useful to recall that all Members of Regions 1 and 3 were invited to the Conference within the framework of their rights and obligations provided for in the Convention - also to submit their broadcasting service frequency assignment demands and proposals to the Conference.

It is for the Conference to decide whether or not in their absence from the negotiations those Members which are not present should be extended the right to make reservations on accession to the Agreement. These include those Members who renounced their right to participate in the Conference.

General

Thus, the considerations of this matter need to take into account the following situations :

i) Under approval procedures

Members participating in the Conference and whose delegates sign the Agreement with reservations accepted by the Conference in accordance with I.T.U. legislation and bind provisionally their Governments.

ii) Under accession procedures

- a) Members participating in the Conference and whose delegations do not sign the Agreement
- b) Members who have renounced their right to attend the Conference - even if assignment demands were notified
- c) Members which have accepted the invitation to attend the Conference, but did not arrive, even if assignment demands were notified
- d) Countries, non-Members of the Union - whether or not they made information or their assignment demands known to the Conference.

As regards d), the Conference cannot bind these Authorities to the Agreement, it can only indicate the form in which their needs were taken into account.

If reservations are permitted with regard to ii) a), b), c) and d), consideration will have to be given to the rights of those in i), who under the established I.T.U. procedures would have made reservations only at the Conference, in the knowledge of the negotiation processes and the decisions and reservations of others present.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 125-E

13 November 1975

Original : French

PLENARY MEETING

NOTE BY THE CHAIRMAN OF COMMITTEE 5

At the request of Committee 5, this Document containing explanatory information about the abrogation of the European Broadcasting Convention (Copenhagen, 1948) and the annexed Copenhagen Plan is published for the benefit of the Conference.

A. PETTI

Chairman of Committee 5

Annex : 1



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A N N E X

EXPLANATORY INFORMATION ABOUT THE ABROGATION OF THE
EUROPEAN BROADCASTING CONVENTION, COPENHAGEN, 1948,
AND THE ANNEXED COPENHAGEN PLAN

In reaching agreement on the procedure to be adopted for abrogating the European Broadcasting Convention and its annexed Copenhagen Plan, the parties to the Additional Protocol took account of the following points :

1. that the Agenda of the Regional Administrative LF/MF Broadcasting Conference held in Geneva during the period 6 October to 22 November 1975 was established by the Administrative Council of the I.T.U. with the agreement of the Members of the Union in Regions 1 and 3;
2. that the Agenda provided for the Conference to draw up an agreement and an associated plan of frequency assignments for broadcasting stations in the LF/MF broadcasting bands in Regions 1 and 3 to replace, as appropriate, the existing plan for those frequency bands;
3. that the European Broadcasting Convention and Copenhagen Plan annexed thereto was established by plenipotentiaries and subject to ratification by the respective governments;
4. that Article 6 of the European Broadcasting Convention provides for the abrogation of the European Broadcasting Convention and annexed Copenhagen Plan between all the contracting Governments at the entry into force of a new Convention and also that the Copenhagen Plan shall be abrogated as from the entry into force of a new Plan;
5. that the Copenhagen Plan annexed to the European Broadcasting Convention contains assignments and related characteristics to broadcasting stations and stations of other radio services;
6. that as No. 47 of the Malaga-Torremolinos Convention stipulates that :

"The agenda of a regional administrative conference may provide only for specific telecommunication questions of a regional nature, including instructions to the International Frequency Registration Board regarding its activities in respect of the region concerned, provided such instructions do not conflict with the interests of other regions"

it was recognized that the status of the coast stations listed in Chapter II of the Copenhagen Plan remained unaffected until such time as the assignments to these stations were modified by the agreement of the parties concerned or by a competent conference.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 126-E
4 November 1975
Original: English

PLENARY MEETING
COMMITTEE 5

SECOND REPORT OF COMMITTEE 4 (PLANNING)

- Frequency band shared between the Broadcasting Service and the Maritime Mobile and Aeronautical Radionavigation Services in Region 1 (255 - 285 kHz).

- Frequency band allocated to different services in Region 1 from those in Region 3 (200 - 285 kHz).

1. Having considered the proposals submitted by Belgium (Document No. 82), the Committee unanimously adopted the principles contained in the texts reproduced in the Annex to the present Report and decided:

- a) to invite Committee 5 (Agreement) kindly to consider the principles concerned insofar as they fall under its terms of reference and to adopt the consequential draft Recommendation and draft Resolution;
- b) to request Working Group 4/11-LF to draw up the list of transmitters for inclusion in the draft Resolution or an annex thereto; and
- c) to invite Committee 5 (Agreement) kindly to consider including any necessary provisions in the draft Agreement under the general heading of "Procedure for modifications to the Plans".

2. The Committee also unanimously agreed to invite Committee 5 (Agreement) kindly to extend the above action to cover the similar situation resulting from the different Regional allocations between Regions 1 and 3 in the band 200 - 285 kHz.

V. ZAGAR
Chairman

Annex: 1



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A N N E X

It is therefore desirable that the Regional Broadcasting Conference:

- should make a Recommendation in its Final Acts to the effect that the World Administrative Radio Conference scheduled for 1979 should consider the modification of the Table of Frequency Allocations appearing in Article 5 of the Radio Regulations so that it no longer includes frequency bands shared between the Broadcasting Service and other Services, such as the Maritime Mobile and the Aeronautical Radionavigation Service;
 - should indicate, in a Resolution annexed to the Plan, that new transmitters can be brought into service in shared bands only after the World Administrative Radio Conference scheduled for 1979 and in the light of the changes to the Table of Frequency Allocations appearing in Article 5 of the Radio Regulations decided at that Conference, unless special agreements have been reached between all the administrations concerned and those having services, operating in accordance with the existing Table, which may be affected.
-

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 127-E

6 November 1975

Original : French

PLENARY MEETING

FIRST REPORT OF COMMITTEE 5

(AGREEMENT)

Subjects discussed : Data relating to an assignment to be included in the Plan.
Draft Resolution on determining the service areas of the stations in the Plan.

Committee 5 adopted the draft texts reproduced in the annexes.

The Delegations of Australia, Japan, Nigeria and the Republic of Korea expressed reservations concerning the draft Resolution in Annex 5.

A. PETTI

Chairman of Committee 5

Annexes : 5



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ANNEXE 1 - ANNEX 1 - ANEXO 1

COLONNES DU PLAN - COLUMNS OF THE PLAN - COLUMNAS DEL PLAN

Fréquence assignée (kHz) (Número del canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	- Rayonnement autorisé - Authorized radiation - Radiación autorizada		- Limitations de rayonnement - Restrictions on radiation - Limitaciones de radiación (Pour antennes directives seulement) (For directive antennae only) (Para antenas directivas sólo)		- Antenne - Antenna - Antena		Conductivité du sol (S/m)	Horaire de fonctionnement (TWG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	- Rayonnement maximal - Maximum radiation	- Azimut de rayonnement maximal - Azimuth of maximum radiation	- Azimuts définissant le secteur à rayonnement limité - Azimuths defining the sector in which limitations exist	- Rayonnement maximal dans le secteur - Maximum radiation in the sector	- Type - Tipo	- Hauteur - Height	Ground Conductivity (S/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo designativo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	- Radiación máxima (dB)	- Acimut de radiación máxima	- Acimuts que definen el sector con limitaciones	- Radiación máxima en el sector (dB)		- Altura (m)	Conductividad del suelo S/m)	Horario de funcionamiento (TWG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

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A N N E X 2

DATA TO BE ENTERED IN THE COLUMNS OF THE TABLE IN ANNEX 1

- Column 1 : Channel frequency (kHz)
(Channel number).
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in degrees and minutes.
- Column 5 : Necessary bandwidth (kHz) / the value in kHz is to be preceded by the symbol A, B, C or D indicating the curve in figure ... in Annex ... that is to be used in calculating the usable field strength /.
- Column 6 : Carrier power (kW)
- Column 7 : Maximum radiation in dB referred to 300 V c.m.f. or 1 kW e.m.r.p. / (*) / to be determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses /.
- Column 8 : Azimuth of maximum radiation in degrees / (*) /.
- Column 9 : Azimuths defining limited radiation sector, in degrees / **) /.
- Column 10 : Maximum radiation in dB referred to 300 V c.m.f. or 1 kW e.m.r.p. / **) / to be determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses /.
- Column 11 : Type of antenna. It is suggested that the symbol A, followed by the antenna height, should be used to indicate a simple vertical base-fed antenna; and the symbol B (followed by a number) to indicate any other type of antenna described in the Annex to the Plan under the number indicated by the figures following the symbol B.

/(*) Where these values differ, e.g., in day-time and night-time, they should be entered on two separate lines. /

/**) In some cases where these values differ for different sectors, they should be entered on two or more lines. /

Column 12 : Height for a simple vertical antenna (metres).

Column 13 : Ground conductivity (s/m).

Column 14 : Hours of operation (GMT); use the symbol H24 for 24 hour transmission, and indicate a particular schedule by the time of the beginning and the end of transmission (e.g. 00 - 18) in other cases.

Column 15 : Comments.

A N N E X E 3 - A N N E X 3 - A N E X O 3

/ GAINS D'ANTENNE DANS DIFFERENTS AZIMUTS ET DIFFERENTS ANGLES DE SITE /

ANTENNA GAIN IN DIFFERENT AZIMUTHS AND AT DIFFERENT ELEVATION ANGLES

/ GANANCIA DE ANTENA PARA DIFERENTES AZIMUTES Y ÁNGULOS DE ELEVACIÓN /

	1	2	3	4	5	6	7A	7B
							AZIM	10 20 30 40 50 60 70 80 90
1377							0	2 -14 -7 -4 -5 -8 -14 -20 -30
							10	2 -14 -7 -4 -5 -8 -14 -20 -30
							20	2 -14 -7 -4 -5 -8 -14 -20 -30
							30	2 -14 -7 -4 -5 -8 -14 -20 -30
							40	2 -14 -7 -4 -5 -8 -14 -20 -30
							50	2 -14 -7 -4 -5 -8 -14 -20 -30
							60	2 -14 -7 -4 -5 -8 -14 -20 -30
							70	2 -14 -7 -4 -5 -8 -14 -20 -30
							80	2 -14 -7 -4 -5 -8 -14 -20 -30
							90	2 -14 -7 -4 -5 -8 -14 -20 -30
							100	2 -14 -7 -4 -5 -8 -14 -20 -30
							110	2 -14 -7 -4 -5 -8 -14 -20 -30
							120	2 -14 -7 -4 -5 -8 -14 -20 -30
							130	2 -14 -7 -4 -5 -8 -14 -20 -30
							140	2 -14 -7 -4 -5 -8 -14 -20 -30
							150	2 -14 -7 -4 -5 -8 -14 -20 -30
							160	2 -14 -7 -4 -5 -8 -14 -20 -30
							170	2 -14 -7 -4 -5 -8 -14 -20 -30
							180	2 -14 -7 -4 -5 -8 -14 -20 -30
							190	2 -14 -7 -4 -5 -8 -14 -20 -30
							200	2 -14 -7 -4 -5 -8 -14 -20 -30
							210	2 -14 -7 -4 -5 -8 -14 -20 -30
							220	2 -14 -7 -4 -5 -8 -14 -20 -30
							230	2 -14 -7 -4 -5 -8 -14 -20 -30
							240	2 -14 -7 -4 -5 -8 -14 -20 -30
							250	2 -14 -7 -4 -5 -8 -14 -20 -30
							260	2 -14 -7 -4 -5 -8 -14 -20 -30
							270	2 -14 -7 -4 -5 -8 -14 -20 -30
							280	2 -14 -7 -4 -5 -8 -14 -20 -30
							290	2 -14 -7 -4 -5 -8 -14 -20 -30
							300	2 -14 -7 -4 -5 -8 -14 -20 -30
							310	2 -14 -7 -4 -5 -8 -14 -20 -30
							320	2 -14 -7 -4 -5 -8 -14 -20 -30
							330	2 -14 -7 -4 -5 -8 -14 -20 -30
							340	2 -14 -7 -4 -5 -8 -14 -20 -30
							350	2 -14 -7 -4 -5 -8 -14 -20 -30

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A N N E X 4

DATA ON THE CHARACTERISTICS OF TRANSMITTING ANTENNAE
OTHER THAN SIMPLE BASE-FED ANTENNAE

Explanatory notes referring to each column of Annex 3

Column 1 : Symbol designating the country or the geographical area in which the station is located

Column 2 : Frequency (kHz)

Column 3 : Name of the transmitting station

Column 4 : Number following the symbol B in column 11 of the Table in Annex 1

Column 5 : The letter D in this column that indicates the gains given in columns 6 and 7 of this Annex were derived by the I.F.R.B. from a radiation diagram supplied by the administration.

The letter E in this column indicates that the administration filled in boxes 16 and 17 of the requirement form; the I.F.R.B. then extrapolated the corresponding gain values for purposes of calculation.

Column 6 : Gain in the horizontal plane (dB) / without allowing for miscellaneous losses /

This column shows the gain (dB) in the horizontal plane in azimuthal directions each 10° from true North.

Columns 7A and 7B : Gain in a vertical plane (dB) / without allowing for miscellaneous losses /

Column 7B shows the gain (in dB) for angles of elevation varying in steps of 10° in the vertical plane containing the axis of the maximum radiation lobe, the azimuth of which is given in column 7A. Where the administration supplied a diagram showing the gain in more than one vertical plane, this gain is indicated in the same way, each line entry beginning with the azimuth of the plane in column 7A and the gain at each 10° in this plane in column 7B.

A N N E X 5

RESOLUTION No.

on determining the service areas of
the stations in the Plan

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva, 1975,

noting

that the work of the Conference is based on calculations made of
the usable field strength of each frequency assignment in the direction of
the main interfering transmitter;

considering

- that it may be useful to know the contours of the service areas
resulting from the Plan;
- that, owing to the time required, it will be impossible to
calculate such contours during the Conference;

instructs the I.F.R.B. :

to prepare for publication by the Secretary-General a document
indicating the values of the usable field strength of the ground wave by
day and at night and of the sky wave and usable distance in 18 azimuths around
each of the stations included in the Plan when its power is equal to or greater
than 20 kW or when a directive antenna is used.

INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Document No. 128-E
6 November 1975
Original : French

COMMITTEE 5

SECOND REPORT OF WORKING GROUP 5A

In pursuance of the decisions reached by Committee 5, Working Group 5A has prepared the draft Recommendation in Annex 1 concerning the future publication by the C.C.I.R. of a handbook of standard antenna diagrams.

In addition, following discussions in the Working Group on methods of forecasting sky wave propagation, certain interested delegations have agreed on the text of the draft Recommendation in Annex 2 to this Report.

M. LO
Chairman of Working Group 5A

Annexes : 2



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ANNEX 1

DRAFT RECOMMENDATION

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

considering

- that the calculation criteria adopted at the First Session of the Conference and contained in their essentials in Annex ... to the Agreement require a knowledge of the antenna gain in the direction of propagation;
- that the presentation of antenna patterns in the Plan would be complex and cumbersome;
- that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae,

recommends the C.C.I.R.

to prepare, for publication, a handbook describing the radiation diagrams of the directional antennae that can be used in the LF/MF broadcasting service, together with the measured radiation patterns of other antenna complexes,

requests

Administrations to communicate to the Director of the C.C.I.R. all information they may have resulting from measurements on this subject.

ANNEX 2

DRAFT RECOMMENDATION

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

that the methods of forecasting sky wave propagation used in
drawing up the Plan are likely to undergo improvement in the future;

recommends

that in their bilateral negotiations on modifications to the
Plan, Administrations should use the methods most recently adopted by the
C.C.I.R. for forecasting sky wave propagation or any other methods on
which they may agree.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 129-E

6 November 1975

Original: English

PLENARY MEETING

COMMITTEE 5

THIRD REPORT OF COMMITTEE 4 (PLANNING)

Definition of daytime hours of operation

The Report of Working Group 4 Ad Hoc (Document No. 115) was considered. The Committee took note that Documents No. 11 (New Zealand), No. 58 (Italy), No. 85 (Socialist Federal Republic of Yugoslavia), No. 97 (Federal Republic of Germany) and No. 105 (Republic of India) have been considered by the Working Group. The Committee agreed that

1. the Report of Working Group 4 Ad Hoc would be taken into account as a guideline in planning and accordingly is referred to the Convenors of the Planning Groups;
2. in planning, the hours of use will be the subject of negotiation in each case;
3. in the Plan the hours of use for daytime operation are to be expressed in specific hours (GMT);
4. the definition of daytime hours of operation contained in Document No. 115 together with the two related graphs should be referred to Committee 5 for inclusion in the technical criteria annexed to the Plan with suitable references in the procedures for modifying the Plan.

Accordingly, Committee 5 is invited kindly to take the above decision into account.

V. Zagar
Chairman



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 130-E

6 November 1975

Original : English

COMMITTEE 4 AND
ALL WORKING GROUPS
OF COMMITTEE 4

NOTE BY THE CHAIRMAN OF COMMITTEE 4

At the request of the Head of the delegation of Saudi Arabia, two letters addressed to the Chairman of the Asian and Pacific Group of Committee 4 are reproduced in the attached Annexes.

V. ŽAGAR
Chairman of Committee 4

Annexes : 2



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A N N E X 1

To : Chairman (Mr. A. Fadami)
Asian and Pacific Group
Committee 4

Dear Sir,

The delegation of Saudi Arabia is pleased to inform you that the following requirements have been deleted from our original list of requirements in order to accommodate the requirements of other countries.

IFRB Serial No.	Freq. kHz	Power kW	Station
7146	594	20	SULAIYAL
7149	630	1000	GURIAT
7156	711	1000	GIZAN
7157	720	1000	DAMMAM
7158	729	500	DAMMAM
7161	783	500	JEDDAH
7163	810	500	DAMMAM
7166	846	500	DAMMAM
7177	999	1000	GIZAN
7185	1 134	20	RIYADH
7210	1 476	1000	GIZAN
7211	1 476	20	DHAHRAN
7217	1 566	500	JEDDAH

The thirteen requirements deleted result in a total power reduction of 7,560 kW.

A.R. DAGHASTANI
Chief, Saudi Arabian delegation

A N N E X 2

To : The Chairman, (Mr. A. Fadami)
Asian and Pacific Region
Committee 4

Dear Sir,

The delegation of Saudi Arabia is pleased to inform you of the following changes in operational schedules and power levels in respect of the requirements indicated below.

IFRB Serial No.	Freq. kHz	Power kW	Station	Change
7142	558	20	UMMLAJJ	Day only
7147	603	20	BURaida	" "
7152	675	20	QAISOMAH	" "
7153	684	1 000	GURIAT	Reduce to 500 kW Night
7154	693	20	AFIF	Day only
7159	747	20	AFLAJ	" "
7162	801	20	RAFHA	" "
7165	828	20	BEESHA	" "
7172	918	20	TABOUK	" "
7173	927	500	GURIAT	" "
7175	981	20	OULA	" "
7179	1 035	20	YAMBO	" "
7181	1 062	20	MAJMAA	Reduce to 10 kW Night
7182	1 080	20	TAIF	Day only
7186	1 152	20	HAQL	" "
7187	1 161	20	JOWF	Reduce to 10 kW Night
7190	1 206	20	KHURMAH	Day only
7193	1 233	20	JEDDAH	" "
7194	1 242	20	GIZAN	" "
7195	1 251	20	RIYADH	" "
7198	1 296	50	MEDINAH	" "
7200	1 332	20	HOFUF	" "
7201	1 350	20	TAIF	" "
7203	1 368	20	TABOUK	" "
7206	1 404	20	DAMMAM	Reduce to 10 kW Night
7209	1 458	20	JEDDAH	Day only
7214	1 521	2 000	DUBA	Reduce to 1 000 kW Night
7216	1 539	50	MEDINAH	Reduce to 20 kW Night

A.R. DAGHASTANI
Chief, Saudi Arabian delegation

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 131-E

6 November 1975

Original : English

Note by the Secretary-General

DELEGATION OF POWERS

NAURU

The Government of Nauru will send a delegation to the Conference. Pending the arrival of that delegation, the delegation of Fiji will represent the interests of Nauru.

M. MILI

Secretary-General



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 132-E

6 November 1975

Original : French

COMMITTEE 3

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 3

(Budget control)

Friday, 31 October 1975, at 1500 hrs

Chairman : Mr. M.K. BASU (India)

Subjects discussed :

Document No.

1. Approval of the summary record of the
second meeting of Committee 3
2. Situation concerning expenditure for the
Broadcasting Conference at 25 October 1975
3. Date of the next meeting of Committee 3

108

109

-



1. Approval of the summary record of the second meeting of Committee 3
(Document No. 108)

The summary record of the second meeting was approved, subject to amendment of the first sentence of the last paragraph on page 3, which should read :

"The figures were checked by computer and all the supplementary posts provided for the Conference were considered occupied so long as the computer was not given instructions to the contrary."

2. Situation concerning expenditure for the Broadcasting Conference at 25 October 1975 (Document No. 109)

The Chairman invited comments on the statement of expenditure for the Conference up to 25 October 1975. He noted that the total expenditure was 2,000 Swiss francs less than the budget approved by the Administrative Council.

The Secretary of the Committee, referring to Item 14.102 entitled "Reimbursement of salaries to the ordinary budget", said that many of the permanent staff members seconded to the Conference were continuing to perform either some or all of their normal duties at the Union's Headquarters. It was practically impossible to calculate precisely what percentage of his or her time each staff member was devoting to the Conference. In the light of the figures studied and approved by the Administrative Council, it would seem reasonable to recommend to the Plenary Meeting that the amount of 120,000 Swiss francs should be included under Item 14.102 of the accounts of the Regional Conference.

It was so decided.

The Secretary of the Committee, referring to the chapter concerning staff expenditure, drew attention to the estimated reduction, at 25 October, of 10,000 Swiss francs in the amount of used credits, the figure given in Document No. 109 being 58,000 Swiss francs. However, it should be noted that the credit of 150,000 Swiss francs allocated for overtime by the Administrative Council was included in the sum of 2,083,000 Swiss francs approved for Item 14.101. When the statement of expenditure in Document No. 109 had been drawn up, the sum of 52,000 Swiss francs had actually been disbursed for overtime, the total cost of which up to 20 October was 60,000 Swiss francs. If that figure was taken as the basis for calculation, the cost of overtime for the entire duration of the Conference would be 225,000 Swiss francs. Consequently, the amount of 150,000 Swiss francs allocated by the Council for overtime would have to be increased when the next statement of expenditure was drawn up.

It should also be borne in mind that between 60% and 80% of expenditure entered in the statement was "estimated" expenditure, and that there was a margin of less than 0.1%. It would therefore be illusory to assume that the situation was as favourable as it might appear in Document No. 109.

The Chairman observed that it had already been necessary to schedule two night meetings, and that both night meetings and Saturday afternoon meetings were very costly. Given the additional expenditure that could be entailed, the situation did indeed seem much less favourable than might have been hoped.

The Executive Secretary of the Conference gave some information about the Final Acts and their probable cost.

The estimates for the production of actual texts were :

- a) Agreement, protocols, resolutions, recommendations - about 115 pages and
- b) Plan - about 500 pages (or slightly less).

Clearly, the number of copies to be made of the Final Acts for the signing ceremony would have to be settled. If two to three copies were distributed to delegations and the number needed would be 350 and if a copy were given to every participant, 800 would be needed. The cost of the Final Acts also largely depended on the type of printing. Provision should be made for printing the texts of the Agreement and the other parts (excluding the Plan) on both sides of the page, A4 format. The Plan should be printed in the 25 x 35 cm format on one side of the page only, to facilitate handling and consultation. Finally, it was necessary to know how much information was to be included in the Plan. Those questions would have to be settled by the Conference before the expenditure could be estimated.

The Secretary of the Committee believed that for the time being they could adhere to the figure of 103,000 Swiss francs provided in the budget which also included expenditure on translation and printing of the Final Acts in the Russian and Chinese languages.

The Chairman considered that they should wait for a few more days so as to know the form of the Final Acts i.e., number of pages in the Agreement, format and number of columns in the Plan etc.

The Committee took note of the situation concerning expenditure at 25 October as set out in Document No. 109.

3. Date of the next meeting of Committee 3

The Chairman announced that the next meeting would be held on Thursday, 6 November 1975.

The meeting rose at 1556 hours.

The Secretary :

R. PRELAZ

The Chairman :

M.K. BASU

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 133-E

7 November 1975

Original : French

COMMITTEE 4

NOTE BY THE CHAIRMAN OF COMMITTEE 4

At the request of the Head of the Delegation of the Czechoslovak Socialist Republic, the letter addressed to the Chairman of Committee 4 is presented in the attached Annex.

V. ŽAGAR

Chairman of Committee 4

Annex : 1



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A N N E X

Geneva, 6 November 1975

Mr. V. Žagar
Chairman of Committee 4 of the
Regional Broadcasting Conference
Geneva

Dear Sir,

Since the entry into force of the European Broadcasting Convention (1948), our country's broadcasting services have relied on transmitters using frequencies allocated to the Czechoslovak Socialist Republic in the Plan annexed to the Convention. As a result of the increased level of interference in these frequencies, the service areas of the transmitters have been greatly reduced. In order to restore the original service areas, our Administration found it necessary to increase the power of the transmitters operating on the above frequencies. The notifications of these changes were entered in the Master International Frequency Register without any reservation on the part of any Member of the I.T.U.

The increased power of our transmitters has somewhat improved the unsatisfactory coverage of our territory, but the situation provided for in the Copenhagen Plan (1948) is far from having been restored. If the transmitters referred to in the requirements submitted to the present Conference were brought into service, the coverage of our national territory would undergo a further marked reduction. In our view, the only way for the Conference to prepare an effective Plan would be to reduce the frequency requirements and the transmitter powers to be included.

In order to contribute to the success of the Conference, the Czechoslovak delegation, during the work on planning, reduced the number of incompatibilities in the draft Plan by introducing 12 low-power transmitters in the channels provided.

With the same object in view, the Czechoslovak Socialist Republic is now prepared to reduce the power of two of its MF broadcasting transmitters operating at night to 1,000 kW.

We hope that our example will be followed by the other delegations concerned and that we shall thus be able to establish a suitable Plan. Failing this, our delegation reserves the right to revert to the question and to retain the present power values of the two transmitters mentioned above.

Yours faithfully,

J. MARSICEK
Acting Head of Delegation

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 134-E

7 November 1975

Original : English

COMMITTEE 2

SECOND REPORT BY THE WORKING GROUP OF COMMITTEE 2

(CREDENTIALS)

1. The second meeting of the Working Group of Committee 2 took place on 6 November 1975, under the chairmanship of Mr. D.S. Variyan (Malaysia). The meeting was attended by participants from the following delegations : Bulgaria, Japan, Norway and Switzerland.

2. The Working Group examined the credentials of the delegations mentioned in the Annex to this Report.

These credentials were considered to be in order and the Working Group recommends to Committee 2 that they be accepted as such.

3. The Secretary of Committee 2 was requested to maintain contact with the Heads of those delegations which had not yet submitted credentials to the secretariat.

4. The last meeting of the Working Group is provisionally scheduled for Friday, 14 November 1975.

D.S. VARIYAN

Vice-Chairman of Committee 2

Annex : 1



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A N N E X

Saudi Arabia (Kingdom of)
Australia
Austria
Burundi (Republic of)
Central African Republic
Ivory Coast (Republic of the)
Denmark
Fiji
Gabon Republic
Ghana
Greece
Jordan (Hashemite Kingdom of)
Liberia (Republic of)
Mongolian People's Republic
Nepal
Oman (Sultanate of)
Philippines (Republic of the)
Portugal
Syrian Arab Republic
Sudan (Democratic Republic of the)
Sri Lanka (Ceylon) (Republic of)
Chad (Republic of the)
Togolese Republic
Yemen Arab Republic

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 135-E

7 November 1975

Original : English

COMMITTEE 5

REPORT OF THE AD HOC GROUP

1. The Ad Hoc Group, consisting of delegates from Czechoslovakia, Denmark, France, Libya, Togolese Republic and U.S.S.R., under the chairmanship of a United Kingdom delegate, was given the following terms of reference by Committee 5 (Document No. 71, page 4) :

"Abrogation of previous convention and agreement".

2. The documents which would need to be abrogated on the coming into force of any new Agreement are :

- 1) the Regional Agreement for the African Broadcasting Area, Geneva, 1966;
- 2) the European Broadcasting Convention, Copenhagen, 1948.

3. The Ad Hoc Group held three meetings.

4. African Broadcasting Agreement

It was readily agreed that the abrogation of the African Broadcasting Agreement presented no particular problems for the reasons that :

- 1) the Agreement was prepared by a Regional Administrative Conference,
- 2) that Agreement provided in Article 7 for its future revision by a competent Conference,
- 3) this present Conference, being also a Regional Administrative Conference, is competent to reach a new Regional Agreement of similar status.

5. The formal abrogation of the Regional African Agreement would therefore be provided for by including in the new Agreement the proposed draft Article in Annex 1.



6. European Broadcasting Convention

The abrogation of the European Broadcasting Convention, Copenhagen, 1948 is however more complex for the reason that the Convention is an agreement between those Governments who ratified the provisions previously agreed between their plenipotentiary representatives. There is therefore a difference between the status of the European Broadcasting Convention and that of an agreement reached by a Regional Administrative Conference.

7. Nevertheless it has been represented that the most convenient way to give effect to the abrogation of the Convention would be to include in the new Agreement an Article (proposed text at Annex 1) which makes reference to an Additional Protocol (proposed text at Annex 2) in which a procedure is set out for abrogating the Convention. This procedure is devised in such a way as to indicate that the delegates of the Members of the Governments which are party to the Convention agree to the procedure described in the Additional Protocol, recognizing that the procedure provides for their respective Governments to take the necessary action (described in the Additional Protocol) to make the abrogation of the Convention effective not later than one year before entry into force of the new Agreement.
8. The Ad Hoc Group also thought it is appropriate that the considerations (see Annex 3) which were taken into account in making the procedural arrangements described in the Additional Protocol should be placed on permanent record.
9. The Ad Hoc Group recommends the adoption of the Annexes to the present document.

A.O. CARTER

Chairman of the Ad Hoc Group

Annexes : 3

A N N E X 1

ARTICLE ...

Abrogation of the Regional Agreement for the
African Broadcasting Area, Geneva, 1966

The present Agreement and annexed Plan shall abrogate and replace the Regional Agreement for the African Broadcasting Area, Geneva, 1966, and the Plan annexed thereto.

ARTICLE ...

Abrogation of the European Broadcasting Convention
Copenhagen, 1948, and annexed Copenhagen Plan

The Additional Protocol to the Final Acts of the Conference provides for the abrogation of the European Broadcasting Convention, 1948, and the annexed Copenhagen Plan.

A N N E X 2

ADDITIONAL PROTOCOL

The delegates of the following Members of the International Telecommunication Union:

.....
parties to the European Broadcasting Convention (Copenhagen, 1948), and meeting in Geneva for the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva 1975, convened in accordance with the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973),

agree

- 1) that the Regional Agreement and Plan for LF/MF broadcasting stations in Regions 1 and 3, Geneva 1975, shall replace the European Broadcasting Convention and annexed Copenhagen Plan which shall be abrogated*) save that the rights and obligations in respect of the coast stations listed in Chapter II of the Copenhagen Plan shall continue until modified by the agreement of the parties concerned or by a competent conference;
- 2) that the abrogation of the European Broadcasting Convention and Copenhagen Plan in accordance with 1) above shall take effect on the coming into force of the (title) provided that each of the contracting Governments to the European Broadcasting Convention shall have deposited with the Government of the Kingdom of Denmark (the depository of the aforesaid Convention) a declaration of acceptance of the abrogation of the European Broadcasting Convention ;
- 3) that the aforesaid Members shall take action to inform the Government of the Kingdom of Denmark that they formally agree to the abrogation of the European Broadcasting Convention and the Copenhagen Plan annexed thereto;
- 4) that the aforesaid action for advice on abrogation shall be taken not later than one year before entry into force of the new Agreement (Geneva, 1975);
- 5) that the Government of the Kingdom of Denmark should be asked to inform the Governments who are parties to the European Broadcasting Convention and the Secretary-General of the International Telecommunication Union of the notifications received in accordance with 3) above.

*) Explanatory information about the abrogation of the European Broadcasting Convention and annexed Copenhagen Plan is recorded in Document No. ... of this Conference.

A N N E X 3

EXPLANATORY MEMORANDUM

In reaching agreement on the procedure to be adopted for abrogating the European Broadcasting Convention and its annexed Copenhagen Plan, the parties to the Additional Protocol took account of the following points :

1. that the Agenda of the Regional Administrative LF/MF Broadcasting Conference held in Geneva during the period 6 October to 22 November 1975 was established by the Administrative Council of the I.T.U. with the agreement of the Members of the Union in Regions 1 and 3;
2. that the Agenda provided for the Conference to draw up an agreement and an associated plan of frequency assignments for broadcasting stations in the LF/MF broadcasting bands in Regions 1 and 3 to replace, as appropriate, the existing plan for those frequency bands;
3. that the European Broadcasting Convention and Copenhagen Plan annexed thereto was established by plenipotentiaries and subject to ratification by the respective governments;
4. that Article 6 of the European Broadcasting Convention provides for the abrogation of the European Broadcasting Convention and annexed Copenhagen Plan between all the contracting Governments at the entry into force of a new Convention and also that the Copenhagen Plan shall be abrogated as from the entry into force of a new Plan;
5. that the Copenhagen Plan annexed to the European Broadcasting Convention contains assignments and related characteristics to broadcasting stations and stations of other radio services;
6. that as No. 47 of the Malaga-Torremolinos Convention stipulates that :

"The agenda of a regional administrative conference may provide only for specific telecommunication questions of a regional nature, including instructions to the International Frequency Registration Board regarding its activities in respect of the region concerned, provided such instructions do not conflict with the interests of other regions"

it was recognized that the status of the coast stations listed in Chapter II of the Copenhagen Plan remained unaffected until such time as the assignments to these stations were modified by the agreement of the parties concerned or by a competent conference.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 136-E

7 November 1975

Original : FrenchCOMMITTEE 5THIRD AND LAST REPORT OF WORKING GROUP 5A

1. The following is a Report on the results of the Working Group's deliberations under item 2 of its terms of reference, which was :

- to determine the technical data to be used in the application of the Agreement.

These results are given in the Annex to this Report.

2. According to Working Group 5B, paragraph 4.8 of the Annex should be replaced by the text suggested below, which Working Group 5A did not have time to discuss.

/ 4.8 In applying paragraph of the Agreement, the following table shall be used :

TABLE

c.m.f. (V)	e.m.r.p. (kW)	Coordination distance (km)
300	1.0	600
260	0.75	500
212	0.5	400
150	0.25	200, 300*)
95	0.1	70, 250*)
67	0.05	50, 200*)

*) Values for a sea propagation path. 7

3. The Working Group draws the attention of Committee 5 to the following further points :



3.1 Some delegations accepted the inclusion of paragraphs 3.3.4.2 and 3.4.3.2 on the understanding that the presentation of the texts would be discussed in Committee without reference to the substance of the question on which a decision has been taken by Committee 4.

3.2 The Delegation of the Federal Republic of Germany urged that, in view of the proposed duration of the Agreement, provision should be made for the possibility of using in the future a system of modulation other than double sideband amplitude modulation and that the Conference decisions should be sufficiently flexible to allow for the subsequent application of such a system with a view to a more efficient use of the frequency spectrum.

Working Group 5A considers that, on conclusion of its five meetings, it has fulfilled the terms of reference assigned to it by Committee 5.

M. LO
Chairman

Annex : 1

A N N E X /.../

TECHNICAL DATA TO BE USED IN THE
APPLICATION OF THE AGREEMENT

CHAPTER 1

DEFINITIONS

Channel (in AM broadcasting)

Part of the frequency spectrum, the width of which is equal to the necessary bandwidth of the broadcasting emission, and which is characterized by the nominal value of carrier frequency.

Low-power channel (LPC)

Channel used by medium frequency broadcasting stations employing a maximum e.m.r.p. of 1 kW (c.m.f. of 300 V) / with no antenna loss /.

Audio-frequency signal-to-interference ratio

Ratio between the values of the voltage of the wanted signal and the voltage of the interference, measured under specified conditions, at the audio-frequency output of the receiver.

This ratio is generally expressed in dB, and corresponds closely to the difference in volume of sound (expressed in dB) between the wanted programme and the interference.

Audio-frequency protection ratio

Agreed minimum value of the audio-frequency signal-to-interference ratio considered necessary to achieve a subjectively defined reception quality.

This ratio may have different values according to the type of service desired.

Radio-frequency wanted-to-interfering signal ratio

Ratio between the values of the radio-frequency voltage of the wanted signal and the interfering signal, measured at the input of the receiver under specified conditions.

This ratio is generally expressed in dB.

Radio-frequency protection ratio

Value of the radio-frequency wanted-to-interfering signal ratio that enables, under specified conditions, the audio-frequency protection ratio to be obtained at the output of a receiver.

These specified conditions include such diverse parameters as spacing Δf of the wanted and interfering carrier, emission characteristics (type of modulation, modulation depth, etc.), receiver input and output levels as well as the receiver characteristics (selectivity and susceptibility to cross-modulation, etc.).

Usable field strength (E_u)

The minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference in a practical situation (or in one resulting from a frequency plan).

Nominal usable field strength (E_{nom})

The agreed minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference from other transmitters.

The value of the nominal usable field strength is taken as a reference for planning purposes.

Service area (of a broadcasting transmitter)

The area in which the field strength of a transmitter is equal to or greater than the usable field strength.

Cymomotive force (in a given direction) (c.m.f.)
(See Report 618 (1974) of the C.C.I.R.)

The product formed by multiplying the electric field-strength at a given point in space, due to a transmitting station, by the distance of the point from the antenna. This distance must be sufficient for the reactive components of the field to be negligible; moreover the finite conductivity of the ground is supposed to have no effect on propagation.

The cymomotive force (c.m.f.) is a vector; when necessary it may be expressed in terms of components, along axes perpendicular to the direction of propagation.

The c.m.f. is expressed in volts; it corresponds numerically to the field strength in mV/m at a distance of 1 km.

Effective monopole radiated power (e.m.r.p.)
(See Report 618 (1974) of the C.C.I.R.)

The power supplied to an antenna, multiplied by its gain in a given direction, referred to that of a short vertical antenna in the horizontal direction.

Gain of an antenna (in a given direction) referred to a short vertical antenna

The radiation is expressed either in effective monopole radiated power (e.m.r.p.) or in cymomotive force (c.m.f.). To define the gain of an antenna in a given direction referred to a short vertical antenna either of the two following definitions should be adopted :

- the ratio between the cymomotive force of the actual antenna in a given direction and the cymomotive force in the horizontal plane of a short vertical antenna without losses on a perfectly conducting plane, the two antennae being supplied with the same power;

- the ratio of the power required at the input of a short vertical antenna without losses situated on perfectly conducting horizontal plane to produce the reference effective monopole radiated power (e.m.r.p.) of 1 kW (cymomotive force of 300 V) in the horizontal direction, to the power supplied to the actual antenna to produce the same e.m.r.p. (c.m.f.) in the given direction.

The ratio, expressed in dB, is the same for the two definitions.

Synchronized network

A group of transmitters whose carrier frequencies are identical (or differ only slightly, usually by a fraction of a Hz), and which broadcast the same programme.

CHAPTER 2Ground wave propagation

- 2.1 The value of the ground wave field strength is given by the curves in Figures 1 to 9.

The following points are to be especially noted with regard to them :

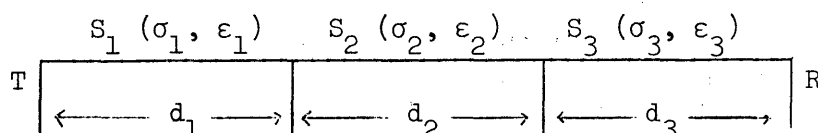
- 2.1.1 they refer to a smooth homogeneous earth;
- 2.1.2 no account is taken of tropospheric effects at these frequencies;
- 2.1.3 the curves refer to the following conditions :
 - they are calculated for the vertical component of electric field from the rigorous analysis of van der Pol and Bremmer;
 - the transmitter is an ideal Hertzian vertical electric dipole to which a vertical antenna shorter than one quarter wavelength is nearly equivalent;
 - the dipole moment is chosen so that the dipole would radiate 1 kW if the Earth were a perfectly conducting infinite plane under which conditions the radiation field at a distance of 1 km would be $3 \times 10^5 \mu\text{V/m}$;
 - the curves are drawn for distances measured around the curved surface of the Earth;
 - the inverse-distance curve A shown in the figures, to which the curves are asymptotic at short distances, passes through the field value of $3 \times 10^5 \mu\text{V/m}$ at a distance of 1 km;
- 2.1.4 the propagation loss defined in C.C.I.R. Recommendation 341, 1974, for ground waves may be determined from the values of the field strength in dB relative to $1 \mu\text{V/m}$ given in the attached curves by the use of equation (19) of C.C.I.R. Report 112, 1974;

2.1.5 the curves should, in general, be used to determine field strength, only when it is known that ionospheric reflections at the frequency under consideration will be negligible in amplitude - for example, propagation in daylight between 150 kHz and 2 MHz and for distances of less than about 2,000 km. However, under conditions where the sky wave is comparable with, or even greater than the ground wave, the curves are still applicable when the effect of the ground wave can be separated from that of the sky wave, by the use of pulse transmissions, as in some forms of direction-finding systems and navigational aids.

2.2 Mixed path

2.2.1 The curves in Figures 1 to 9 may be used for the determination of propagation over mixed paths (non-homogeneous smooth earth) as follows :

Such paths may be made up of sections S_1, S_2, S_3 , etc. of lengths d_1, d_2, d_3 , etc. having conductivity and dielectric constant $\sigma_1, \epsilon_1; \sigma_2, \epsilon_2; \sigma_3, \epsilon_3$ etc. shown below for three sections :



There are various semi-empirical methods of determining the propagation over such paths, of which that due to Millington (Millington, 1949) is the most accurate and has been made to satisfy the reciprocity condition. The method assumes that the curves are available for the different types of terrain in the sections S_1, S_2, S_3 etc. assumed to be individually homogeneous, all drawn for the same source T defined, for instance, by a given inverse-distance curve. The values may then finally be scaled up for any other source.

For a given frequency, the curve appropriate to the section S_1 , is then chosen and the field $E_1(d_1)$ in dB(μ V/m) at the distance d_1 is then noted. The curve for the section S_2 is then used to find the fields $E_2(d_1)$ and $E_2(d_1 + d_2)$ and, similarly, with the curve for the section S_3 , the fields $E_3(d_1 + d_2)$ and $E_3(d_1 + d_2 + d_3)$ are found, and so on.

A received field strength E_R is then defined by

$$E_R = E_1(d_1) - E_2(d_1) + E_2(d_1 + d_2) - E_3(d_1 + d_2) + E_3(d_1 + d_2 + d_3)$$

The procedure is then reversed, and calling R the transmitter and T the receiver, a field E_T is obtained, given by

$$E_T = E_3(d_3) - E_2(d_3) + E_2(d_3 + d_2) - E_1(d_3 + d_2) + E_1(d_3 + d_2 + d_1)$$

The required field is given by $\frac{1}{2} \sqrt{E_R + E_T}$, the extension to more sections being obvious.

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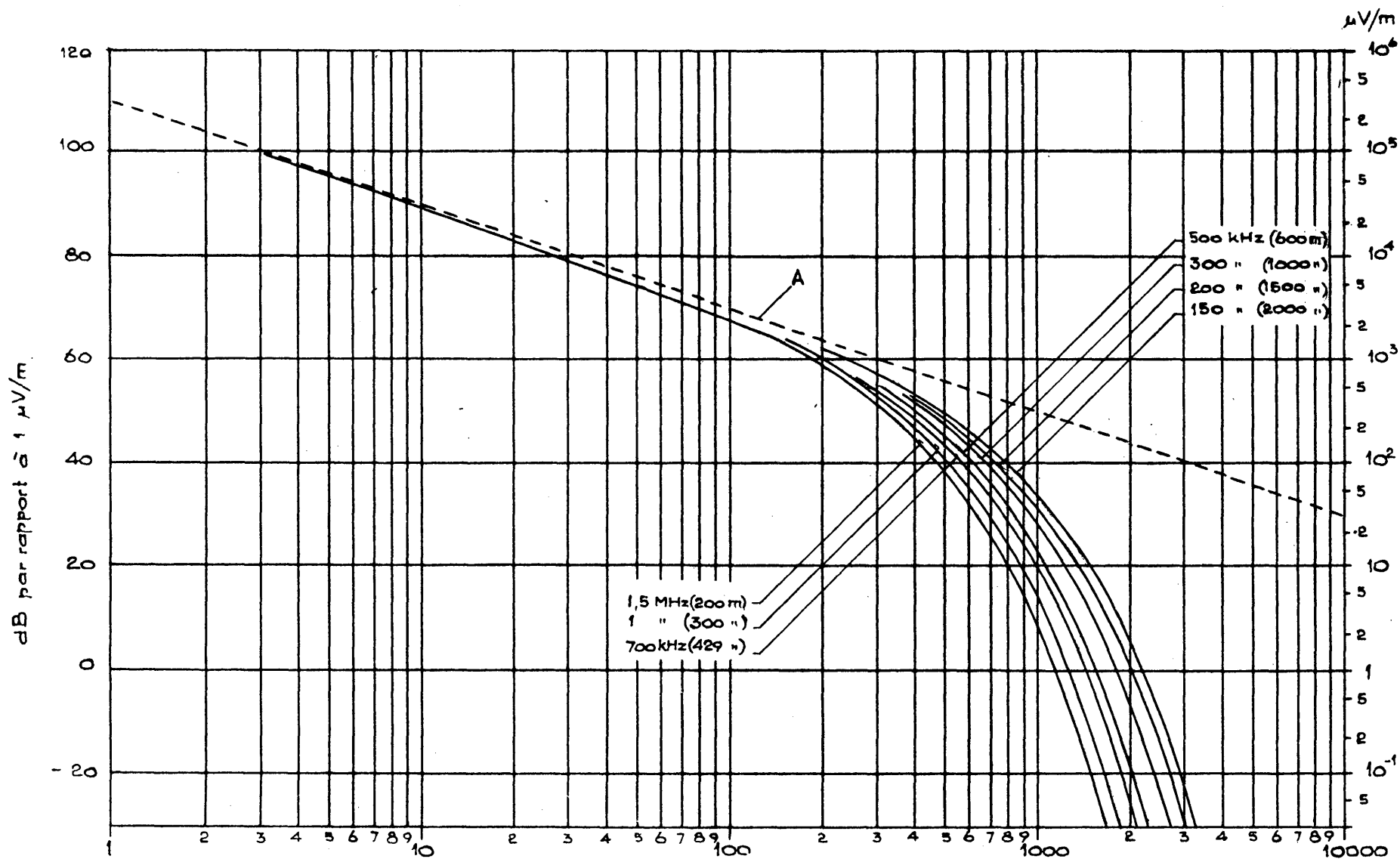


FIGURE 1

Courbes de propagation de l'onde de sol; mer, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

A: Inverse de la distance

FIGURE 1

Ground-wave propagation curves; Sea, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

A: Inverse distance curve

FIGURA 1

Curvas de propagación de la onda de superficie; Mar, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

A: inversa de la distancia

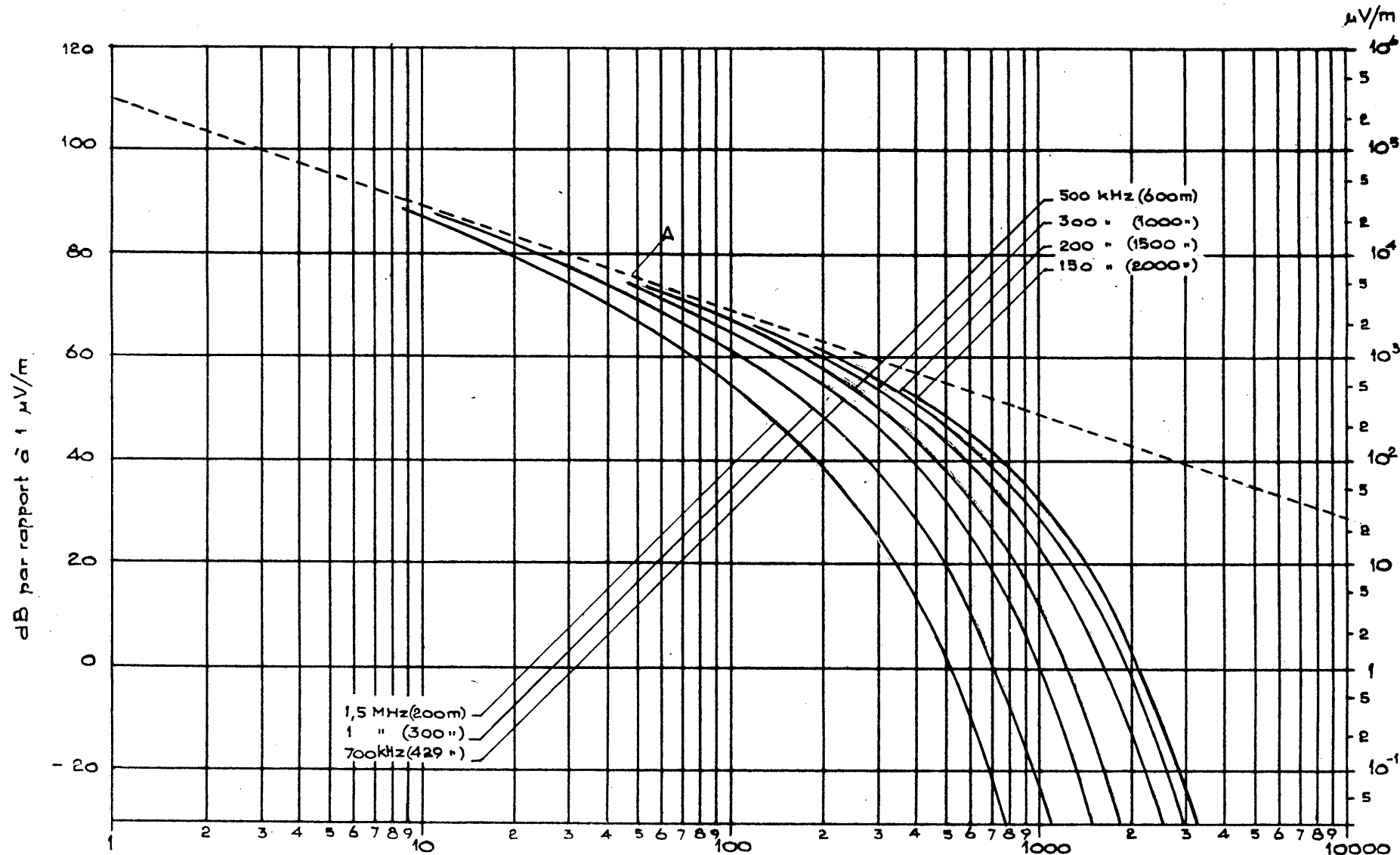


FIGURE 2

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-2}$ S/m, $\epsilon = 4$
A: Inverse de la distance

FIGURE 2

Ground-wave propagation curves; Earth, $\sigma = 3 \times 10^{-2}$ S/m, $\epsilon = 4$
A: Inverse distance curve

FIGURA 2

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-2}$ S/m, $\epsilon = 4$
A: inversa de la distancia

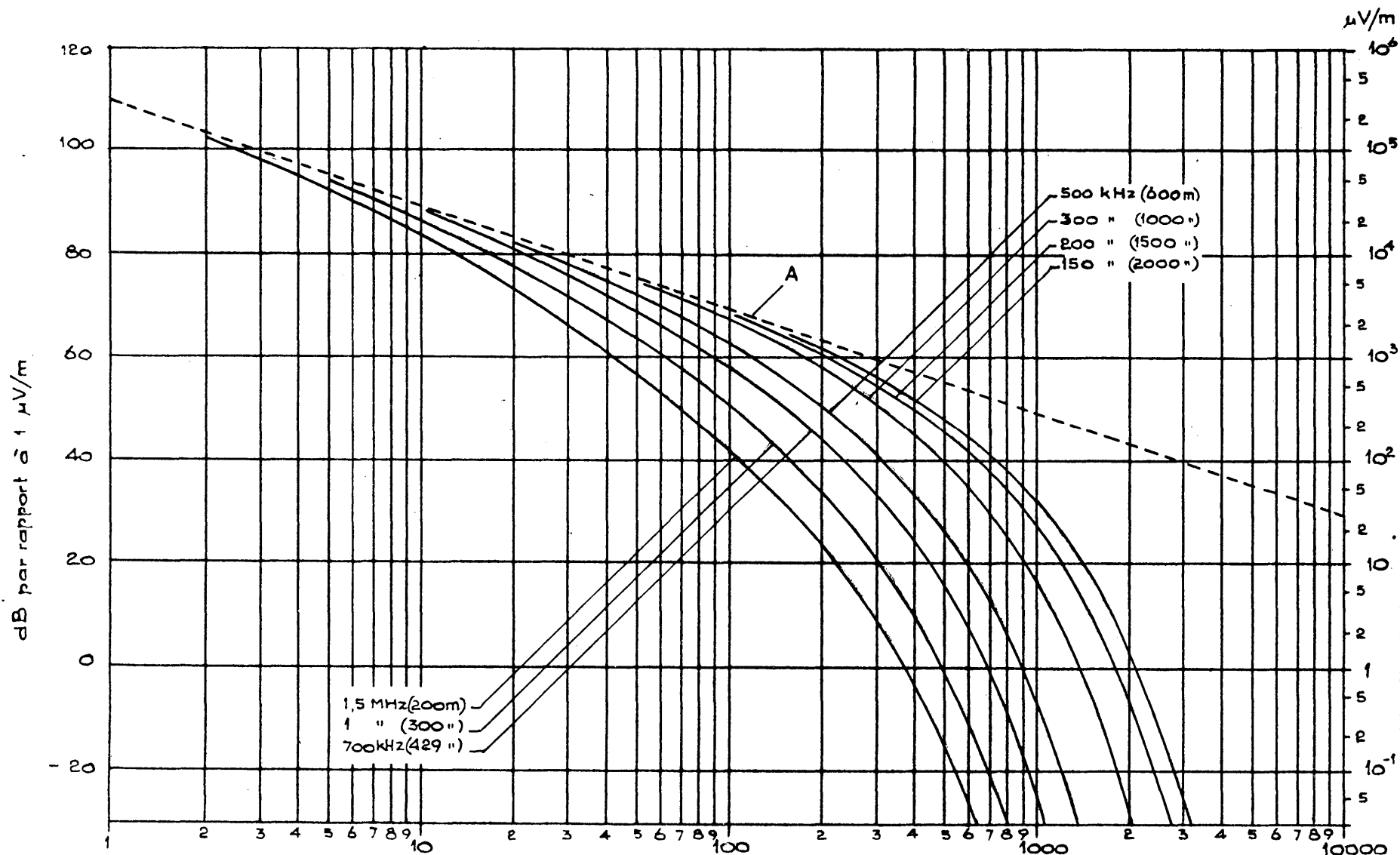


FIGURE 3

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$

A: Inverse de la distance

FIGURE 3

Ground-wave propagation curves; Earth, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$

A: Inverse distance curve

FIGURA 3

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$

A: inversa de la distancia

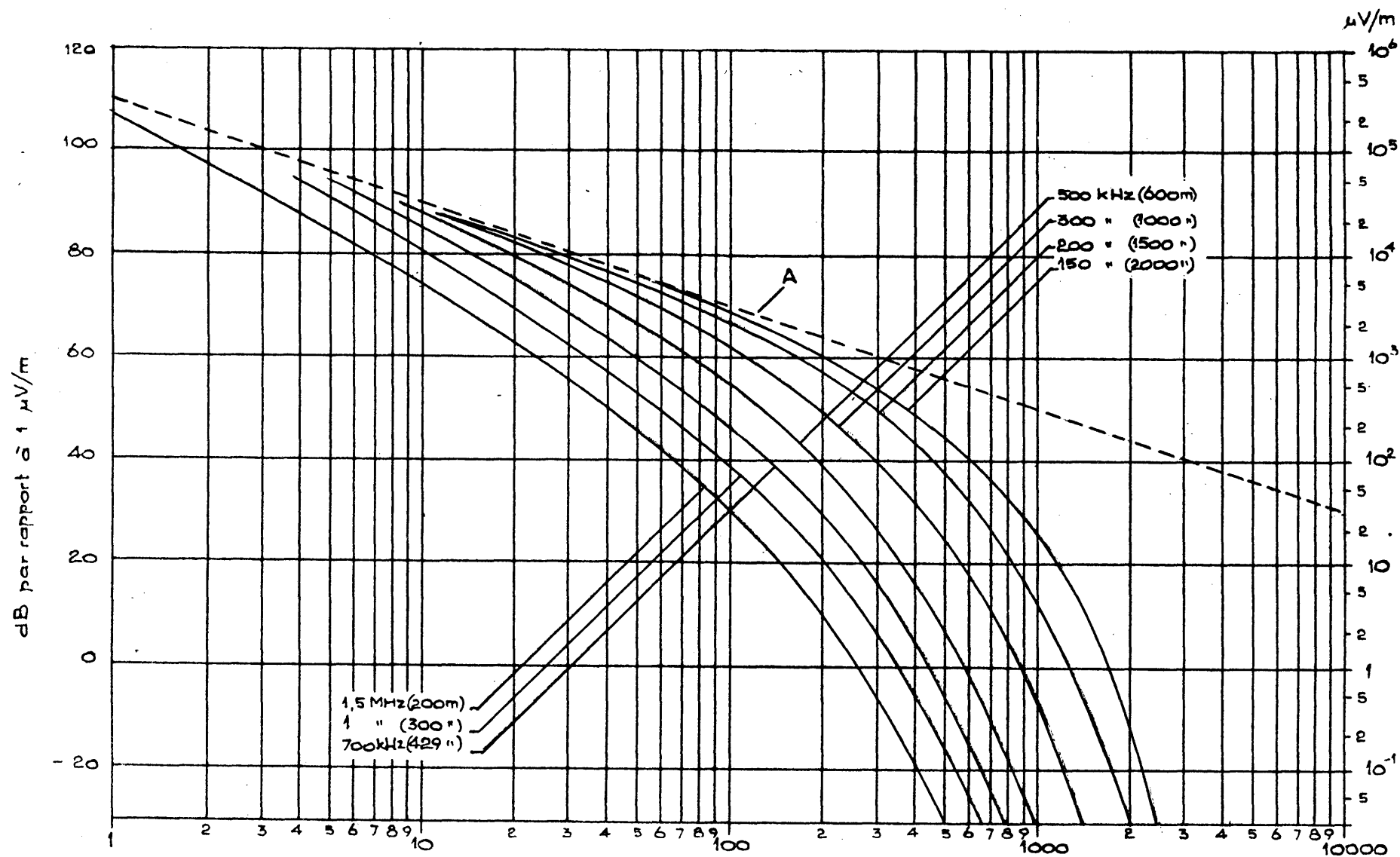


FIGURE 4

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$
A: Inverse de la distance

FIGURE 4

Ground-wave propagation curves; Earth, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$
A: Inverse distance curve

FIGURA 4

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$
A: inversa de la distancia

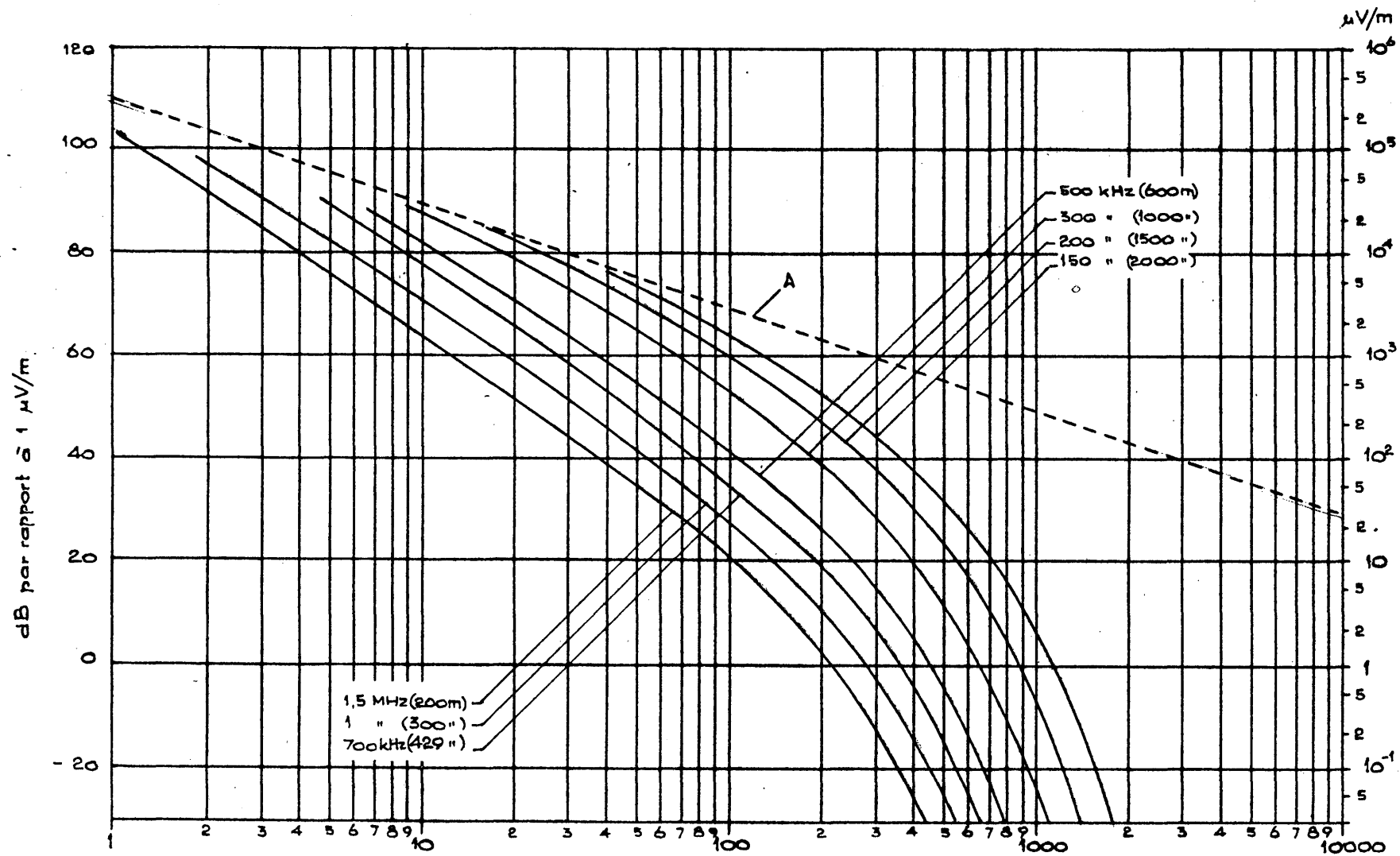


FIGURE 5

Curves de propagation de l'onde de sol; Terre, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$ Ground-wave propagation curves; Earth, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

A: Inverse distance curve

FIGURA 5

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

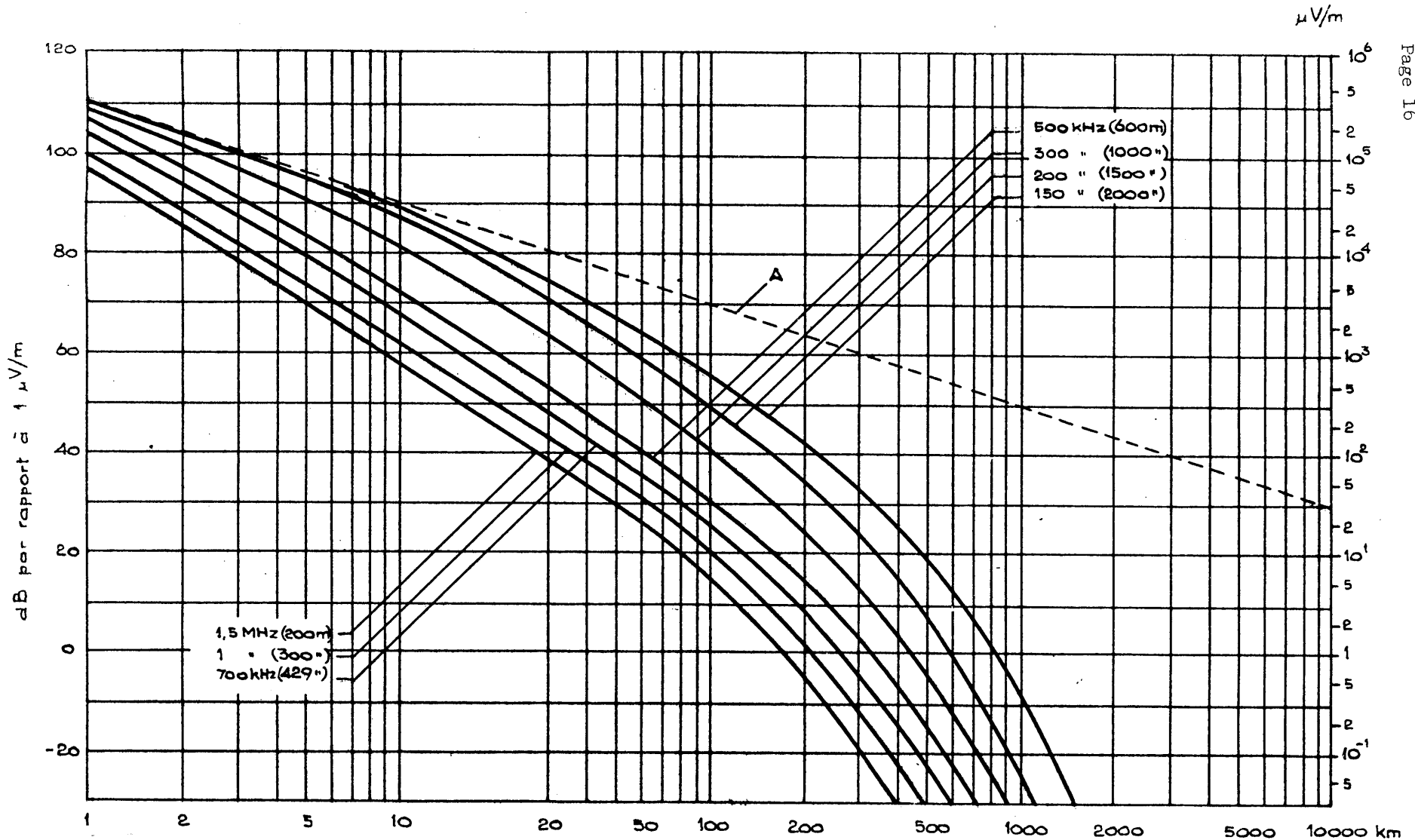


FIGURE 6

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-4} \text{ S/m}$, $\epsilon = 4$.
A: Inverse de la distance

FIGURA 6

FIGURE 6 CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-4} \text{ S/m}$, $\epsilon = 4$
A: inversa de la distancia
Eje de abscisas = Distancia (km)

Ground-wave propagation curves; Earth
 $\sigma = 3 \times 10^{-4} \text{ S/m}$, $\epsilon = 4$
A: Inverse distance curve

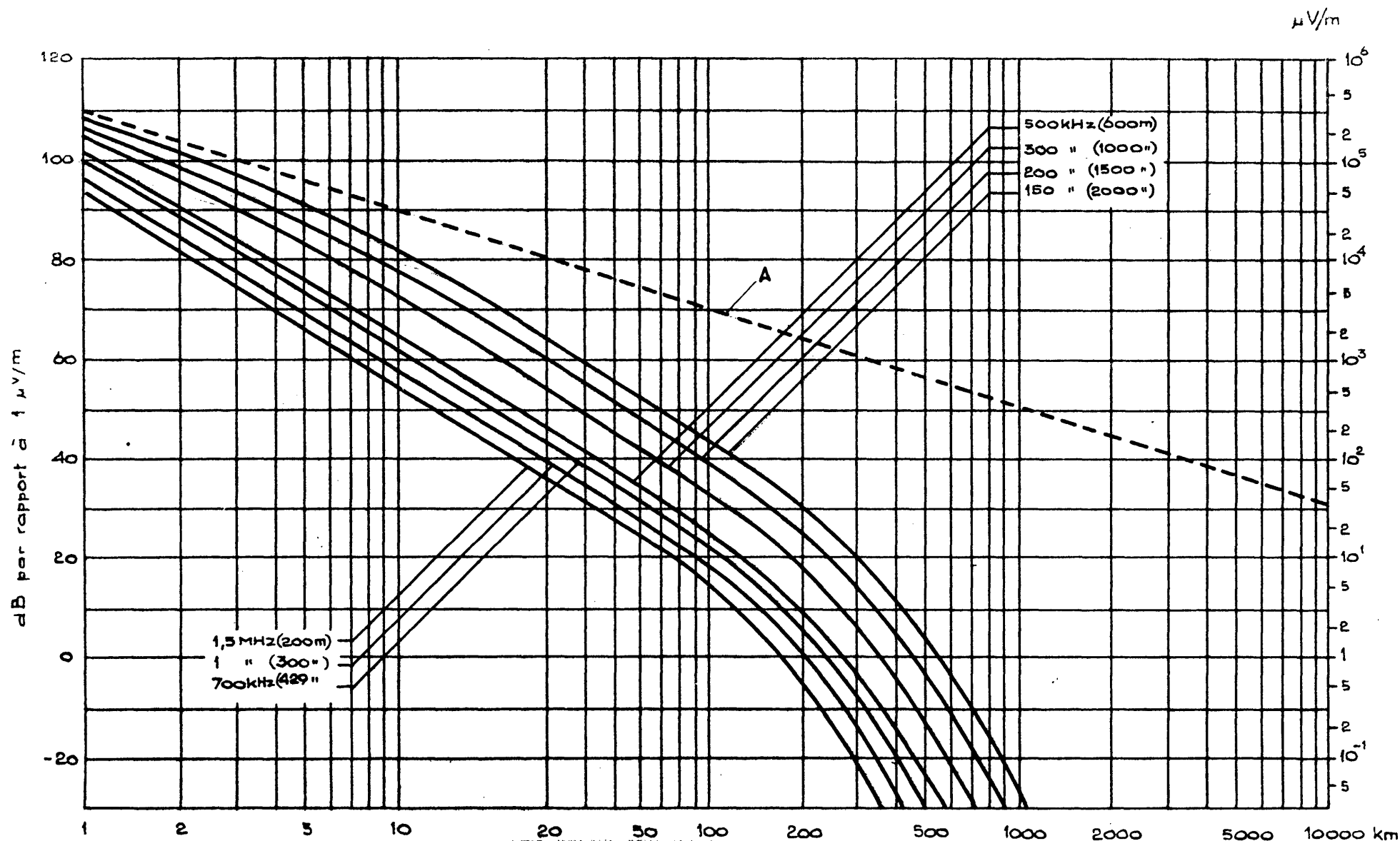


FIGURE 7

COURBES DE PROPAGATION DE L'ONDE DE SOL. TERRE $\sigma = 10^{-4} \text{ S/m}$ $\epsilon = 4$

FIGURE 7

Ground-wave propagation curves: Earth

$\sigma = 10^{-4} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

A = Inverse de la distance

FIGURA 7

Curvas de propagación de la onda de superficie;
 $\sigma = 10^{-4} \text{ S/m}$, $\epsilon = 4$ A: Inversa de la distancia

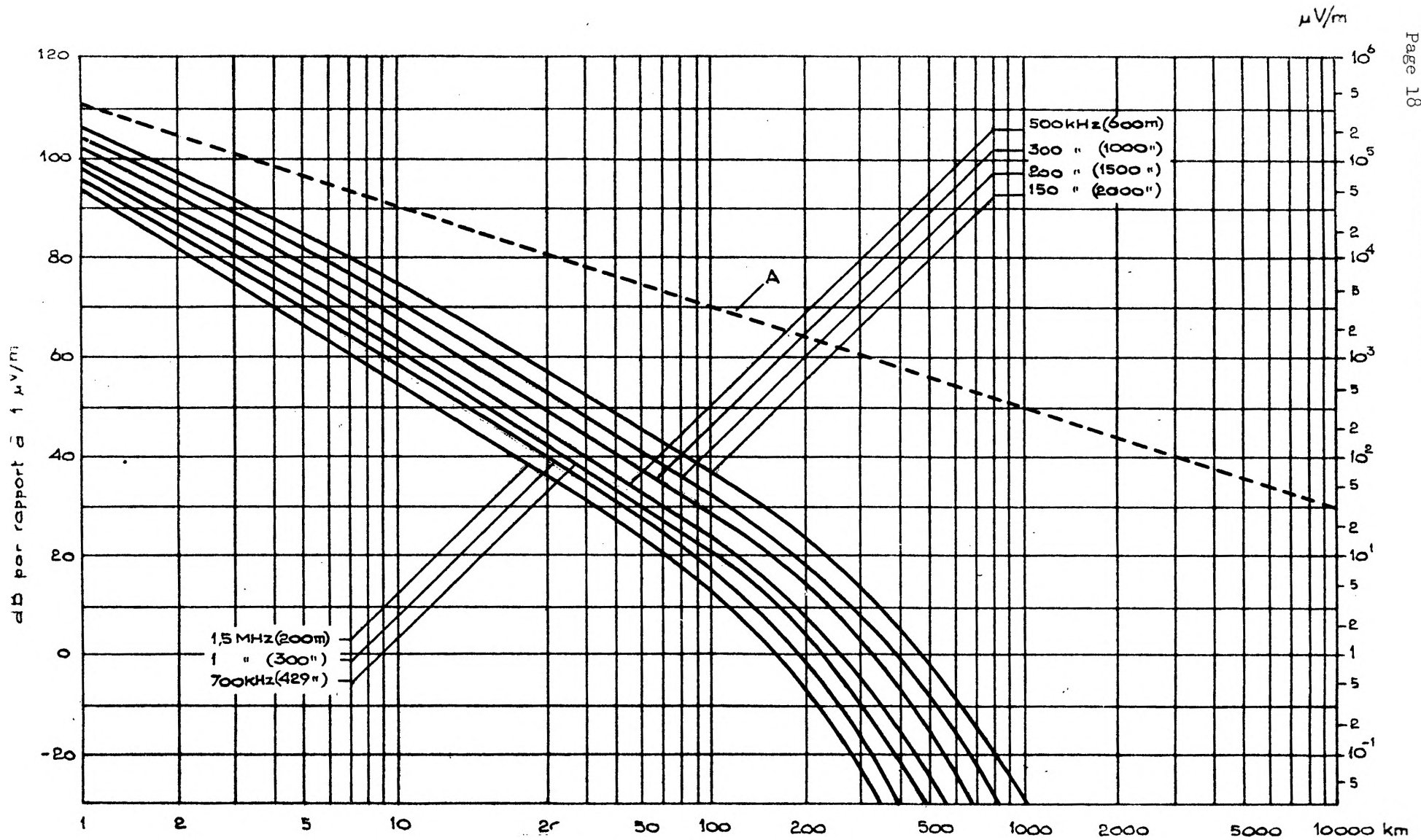


FIGURE 8

FIGURE 8 COURBES DE PROPAGATION DE L'ONDE DE SOL. TERRE $\sigma = 3 \times 10^{-5} \text{ S/m}$ $\epsilon = 4$

Ground-wave propagation curves; Earth

$\sigma = 3 \times 10^{-5} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURA 8

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-5} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

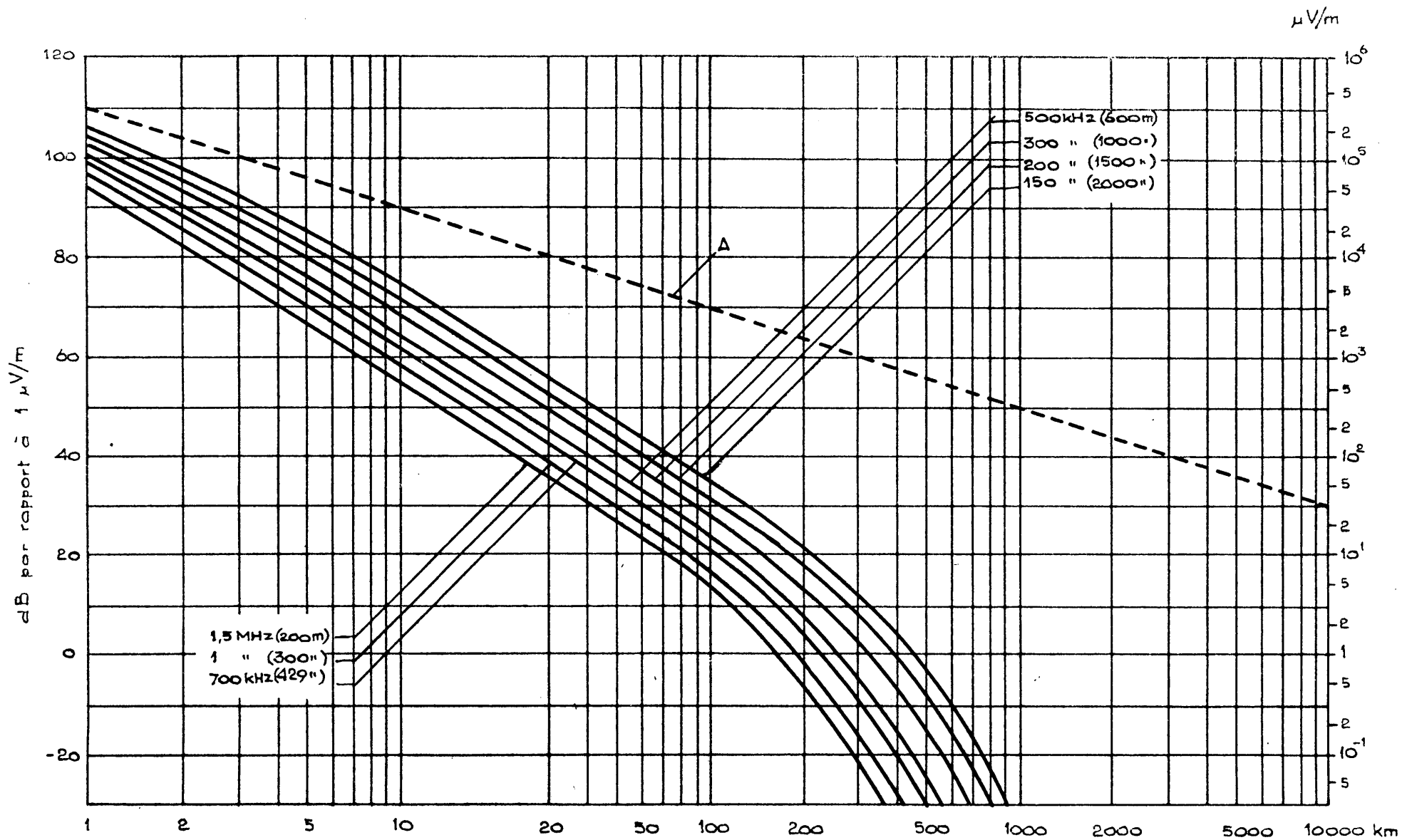


FIGURE 9

COURBE DE PROPAGATION DE L'ONDE DE SOL. TERRE $\sigma = 10^{-5} \text{ S/m}$ $\epsilon = 4$

Ground-wave propagation curves; Earth

$\sigma = 10^{-5} \text{ S/m}$, $\epsilon = 4$

A = Inverse distance curve

A = Inverse de la distance

FIGURA 9

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 10^{-5} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

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CHAPTER 3

Sky wave propagation

3.1 Introduction

Within Region 1 the sky wave propagation prediction method described in 3.3 should be used.

Within the Asian part of Region 3 situated North of the parallel 11°S , the sky wave propagation prediction method described in 3.4 should be used.

Within the part of Region 3 situated South of the parallel 11°S , the method described in 3.5 should be used.

For paths which pass from one region to another, the method used should be that which applies at the mid-point of the great-circle path.

Within the whole of Regions 1 and 3 the radiation in a given direction is expressed in dB with reference to 300 V cymomotive force or 1 kW e.m.r.p. The powers are expressed in dB relative to 1 kW.

3.2 Symbols

- b Solar-activity factor given in Section 3.3.2.6;
- d Great circle ground distance between transmitter and receiver (km);
- F_o Annual median field strength at the reference time in dB relative to $1\mu\text{V/m}$;
- F_c Field strength (dB) deduced from the Cairo curve (Figure / 20 /);
- F_t Annual median field strength at time t (dB above $1\mu\text{V/m}$);
- f Frequency (kHz);
- f' A frequency defined in Equation (6) (kHz);
- G Antenna gain referred to a short vertical antenna in the direction of propagation;

G_O	Sea gain for a path terminal on the coast (dB);	
G_S	Sea gain for a path terminal near the sea (dB);	
h	Transmitting antenna height;	
h_r	Height of reflecting layer (km);	
I	Magnetic dip angle (degrees);	
k	Basic loss factor due to the absorption in the ionosphere;	
k_R	Loss factor incorporating effects of ionospheric absorption, focusing and terminal losses, and losses between hops on multi-hop paths;	
L_P	Excess polarization coupling loss (dB);	
L_t	Diurnal loss factor (dB);	
P	Radiated power (dB above 1 kW);	
p	Slant propagation distance (km);	
Q	A sea gain parameter given in Section 3.3.2.3;	
R	Twelve-month smoothed Zurich sunspot number (Wolf number);	
s	Distance of path terminal from sea, measured along great-circle path (km);	
t	Time relative to sunset or sunrise (hours);	
V	Transmitter electromotive force (dB relative to a reference electromotive force of 300 volts);	
Θ	Direction of propagation relative to magnetic East-West (degrees);	
λ	Wavelength;	
Φ	A geomagnetic latitude parameter;	
Φ_T	Geomagnetic latitude of transmitter	} (degrees, positive in Northern hemisphere, negative in Southern hemisphere)
Φ_R	Geomagnetic latitude of receiver	

3.3 Sky wave field strength prediction method for the frequency range 150 to 1 605 kHz for Region 1

3.3.1 Introduction

This method of prediction gives the night-time sky wave field strength produced for a given power radiated from one or more vertical antennae, when measured by a loop aerial at ground level aligned in a vertical plane along the great circle path to the transmitter. It applies for paths of lengths up to 12,000 km. In the LF band however, it was only verified for paths of up to 5,000 km. The accuracy of prediction varies from region to region and may be improved in certain regions by applying modifications. In any case the method should be used with caution for geomagnetic latitudes greater than 60° and for distances less than 300 km.

3.3.2 Annual median night-time field strength

The predicted sky wave field strength is given by :

$$F_o = V + G_s - L_p + 105.3 - 20 \log_{10} p - 10^{-3} k_{Rp} \quad (1)$$

where F_o = annual median of half-hourly median field strengths (dB above 1 μ V/m) at the reference time defined in Section 3.3.2.1.

3.3.2.1 Reference time

The reference time is taken as six hours after the time at which the sun sets at a point S on the surface of the earth. For paths shorter than 2,000 km, S is the mid-point of the path. On longer paths, S is 750 km from the terminal where the sun sets last, measured along the great-circle path.

3.3.2.2 Cymomotive force

The cymomotive force V in the azimuth and the elevation of the direction propagation is calculated by the formula :

$$V = P' + G \quad (2)$$

where P' , expressed in dB (kW), is the power supplied by the transmitter to the antenna transmission line, while neglecting various losses in the antenna and its transmission line,

and where G is the gain of the antenna in dB in the direction of propagation referred to a short vertical antenna (see preceding chapter).

For a simple vertical antenna, without losses, this gain is given by Figure / 10 /.

3.3.2.3 Sea gain

G_S is the additional signal gain when one or both terminals is situated near the sea. G_S for a single terminal is given by :

$$G_S = G_O - 10^{-3} \frac{Q s f}{G_O} \quad (\text{dB}) \quad (3)$$

where G_O is the gain when the terminal is on the coast, f is the frequency in kHz and s is the distance in km of the terminal from the sea, measured along the great-circle path. $Q = 0.44$ in the LF band and 1.75 in the MF band. G_O is given in Annex Figure / 11 / as a function of d for the above-mentioned bands. In the MF band, $G_O = 10$ dB when $d > 6,500$ km. Equation (3) applies for values of s such that $G_S > 0$. For larger values of s , $G_S = 0$. If both terminals are near the sea, G_S is the sum of the values of G_S for the individual terminals.

3.3.2.4 Excess polarization coupling loss

L_p is the excess polarization coupling loss. In the LF band, $L_p = 0$. In the MF band, at low latitudes, for $|I| \leq 45^\circ$.

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2 \text{ (dB/terminal)} \quad (4)$$

(see Figure 18)

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p values added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures 19 and 20).

3.3.2.5 Slant propagation distance

For paths longer than 1,000 km, p is approximately equal to the ground distance d (km). For shorter paths,

$$p = (d^2 + 4h_r^2)^{\frac{1}{2}} \quad (5)$$

where $h_r = 100$ km if $f \leq f'$ and 220 km if $f > f'$, where f' (in kHz) is given by

$$f' = 350 + \sqrt{(2.8d)^3 + 300^3}^{\frac{1}{3}} \quad (6)$$

Equation (5) may be used for paths of any length with negligible error.

3.3.2.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by :

$$k_R = k + 10^{-2} bR \quad (7)$$

where R = twelve-month smoothed Zurich sunspot number. In the LF band, $b = 0$. In the MF band, $b = 1$ for Europe and 0 elsewhere.

$$k = 1.9 f^{0.15} + 0.24 f^{0.4} (\tan^2 \phi - \tan^2 37^\circ) \quad (8)$$

For paths shorter than 3,000 km :

$$\Phi = (\Phi_T + \Phi_R) / 2 \quad (9)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure 121 at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole at 78.5°N, 69°W geographic coordinates. Φ_T and Φ_R are taken as positive in the northern hemisphere and negative in the southern hemisphere. Paths longer than 3,000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = (3\Phi_T + \Phi_R) / 4 \quad (10)$$

for the first half of the path and

$$\Phi = (\Phi_T + 3\Phi_R) / 4 \quad (11)$$

for the second half. The values of k calculated from Equation (8) for the two half-paths are then averaged and used in Equation (7).

If $|\Phi| > 60^\circ$, Equation (8) is evaluated for $\Phi = 60^\circ$.

3.3.4 Nocturnal variation of annual median field strength

3.3.4.1 Nocturnal variation of annual median field strength is given by the following equation :

$$F_t = F_o - L_t$$

Figure 112 shows the average of the annual median nocturnal variations, derived from Figure 8 of C.C.I.R. Report 264, 1974, and Figure 5 of C.C.I.R. Report 431, 1974, respectively; the time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the mid-path position for $d < 2,000$ km and at 750 km from the terminal where the sun sets last or rises first for longer paths.

3.3.4.2 It is accepted in practice that when a station operates within the daytime limits defined in Figure / 13 / (temperate zones) and Figure / 14 / (equatorial zone), the sky wave field strength calculated at the reference time of the station regarded as emitter of the interfering signal may be reduced by 20 dB (or by 40 dB in the case of the dotted curve in Figure / 14 /).

3.3.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a series of nights, during short periods centred on a specific time is 8 dB greater in the LF band and 10 dB greater in the MF band than the values of F_o and F_t given above.

3.4 Sky wave field strength prediction method for the frequency range 525 to 1 605 kHz for the Asian part of Region 3 North of 11°S

3.4.1 Propagation curve

In the Asian area of the Region 3 situated to the North of 11°S the "Cairo North-South" propagation curve referred to the annual midnight median value should be used for sky wave predictions. This curve appears in Figure / 22 /. This curve refers to an effective radiated power (e.m.r.p.) of 1 kW or a (c.m.f.) of 300 V of a short vertical antenna. The field F_o , in dB, is given by the formula

$$F_o = F_c - L_p + V \quad (12)$$

3.4.2 Excess polarization coupling loss (L_p)

L_p is the excess polarization coupling loss. In the MF band at low latitudes for $|I| \leq 45^\circ$

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2(\text{dB/terminal}) \quad (13)$$

(See Figure / 18 /)

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures / 19 / and / 20 /).

3.4.3 Nocturnal variation of annual median field strength

3.4.3.1 The nocturnal variation of the annual median field strength is given by the following equation :

$$F_t = F_o - L_t \quad (14)$$

In Figure /12/, time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the midpath position for $d < 2\,000$ km and at 750 km from the terminal where the sun sets last or rises first for longer paths.

3.4.3.2 It is accepted in practice that when a station operates within the daytime limits defined in Figure /13/ (temperate zones) and Figure /14/ (equatorial zone), the sky wave field strength calculated at the reference time of the station regarded as emitter of the interfering signal may be reduced by 20 dB (or by 40 dB in the case of the dotted curve in Figure /14/).

3.4.4 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a series of nights, during short periods centred on a specific time is 10 dB greater in the MF band than the values of F_o and F_t given above.

3.5 Sky wave field strength prediction method for the frequency range 525 to 1 605 kHz for the part of Region 3, South of parallel 11°S

3.5.1 Symbols

See 3.2.

3.5.2 Introduction

See 3.3.1 with regard to the MF band.

3.5.3 Annual median night-time field strength

The predicted sky wave field strength is given by :

$$F_o = V + G_s - L_p + 108 - 20 \log_{10} p - 0.8 \times 10^{-3} k_{RP} \quad (15)$$

where F_o = annual median of half-hourly median field strengths (dB above 1 μ V/m) at the reference time defined in Section 3.3.2.1.

3.5.3.1 Reference time

See 3.3.2.1.

3.5.3.2 Cymomotive force

See 3.3.2.2.

3.5.3.3 Sea gain

See 3.3.2.3 with regard to the MF band.

3.5.3.4 Excess polarization coupling loss

See 3.3.2.4 with regard to the MF band.

3.5.3.5 Slant propagation distance

See 3.3.2.5.

3.5.3.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by :

$$k_R = k + 10^{-2} bR \quad (16)$$

where R = twelve-month smoothed Zurich sunspot number. In the MF band, $b = 1$.

$$k = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \Phi - \tan^2 37^\circ) \quad (17)$$

For paths shorter than 3 000 km

$$\Phi = (\Phi_T + \Phi_R) / 2 \quad (18)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure [21]) at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole at 78.5°N, 69°W geographic coordinates. Φ_T and Φ_R are taken as negative in the southern hemisphere. Paths longer than 3 000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = (3\Phi_T + \Phi_R) / 4 \quad (19)$$

for the first half of the path and

$$\Phi = (\Phi_T + 3\Phi_R) / 4 \quad (20)$$

for the second half. The values of k calculated from Equation (17) for the two half-paths are then averaged and used in Equation (16).

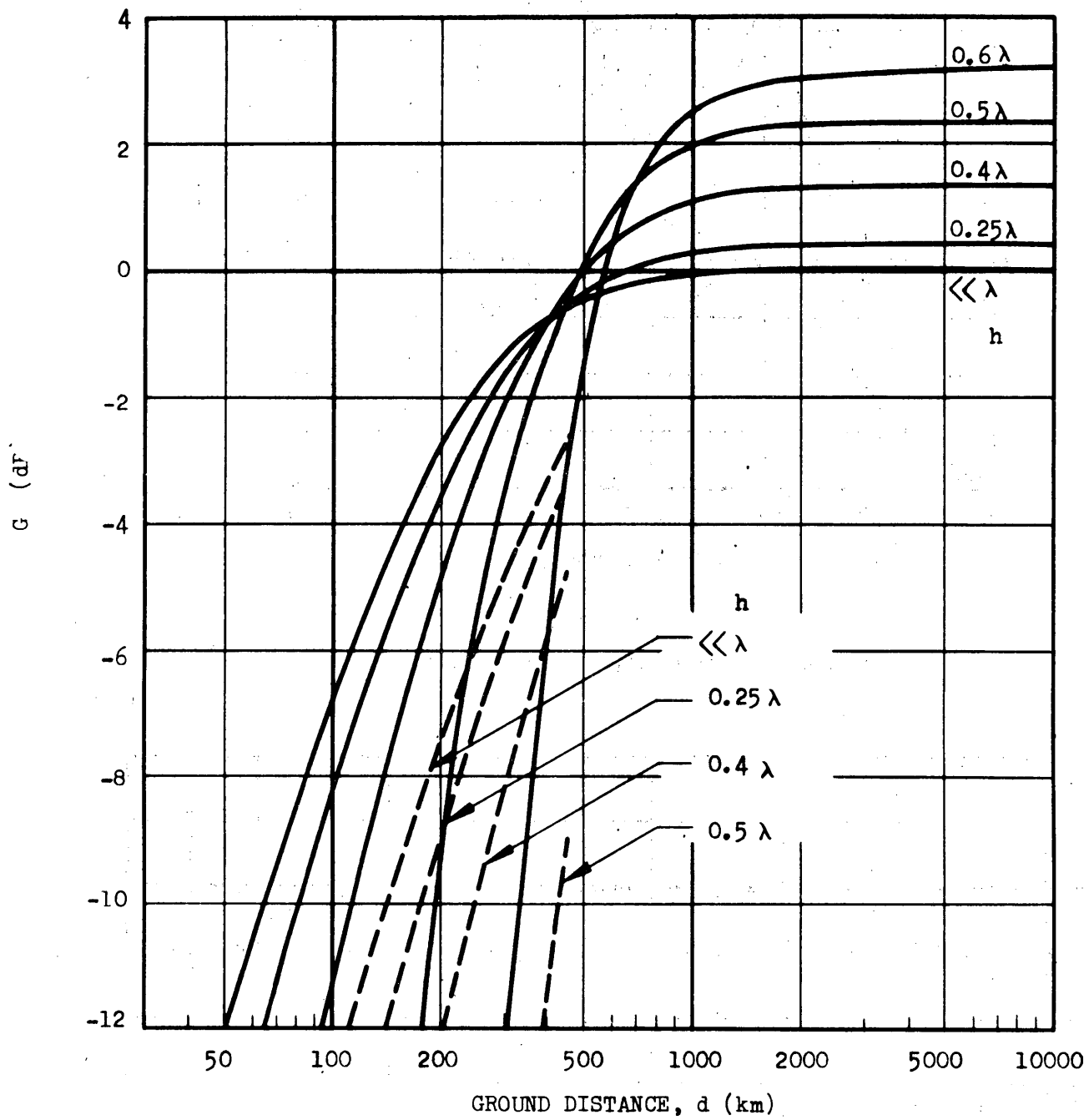
If $|\Phi| > 60^\circ$, Equation (17) is evaluated for $\Phi = 60^\circ$.

3.5.4 Nocturnal variation of annual median field strength

See 3.3.4.

3.5.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a series of nights, during short periods centred on a specific time is 7 dB greater in the MF band than the values of F_o and F_t given below.



- h = Aerial height
 — h_r = 100 km (E layer reflection)
 - - - h_r = 220 km (F layer reflection)

FIGURE [10]
Transmitting antenna gain for
a simple vertical antenna

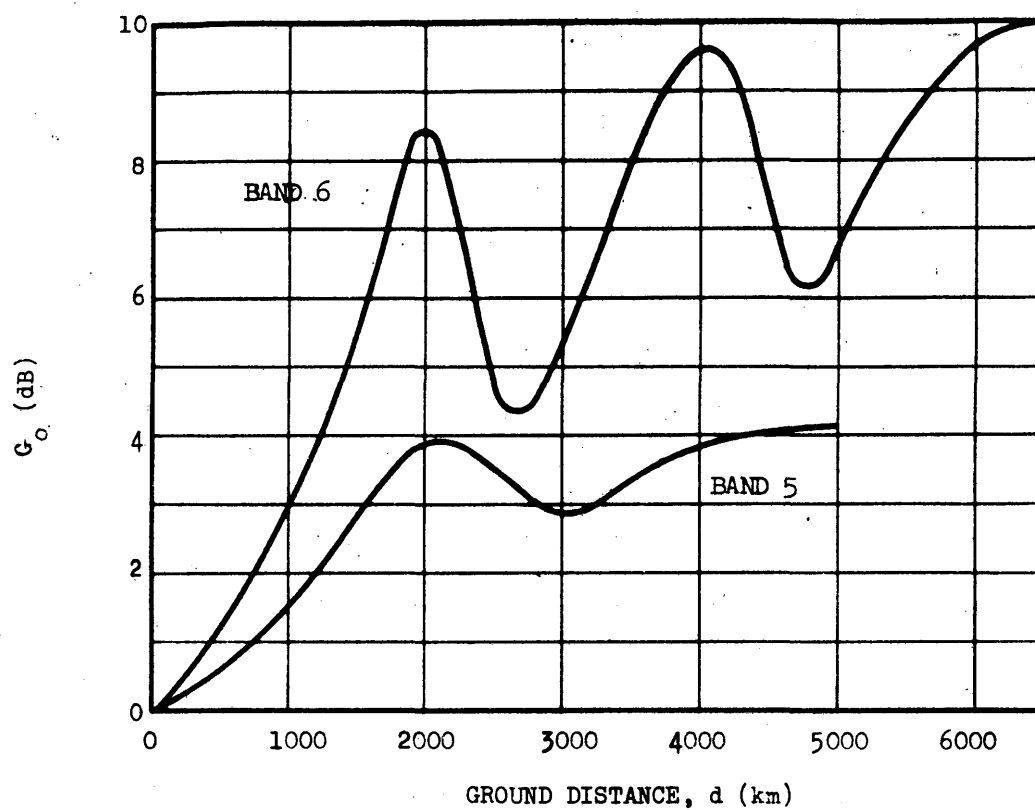


FIGURE [11]

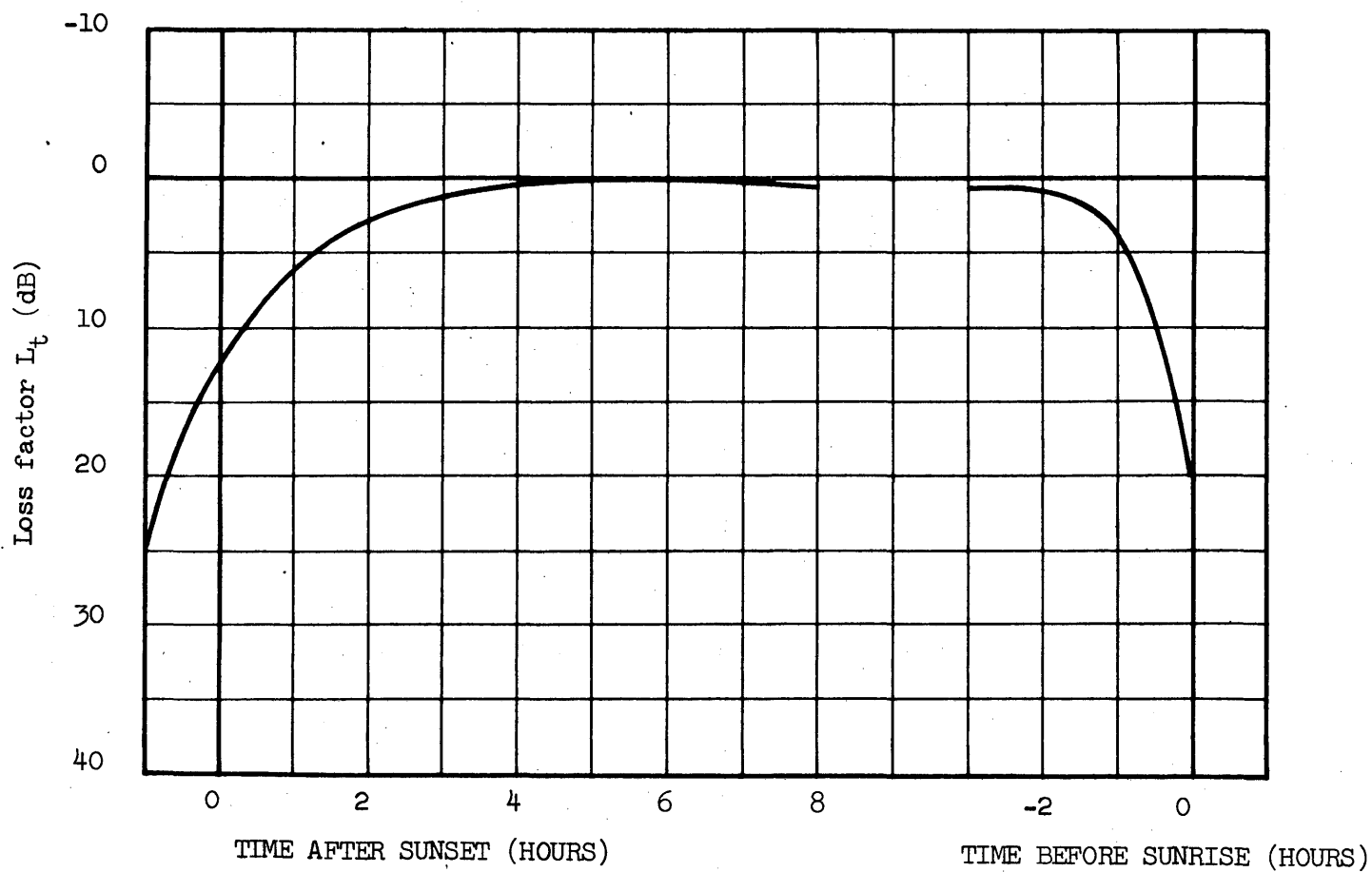
Sea gain (G_o) for a single terminal on the coast

FIGURE [12]

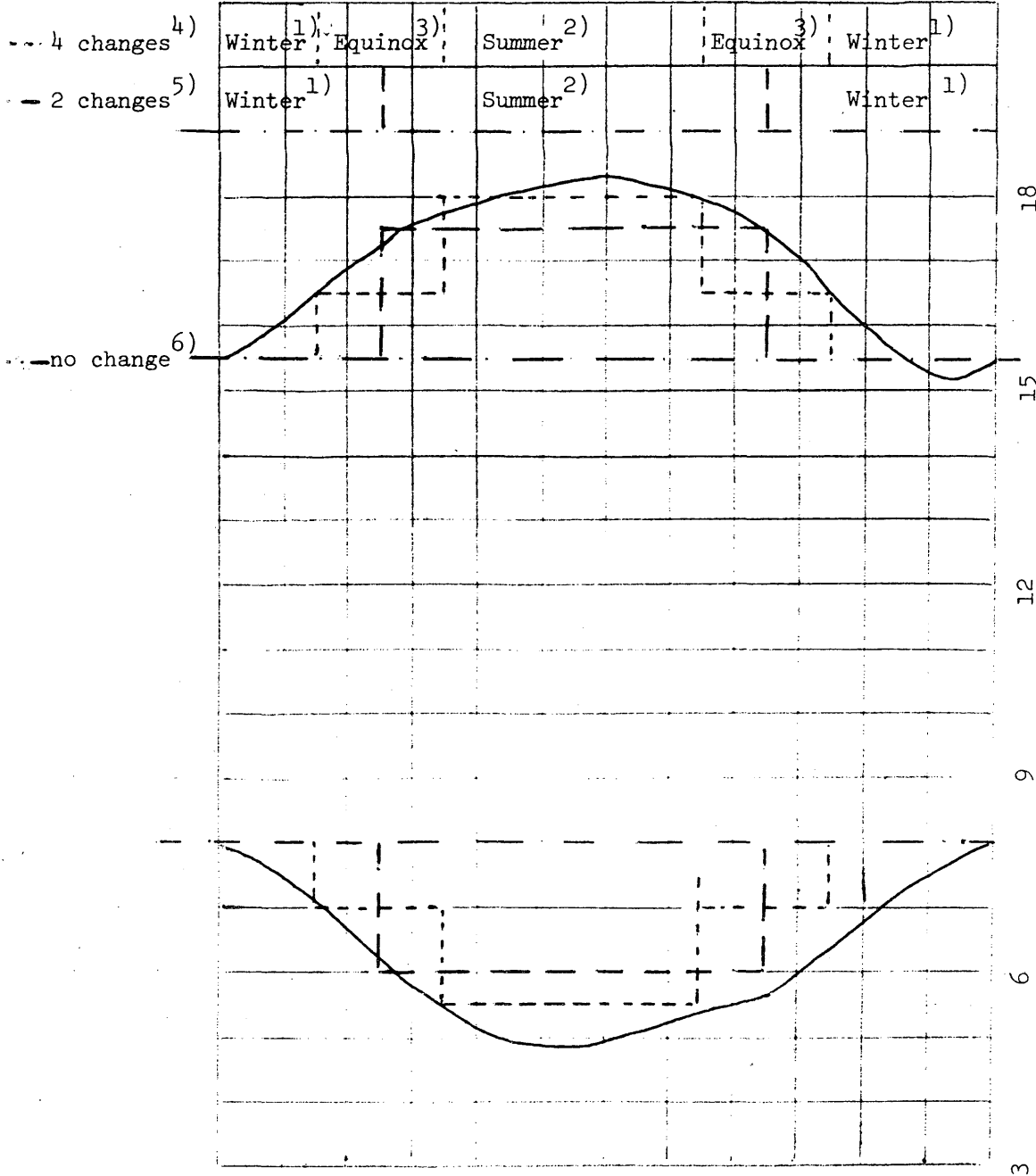
Diurnal loss factor (L_t)

HEMISPHERE DU NORD

NORTHERN HEMISPHERE

HEMISFERIO NORTE

Jan. Fev. Mar. Avr. Mai Juin Juil. Août Sept. Oct. Nov. Dec.
 Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
 En. Feb. Mar. Abr. May Jun. Jul. Ag. Sept. Oct. Nov. Dec.



Heure
 Time of day
 Hora diurna

FIGURE 13 - FIGURA 13

Limites de la journée aux latitudes tempérées (30° - 60°)

Daytime limits at temperate latitudes (30° - 60°)

Límites de las horas diurnas en latitudes templadas (30° - 60°)

Jul. Août Sept. Oct. Nov. Dec. Jan. Fev. Mar. Avr. Mai Juin
 Jul. Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
 Jul. Ag. Sept. Oct. Nov. Dic. En. Feb. Mar. Abril May Junio

HEMISPHERE DU SUD

SOUTHERN HEMISPHERE

HEMISFERIO SUR

1) Hiver/Invierno

2) Eté/Verano

3) Equinoxe/Equinoccios

4) 4 changements/4 cambios

5) 2 changements/ 2 cambios

6) pas de changement/sin cambio

HEMISPHERE DU NORD
NORTHERN HEMISPHERE
HEMISFERIO NORTE

Jan.Fev. Mar. Avr. Mai JuinJuil.Août Sept.Oct.Nov. Dec.
Jan.Feb. Mar. Apr. May JuneJuly Aug. Sept.Oct.Nov. Dec.
En. Feb. Mar. Abr. Mayo Jun.Jul. Ag. Sept.Oct.Nov. Dic.

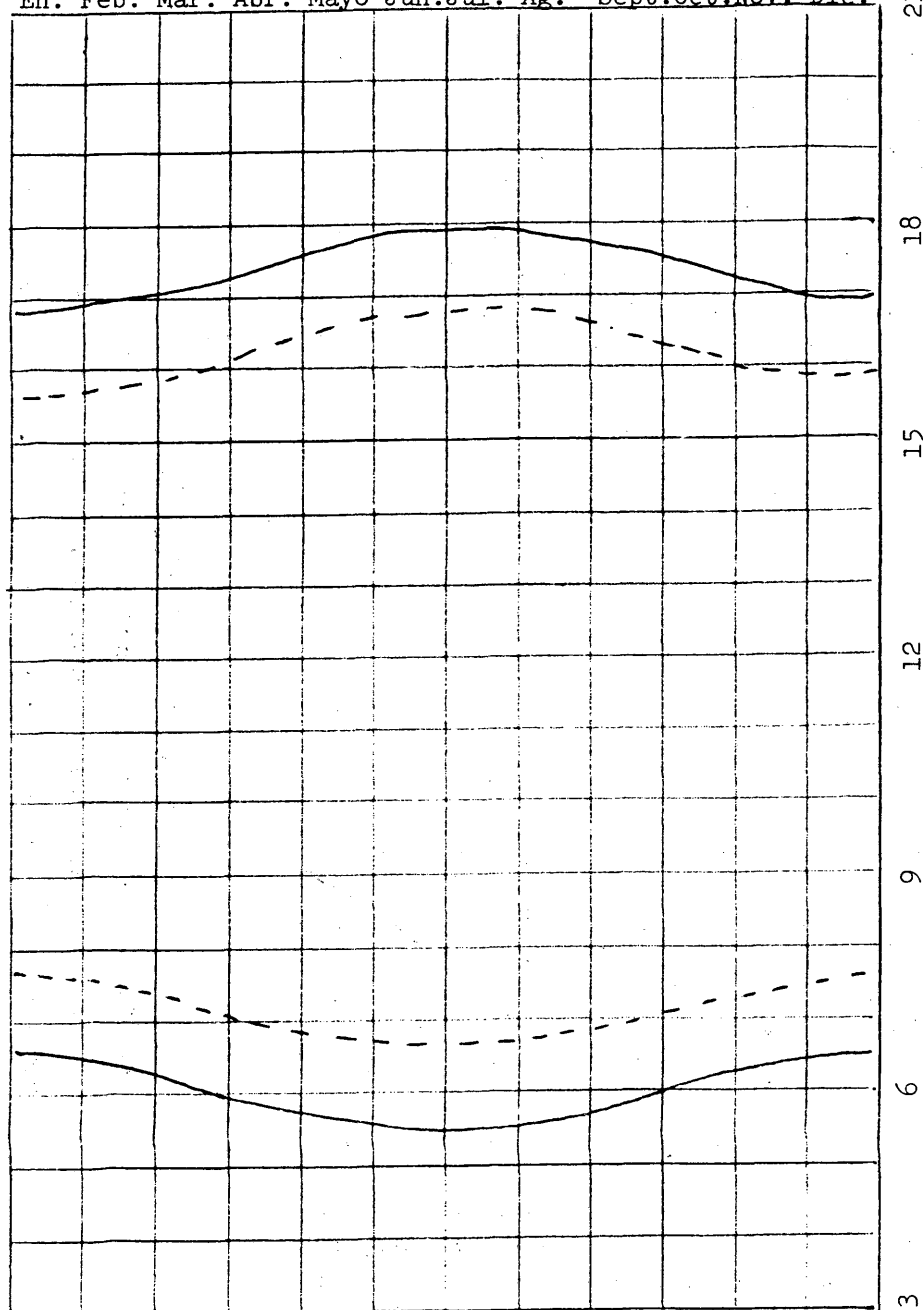


FIGURE 14 - FIGURA 14

Limites de la journée aux latitudes équatoriales (0° - 30°)
Daytime limits at the equatorial latitudes (0° - 30°)
Límites de las horas diurnas en latitudes ecuatoriales (0° - 30°)

Heure
Time of day
Hora diurna

Juil.Août Sept.Oct.Nov. Dec. Jan. Fev. Mar.Avr. Mai Juin
July Aug. Sept.Oct.Nov. Dec. Jan.Feb. Mar.Apr. May June
Jul. Ag. Sept.Oct.Nov. Dec. En. Feb. Mar.Abr. Mayo Junio

HEMISPHERE DU SUD
SOUTHERN HEMISPHERE
HEMISFERIO SUR

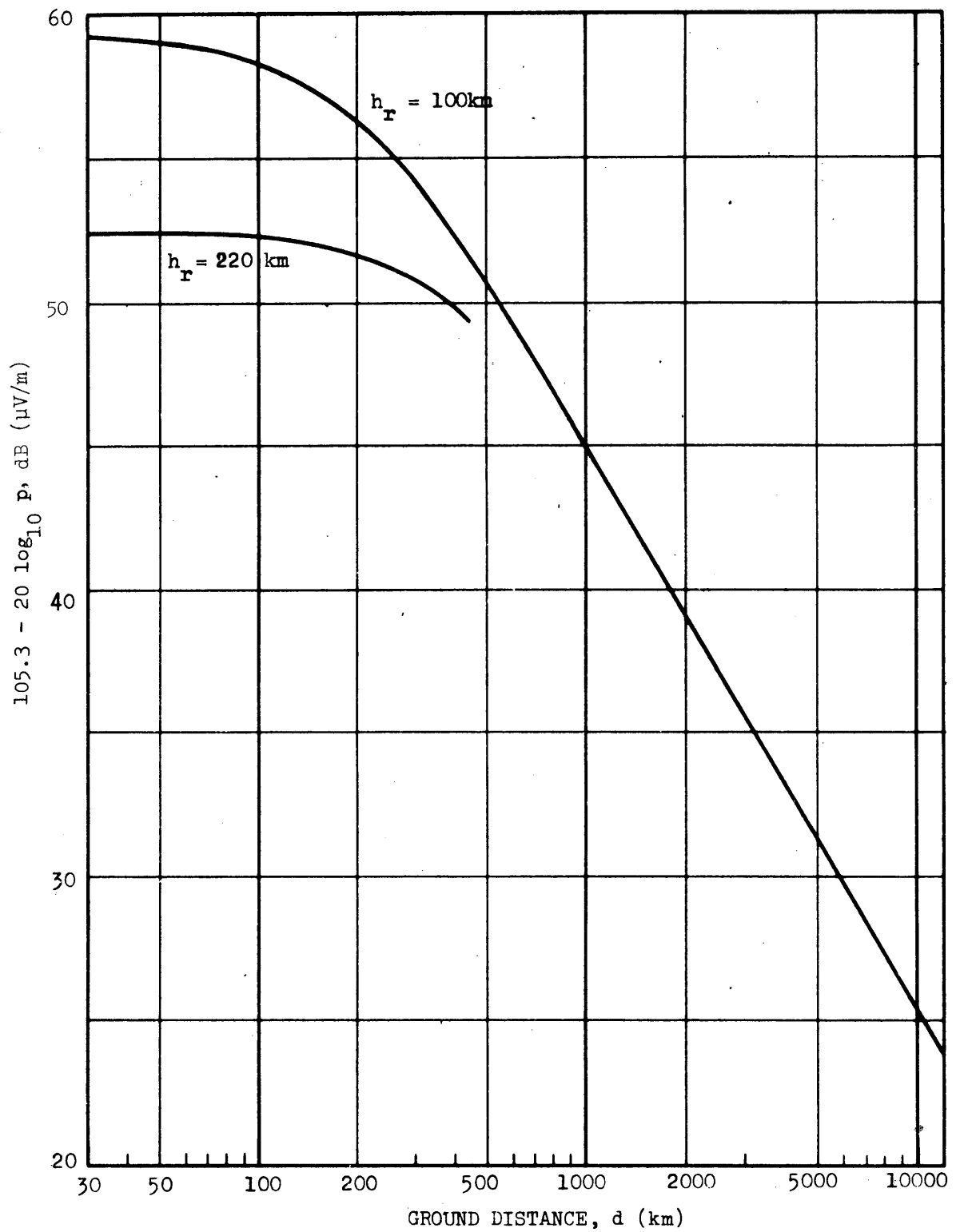


FIGURE [15]

Basic field strength

The curves show $105.3 - 20 \log_{10} p$ as a function of d
where $p = (d^2 + 4h_r^2)^{1/2}$

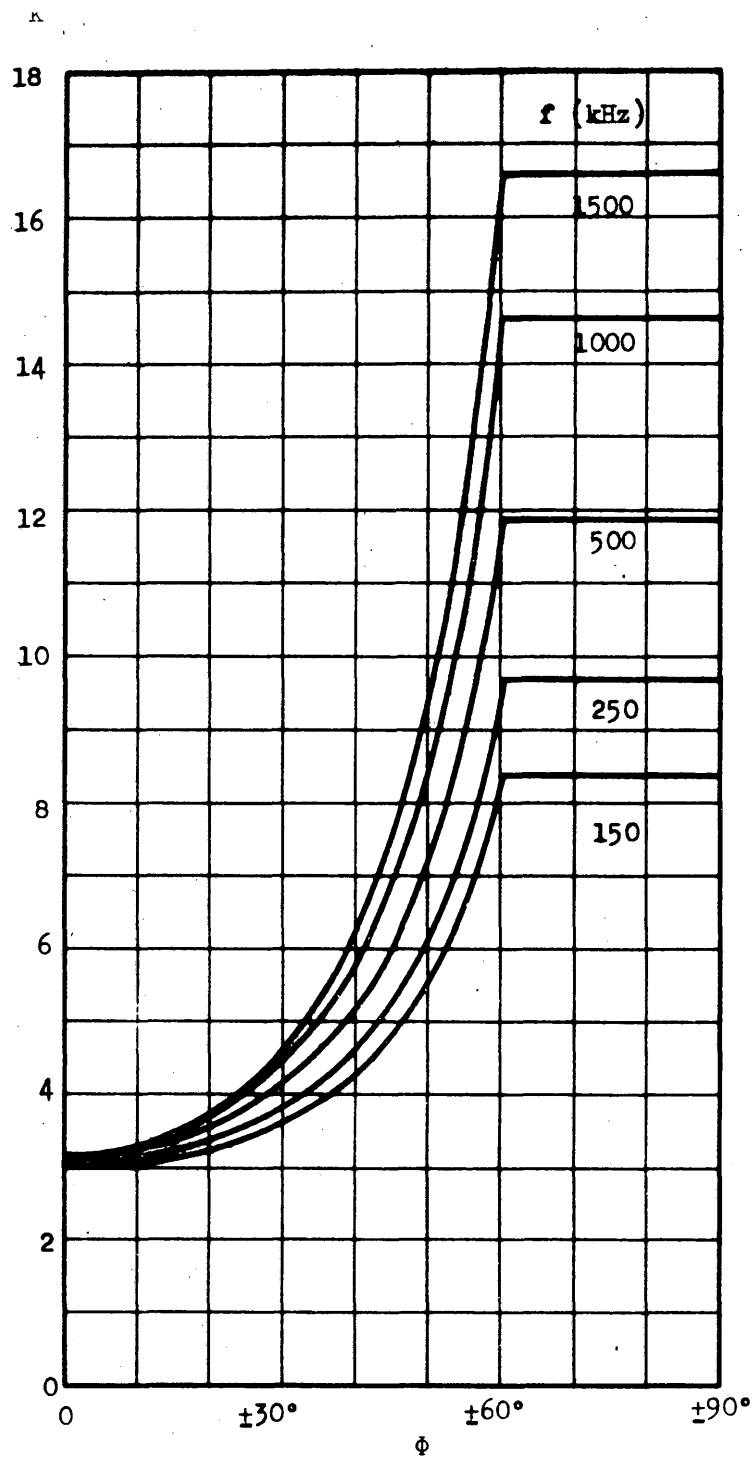


FIGURE 16

Basic loss factor due to ionospheric absorption

$$k = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \phi - \tan^2 37^\circ)$$

$$(0 \leq \phi \leq 60^\circ)$$

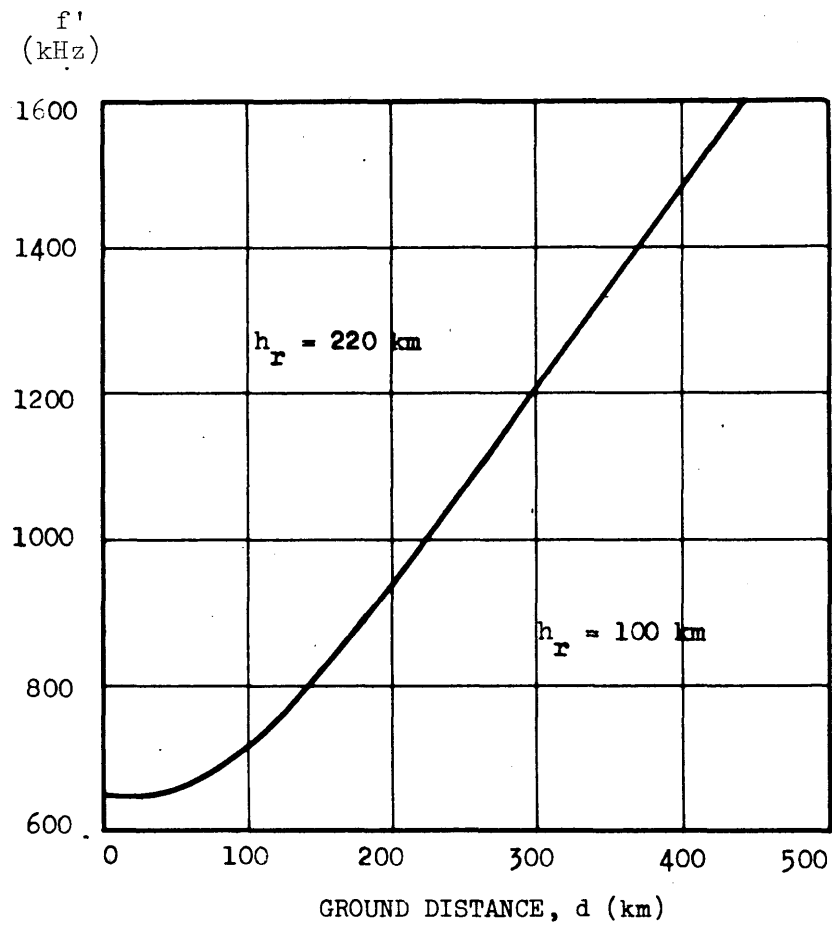


FIGURE 17

Frequency defined in equation (6)

$$f' = 350 + \sqrt[3]{(2.8 d)^3 + 300^3}$$

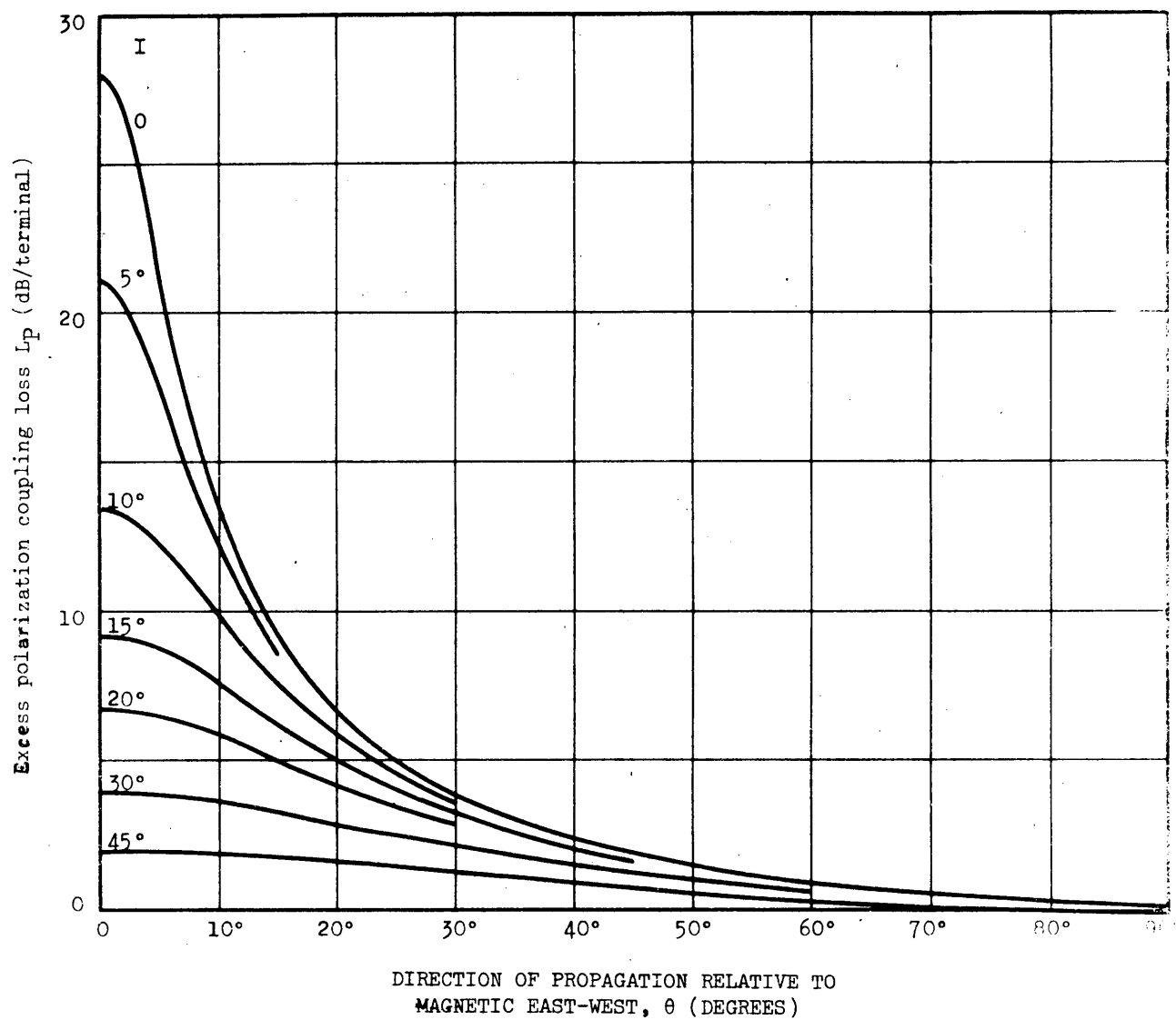


FIGURE [18]

Excess polarization coupling loss L_p

Carte de l'inclinaison magnétique - Map of magnetic dip - Mapa de la inclinación magnética

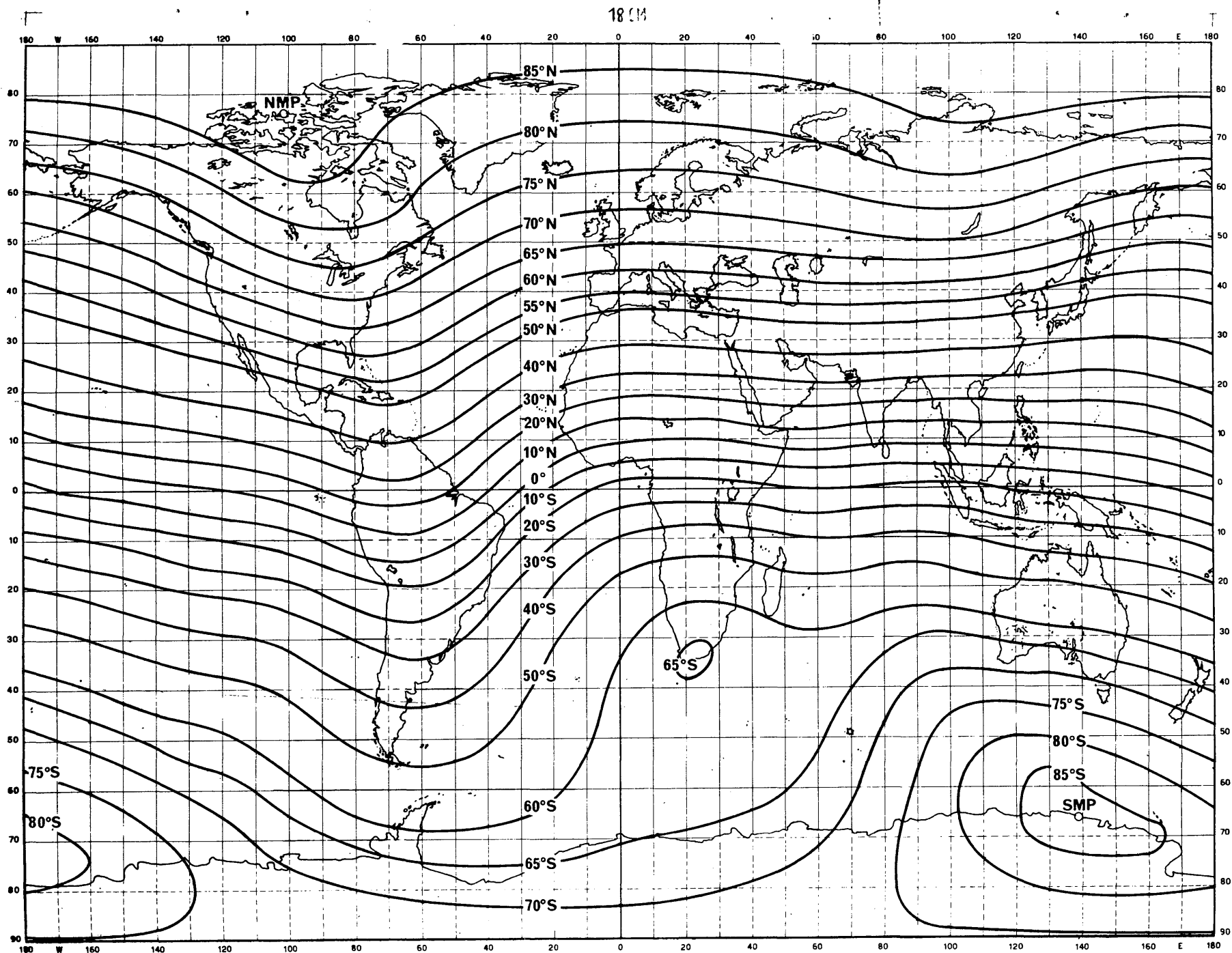
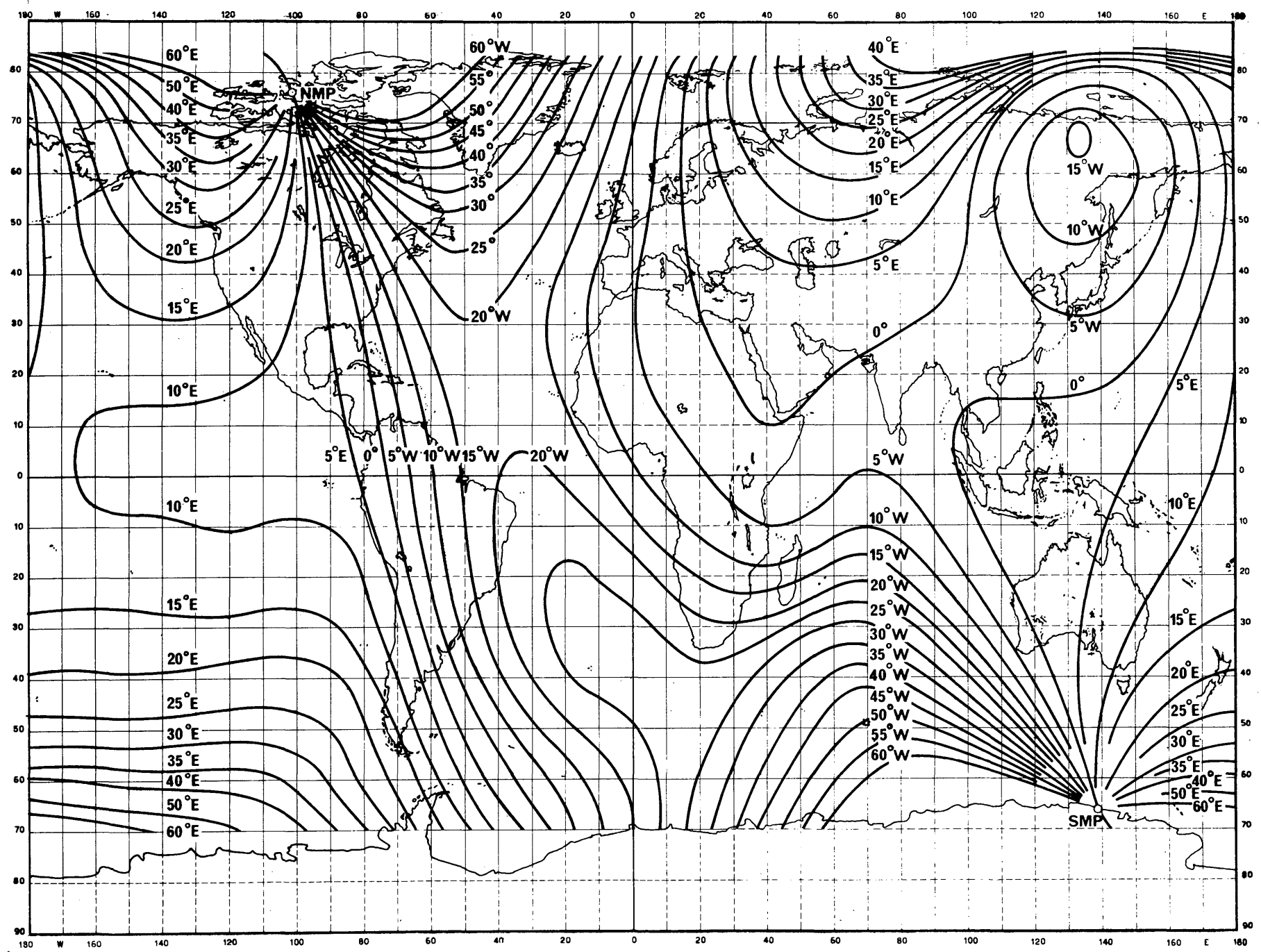


FIGURE [19] - FIGURA [19]

Carte de déclinaison magnétique - Map of magnetic declination - Mapa de declinación magnética

FIGURE [20] - FIGURA [20]



18cm

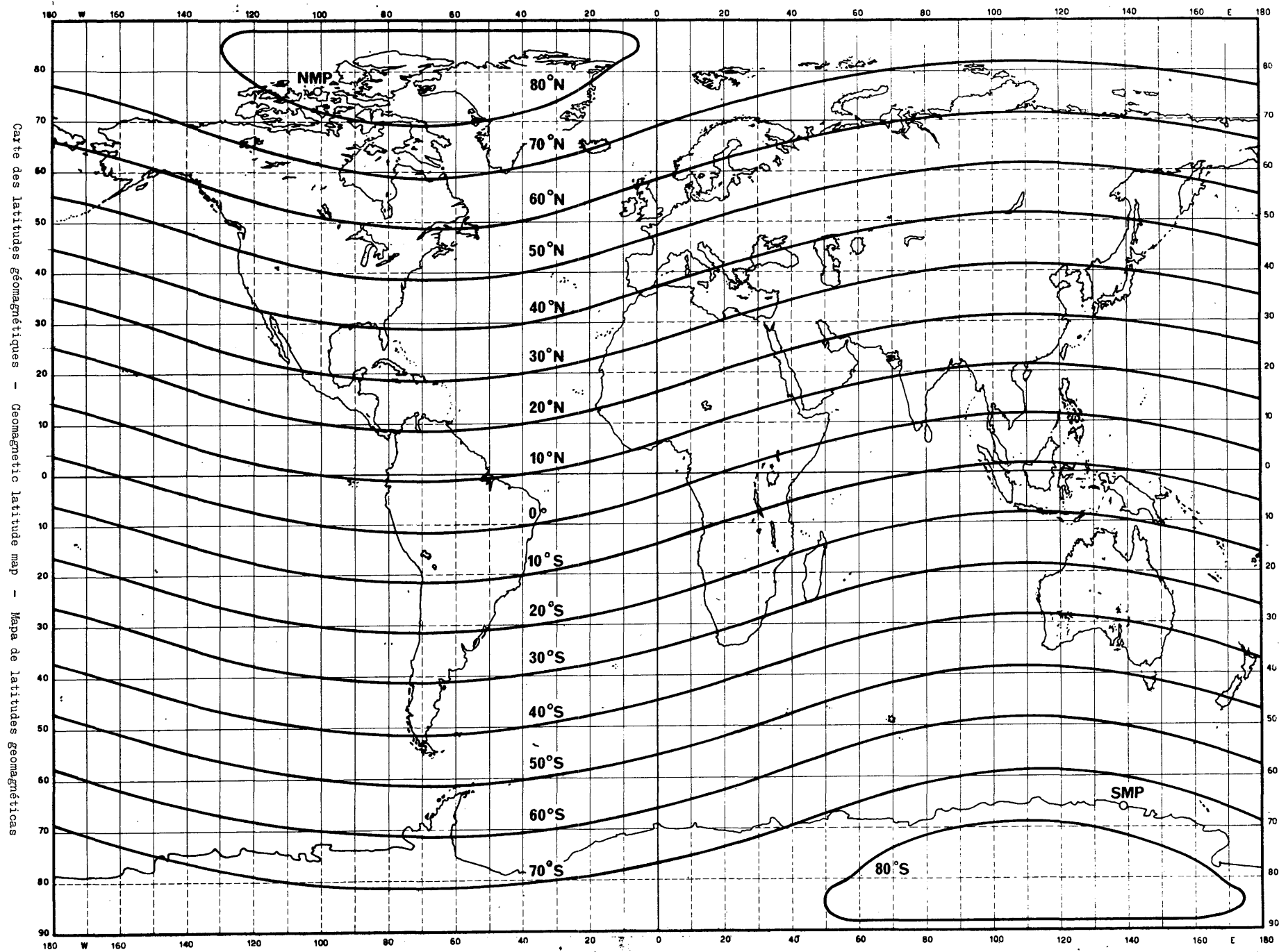


FIGURE [21.7] - FIGURA [21.7]

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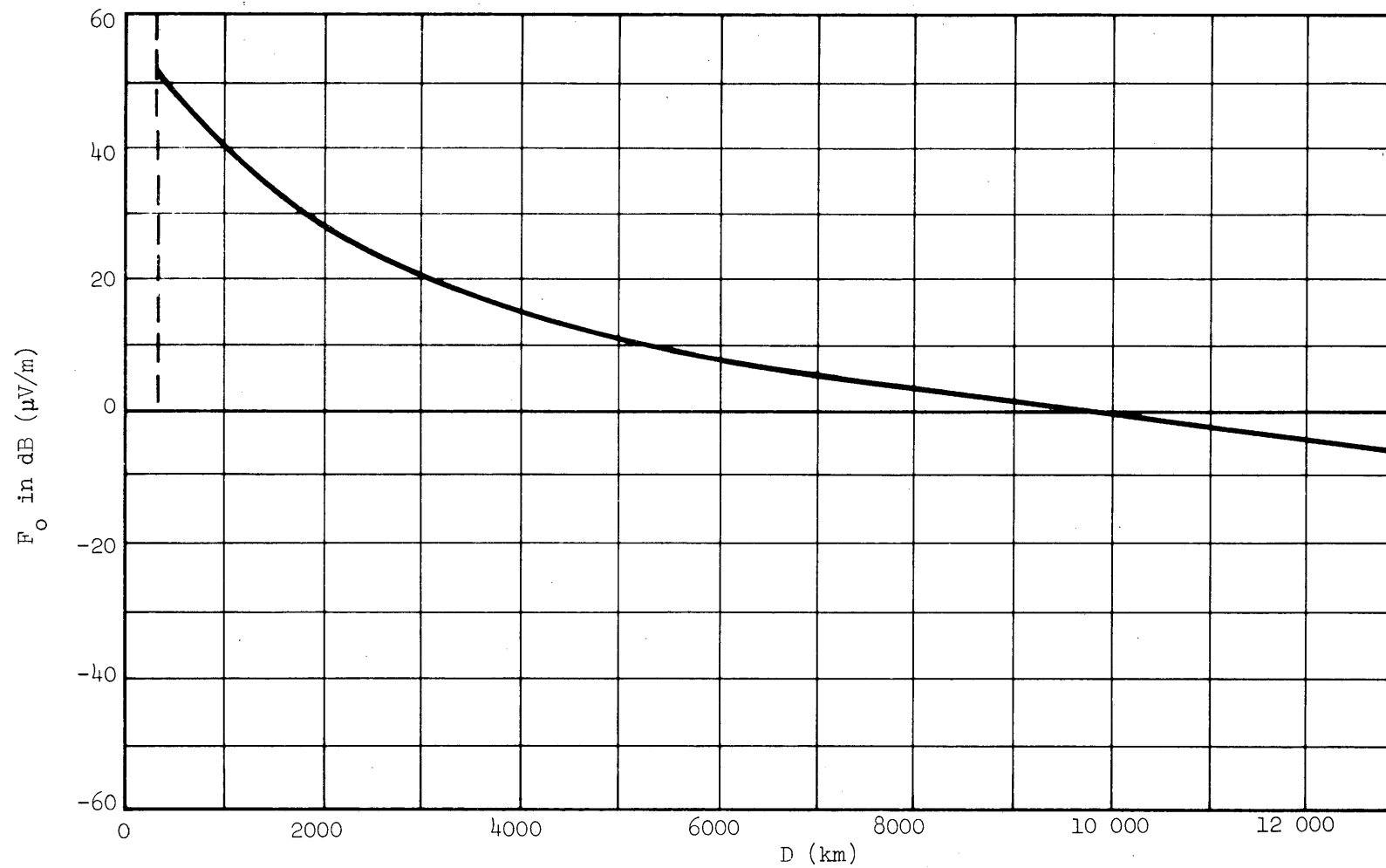


FIGURE [22]

Annual midnight median value of ionospheric field strength of Cairo North/South curve

CHAPTER 4

BROADCASTING STANDARDS

4.1 Class of emission

The Plans are established for a system with double sideband amplitude modulation with full carrier (A3).

4.2 Power

The power of a transmitter is the carrier power in the absence of modulation.

4.3 Radiated power of transmitting stations

The radiated power of a transmitting station is the product of the power and the gain of the antenna / assumed to be without losses /. It is expressed either by the cymomotive force (c.m.f. in V or in dB referred to 300 V) or by the effective monopole radiated power (e.m.r.p. in kW or in dB referred to 1 kW).

4.4 Protection ratios

In applying the Agreement, the following values of the co-channel and adjacent channel protection ratios should be used unless otherwise agreed between the Administrations concerned.

In the case of fluctuating wanted or unwanted signals, the values of the protection ratio apply for at least 50% of the nights of the year at midnight.

4.4.1 Co-channel protection ratios

30 dB for a stable wanted signal interfered with by a stable or fluctuating signal,

27 dB for a fluctuating wanted signal interfered with by a stable or fluctuating signal.

4.4.2 Adjacent channel protection ratio

4.4.2.1 In the case of a stable wanted signal :

9 dB when a limited degree of modulation compression is applied at the transmitter input, such as in good quality transmissions, and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

7 dB when a high degree of modulation compression (at least 10 dB greater than in the preceding case) is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

5 dB when a limited degree of modulation compression is applied and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz;

0 dB when a high degree of modulation compression is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz.

The above figures, taken from Figure /23/ of this Annex, are only valid when the same compression is applied to the wanted and unwanted emissions.

4.4.2.2 These figures should be reduced by 3 dB for a fluctuating wanted signal.

4.4.2.3 In applying the provisions of No *) ... of the Agreement, a value of 9 dB or 5 dB will be used, as required, depending on the bandwidth, for a stable wanted signal and 6 dB or 2 dB for a fluctuating wanted signal.

4.4.2.4 The protection ratios between signals from transmitters belonging to the same synchronized network is 8 dB.

4.5 Minimum value of field strength

4.5.1 The following "minimum values of field strength" necessary to overcome natural noise (at 1 MHz) in the three zones A, B and C have been adopted :

Zone A : + 60 dB/1µVm
Zone B : + 70 dB/1µVm
Zone C : + 63 dB/1µVm

*) of the procedure governing modifications of the Plan.

4.5.2 Zones A, B and C in Regions 1 and 3 shown in Figure [24_] are delimited as follows :

4.5.2.1 The dividing line between zones A and B begins at the point of intersection of parallel 20°N with the western border of Region 1 (No. 126 of the Radio Regulations*). Thence it follows the parallel 20°N up to the point of intersection with meridian 20°E ; thence by great circle arc to the intersection of meridian 44°E with the Equator; thence it follows the Equator up to the intersection with meridian 80°E ; thence by great circle arc to the point with coordinates 100°E , 20°N ; thence it follows the parallel 20°N up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations*). The territory of the Islamic Republic of Mauritania lies entirely in zone A.

4.5.2.2 The dividing line between zones B and C begins at the point of intersection of parallel 6°S with the western border of Region 1 (No. 126 of the Radio Regulations*); thence it follows the parallel 6°S up to the point of intersection with meridian 20°E ; thence by great circle arc to the point with coordinates 46°E , 26°S ; thence by great circle arc up to the point with coordinates 80°E , 20°S ; thence it follows the parallel 20°S up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations*).

*) or the corresponding Article of the Radio Regulations in force.

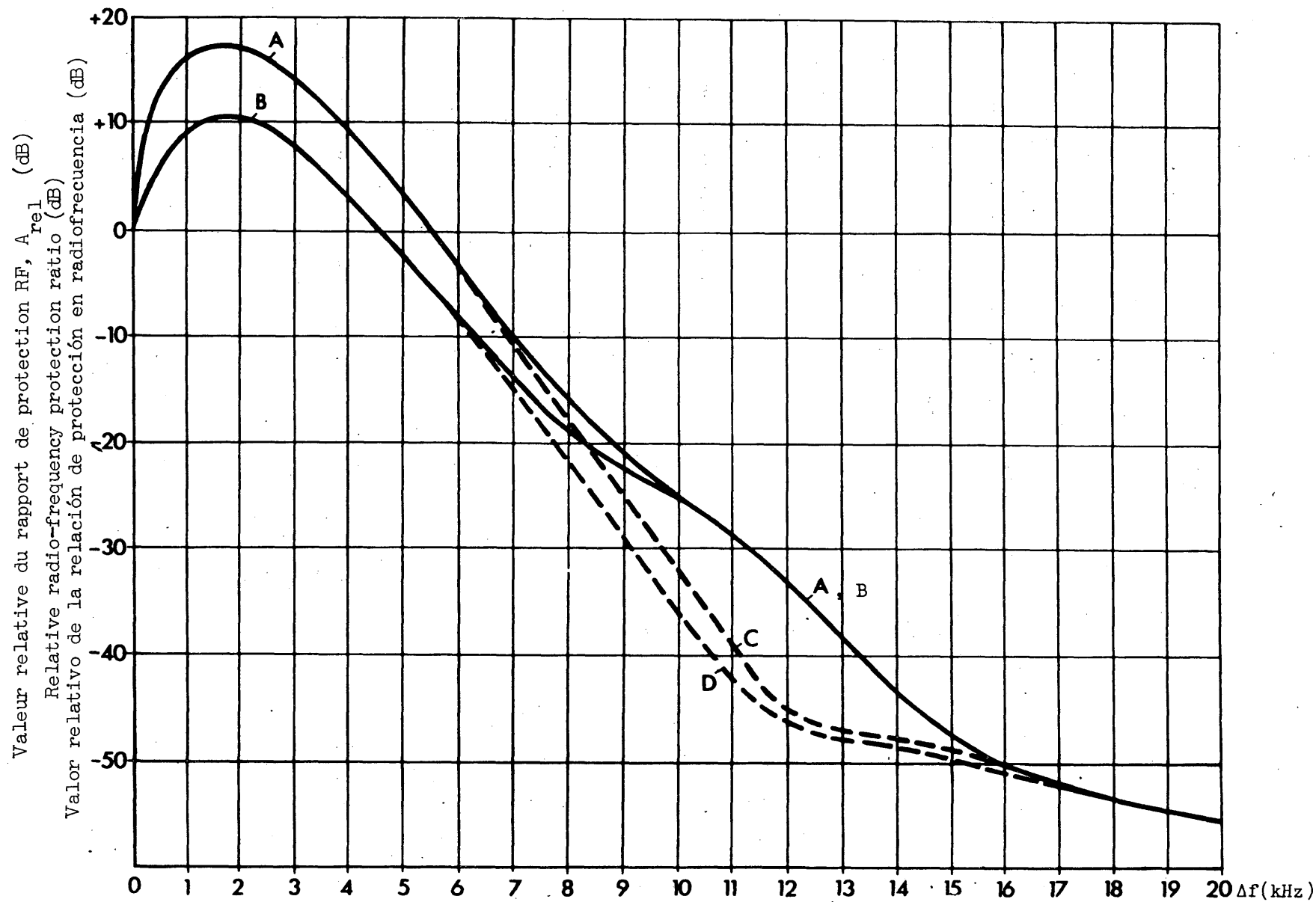


FIGURE / 23 / - FIGURA / 23 /

VALEURS RELATIVES DU RAPPORT DE PROTECTION AUX FREQUENCES RADIOELECTRIQUES EN FONCTION DE L'ECARTEMENT DES PORTEUSES
 RELATIVE VALUE OF THE RADIO-FREQUENCY PROTECTION RATIO AS A FUNCTION OF THE CARRIER FREQUENCY SEPARATION
 VALORES RELATIVOS DE LA RELACION DE PROTECCION EN RADIOFRECUENCIA EN FUNCION DE LA SEPARACION ENTRE LAS PORTADORAS

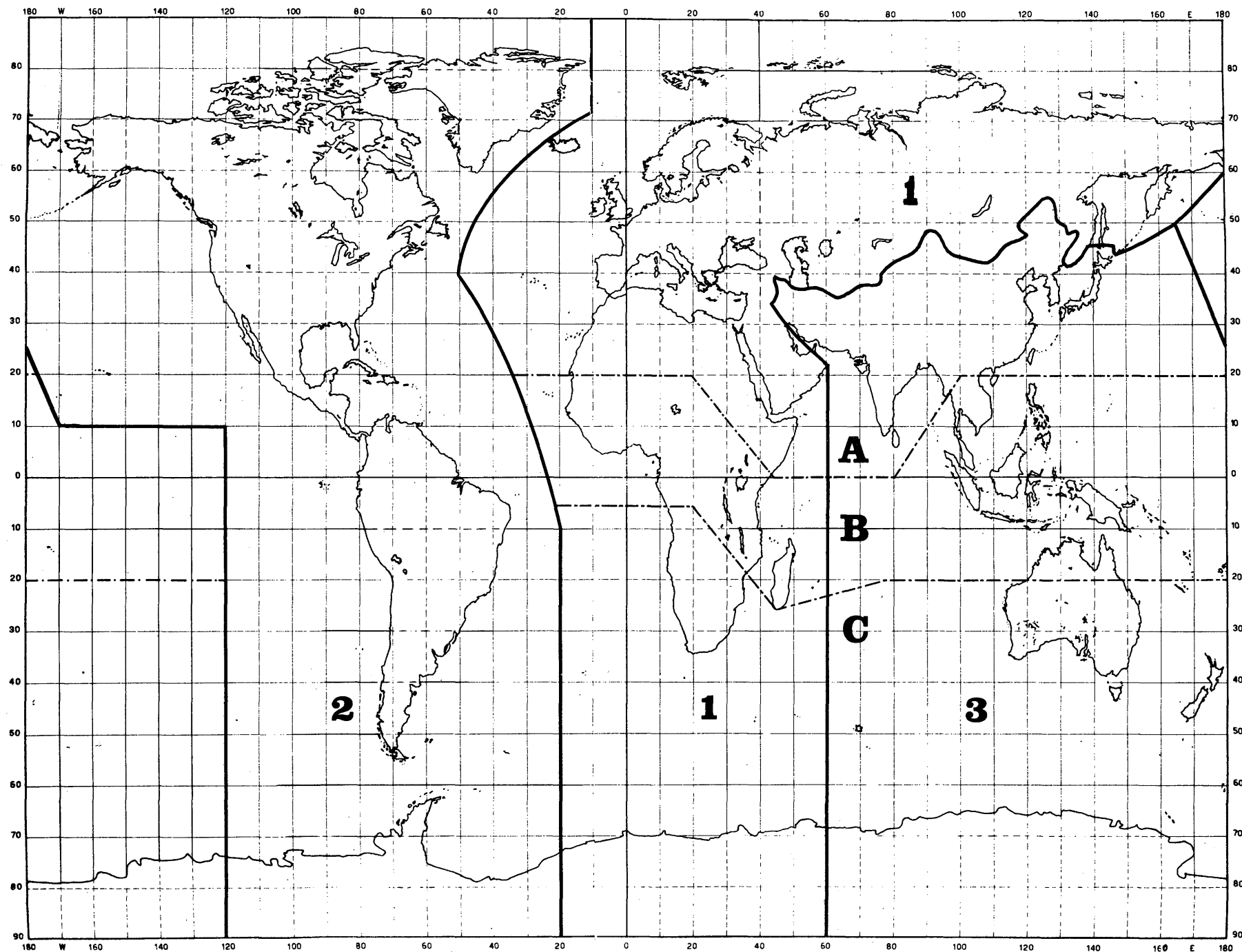


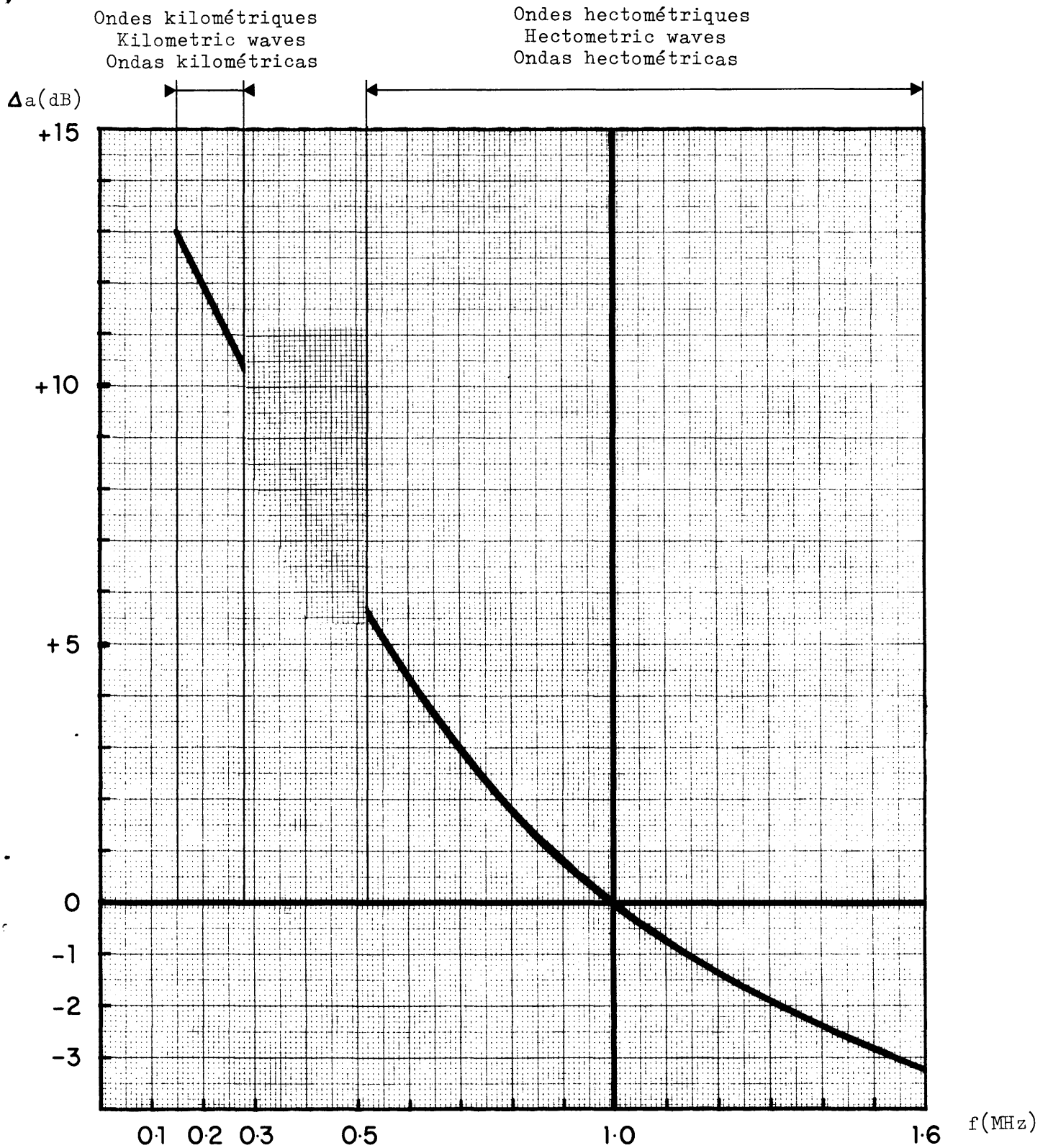
FIGURE [24] - FIGURA [24]

FIGURE / 25 / - FIGURA / 25 /

"VALEUR MINIMALE DU CHAMP" EN FONCTION DE LA FREQUENCE

FREQUENCY DEPENDENCE OF "MINIMUM VALUE OF FIELD-STRENGTH"

"VALOR MÍNIMO DE LA INTENSIDAD DE CAMPO" EN FUNCIÓN DE LA FRECUENCIA



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4.6 Nominal usable field strength

The nominal usable field strength values are shown in the following table :

	ZONE A	ZONE B	ZONE C
A. <u>MF.</u>			
Daytime ground wave service	63 dB	73 dB	66 dB
Night ground wave service*)			
- rural areas**)	71 dB	81 dB	74 dB
- urban areas	77 dB	87 dB	80 dB
Low-power channels	88 dB	88 dB	88 dB
B. <u>LF.</u> ***)	77 dB	87 dB	80 dB

*) Where the transmitter power is sufficiently great for the ground wave service area to be limited by fading due to the sky wave of the same transmitter, the nominal usable field strength may be chosen to be greater than the value given above. It should not, however, be made greater than the ground wave field strength at the beginning of the fading zone. The fading zone may be defined by taking the protection ratio between the ground wave and the sky wave to be equal to the internal protection ratio applicable to a synchronized network, i.e. 8 dB.

**) Some delegations consider a nominal usable field strength of 65 dB to be suitable for rural areas in their countries.

***) Certain delegations consider a value of E_{nom} of the order of 73 dB to be appropriate in non-tropical rural areas.

4.7 Usable field strength

In the presence of a group of transmitters the usable field strength is expressed by the formula :

$$E_u = \sqrt{\sum_i (a_i E_{ni})^2 + E_{min}^2}$$

where

E_{ni} is the field strength of the i-th unwanted transmitter (in $\mu V/m$)*

E_{min} is the minimum usable field strength at the frequency in question (in $\mu V/m$) (see C.C.I.R. Recommendation 499, 1974)

a_i is the radio-frequency protection ratio associated with the i-th unwanted transmitter, expressed as a numerical ratio of field strengths.

Failing data on the manmade noise level, the minimum field strength value given in paragraph 4.5.1., corrected according to the frequency by the curve in Figure 25, can be used.

4.8 Low-power channels

The resultant field strength of a low-power transmitter network at the boundary of the territory of any other country should not exceed 0.5 mV/m except by agreement with the Administration concerned. In cases where countries are separated by sea water, the 0.5 mV/m field strength shall, in principle, not be exceeded at the mid-point of the over-water path, unless other agreement between the Administrations concerned is achieved. /

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BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 137-E

8 November 1975

Original : English

COMMITTEE 5

REPORT FROM WORKING GROUP 5B TO COMMITTEE 5

1. The terms of reference of Working Group 5B, as contained in Document No. 40 read as follows :

"To establish the provisions of the Agreement relating to :

- the procedure for modifications to the Plan,

- the criteria for determining whether or not a modification to the Plan requires coordination,

- the notification of frequency assignments."
2. The Working Group held 9 meetings during which were established the principles which would be taken as the basis for the drafting of the articles coming under the terms of reference of the Working Group.
3. The Working Group set up a drafting group composed of delegates for Spain, France and the United Kingdom, under the Chairmanship of Miss Huet from the French Delegation, to draft these articles.
4. The Working Group set up Sub-Working Group 5B/1 under the Chairmanship of Mr. Haga, delegate from Norway, to study the following problems :

- establish a tolerable value of increase in usable field strength, to be included in the procedure,

- establish under which conditions a modification to the Plan requires the agreement of other Administrations.

The results of Sub-Working Group 5B/1 have been taken into consideration when establishing the draft text of the procedure.



5. In Annex 1, the draft new article is given relating to the procedure for modifications to the Plan. This draft has been achieved after lengthy discussions and is the result of many compromises which could only be reached with the goodwill and cooperation of all delegations.

5.1 The Working Group thought it necessary, in order to avoid repetition, to give a definition for the frequency assignments appearing in the Plan or for which the procedure of the article had been successfully applied. This definition is to be found in paragraph 2.

5.2 The value of 0.5 dB which is given in paragraph 3.2.5 has been generally agreed but the delegation for France has reserved the right to come back on this value in Committee 5. The delegation for Italy reserved the right to come back to the substance of this paragraph.

5.3 The text of paragraph 3.2.12 results from a compromise and takes into account two alternative solutions presented by Sub-Working Group 5B/1 and Document No. 35 presented by the delegation of Mauritania. This text is acceptable provided that the Plan is considered satisfactory for the developing countries.

5.4 The time limit / 3 years /, given in paragraph 3.2.15, relating to the publication of an updated version of the Plan, was not discussed within the Working Group 5B.

5.5 The text of paragraph 3.4 could not be discussed finally, pending decisions of Committee 5 relating to this problem.

5.6 Throughout the procedure for the terms "Participating Member", "Administration" and "Radio Regulations", the Working Group has taken into account the decisions taken in Working Group 5C. However, some delegations thought it would be necessary to come back to these terms in Committee 5. The term "Participating Member" appears only in the first paragraph of the procedure and the term "Administration" in all the other paragraphs.

6. Annex 2 to the present Report contains a draft new article relating to "the notification of frequency assignments" which is similar to that appearing in the African Agreement, but without the last sentence of No. 31 of the African Agreement which relates to the provisions of No. 27 of the African Agreement, which were not included in the procedure.

7. During the discussion it was proposed to draw up a new draft of the Resolution No. 2 of the African Agreement relating to the bringing up to date of the Master International Frequency Register on the date of entry into force of the Agreement. The Chairman was asked not to discuss this matter within Working Group 5B because of the importance of the problem.
8. The Working Group discussed the question of the implementation of the Plan adopted by the Conference, similar to Resolution 1 of the African LF/MF Broadcasting Conference, Geneva, 1966, and it found that it was not necessary to have such a Resolution.
9. The Working Group considers that a clear definition should be given in the Agreement for the term "low power channel" which depends upon the work of Committee 4.

R. BINZ
Chairman of Working Group 5B

Annexes : 2

A N N E X 1

ARTICLE

PROCEDURE FOR MODIFICATIONS TO THE PLAN

1. When a Participating Member proposes to make a modification to the Plan, i.e. either :
 - to change the characteristics of a frequency assignment to a broadcasting station shown in the Plan, whether or not the station has been put into use, or
 - to put into use a broadcasting station not appearing in the Plan, or
 - to change the characteristics of a frequency assignment to a broadcasting station for which the procedure in the present Article has been successfully applied, whether or not the station has been put into use, or
 - to cancel a frequency assignment to a broadcasting station,

the following procedure shall be applied before any notification is made under the provisions of Article 9 of the Radio Regulations (see Article below).
2. In the remainder of this Article, the term "assignment in accordance with the Agreement" means any frequency assignment appearing in the Plan or for which the procedure of the present Article has been successfully applied.

3. Proposed changes in the characteristics of a station or the bringing into use of a new station

3.1 Any Administration proposing a change in the characteristics of an assignment, or the bringing into use of a new assignment shall seek the agreement of all the administrations having an assignment in accordance with the Agreement, in the same channel or an adjacent channel, which is considered to be affected beyond the limits in paragraph 3.2.5.

3.2 Channels other than low-power channels

3.2.1 Any Administration which seeks agreement in accordance with paragraph 3.1 above shall so inform the I.F.R.B. by supplying the characteristics relating to the change or to the addition in the format adopted for the Plan / and their Annexes / . It may also give the name of the Administrations with which it considers agreement may be required, as well as those with which agreement has been reached.

3.2.2 The I.F.R.B. shall determine on the basis of the Annex ... to the Agreement, the Administrations having a frequency assignment in accordance with the Agreement, which is considered to be affected beyond the limits referred to in paragraph 3.2.5. These calculations shall immediately be sent by the I.F.R.B. to the Administration proposing the modification to the Plan. The Board shall include the name of these Administrations in the information received and shall publish the complete information in a special section of its weekly circular.

3.2.3 When an Administration is so listed in the special section of the weekly circular, the I.F.R.B. shall notify that Administration by telegram and shall also send to it the results of its technical calculations.

3.2.4 Any Administration which considers that it should have been included in the list of Administrations whose frequency assignment is considered to be affected, may request the I.F.R.B. to do so, giving the reasons for the same. A copy of the request shall be sent to the Administration proposing the modifications to the Plan.

3.2.5 Any assignment may be considered as affected when the corresponding usable field strength is increased by a value equal to or greater than 0.5 dB as a consequence of the proposed modification to the Plan. The usable field strength is calculated

at any point of the contour of the service area as resulting from the Plan; when the initial assignment in the Plan has been modified in accordance with the Agreement, the calculation shall take account of this modification. The increase in the usable field strength is calculated in accordance with Annex ... to the Agreement.

If necessary it will be corrected by a diurnal loss factor, which is the value :

- either of 20 dB or of 40 dB, depending on the case, when the curves of the Figures ... and ... of the Annex ... apply;
- either the one that corresponds to the highest interfering field strength of the common operating schedule.

3.2.6 Any Administration may request from the Administration proposing the modification to the Plan the additional information it considers necessary to calculate the increase in the usable field strength and shall inform the I.F.R.B. of its request.

3.2.7 Comments from Administrations on information published pursuant to paragraph 3.2.2 should be sent either directly to the Administration proposing the modification, or through the I.F.R.B. In any event the I.F.R.B. shall be informed that comments have been made.

3.2.8 The above procedure need not be applied, and hence the Administration intending to modify the Plan may put its project into effect, subject to the application of the provisions of Article 9 of the Radio Regulations, if the modification relates to :

- either no increase in effective monopole radiated power in any direction,
- or a change in the site of the station, within the tolerances specified in Annex No. / A / to the Agreement.

3.2.9 Any Administration which has not notified its observations either to the Administration concerned or to the I.F.R.B. within a period of sixteen weeks following the date of the weekly circular referred to in paragraph 3.2.2 above shall be understood to have agreed to the proposed change. However, this time limit may be extended by eight weeks in the case of an Administration having requested additional information pursuant to paragraph 3.2.6.

- 3.2.10 If in seeking agreement an Administration makes changes to its initial proposal, it shall again apply the provisions of paragraph 3.2.1 and the following.
- 3.2.11 If no comments have been received on expiry of the periods specified in paragraph 3.2.9, or if agreement has been reached with the Administrations making these comments, the Administration proposing the modification may proceed with its project and shall inform the I.F.R.B. indicating the final characteristics of the assignment as well as the name of the Administrations with which agreement has been reached.
- 3.2.12 When the proposed modification to the Plan involves a developing country, Administrations shall seek a solution enabling an economical development of the broadcasting system of the developing country.
- 3.2.13 The I.F.R.B. shall publish in a special section of its weekly circular the information received under paragraph 3.2.11, together with the name of the countries with which agreement has been reached, where appropriate, the provisions of the present Article have been successfully applied. Insofar as the relations between Contracting Administrations are concerned, such an assignment shall be considered as having the same status as those appearing in the Plan.
- 3.2.14 The Board shall maintain an up-to-date master copy of the Plan resulting from the application of the procedure in this Article; to this effect it shall prepare a document containing the assignments in the Plan as modified by the present procedure together with any new assignments which are in conformity with the Agreement.
- 3.2.15 The Secretary-General shall be informed by the I.F.R.B. of these changes made in the Plan and shall publish an updated version of the Plan in an appropriate form as and when the circumstances justify and in any case every three years.

3.3 Low power channels

- 3.3.1 Any Administration proposing a change in the characteristics of a station in a low-power channel or to bring into use a new station in such a channel shall seek the agreement of any other Administration when the distance between the proposed station and the nearest point on the boundary of the territory of any other Administration is less than the corresponding values given in Table ... of Annex ...*).

*) See paragraph 4.8 of Document No. 136 (3rd Report of Working Group 5A)

3.3.2 After having obtained the agreement of the Administrations concerned, the Administration proposing the modification shall inform the I.F.R.B. indicating the characteristics of the station as well as the name of the Administrations with which agreement has been reached.

3.3.3 The I.F.R.B. shall publish this information in a special section of its weekly circular.

3.3.4 The Administration may then proceed with its project.

3.4 Additional provisions for channels in shared bands

/ 3.4.1 The provisions of this Article apply also to frequency assignments to broadcasting stations where frequency bands are shared with other radiocommunication services. However, the special sections of the I.F.R.B. weekly circular mentioned in paragraphs ... shall be considered by these other services only as giving information on the proposed modification in question at this stage. /

/ 3.4.2 Resolution No. ... lays down the conditions related to the bringing into use of new broadcasting stations in the LF bands in conformity with the Agreement. This Resolution also applies to changes in the characteristics of such stations already in use. Administrations operating such stations shall take all necessary steps to apply the provisions of Nos. 116 and 117 of the Radio Regulations. /

3.5 Common provisions to all channels

3.5.1 If no agreement is reached between the Administrations concerned, the I.F.R.B. shall make any technical examination or study that may be requested by these Administrations; the Board shall inform them of the result of such examination or study and shall offer such recommendations it can make for the solution of the problem.

3.5.2 Any Administration may at any stage of the preceding procedures or before undertaking these procedures seek the assistance of the I.F.R.B., particularly in seeking the agreement of another Administration.

3.5.3 If, after application of the procedure specified in this Article, no agreement has been reached between the Administrations concerned, recourse may be had only with the agreement of the parties concerned to the procedure laid down in Article 50 of the Convention. / In any case the pertinent provisions of Article 9 of the Radio Regulations apply when the assignments are notified. /

4. Cancellation of assignments

When an assignment in accordance with the Agreement is released, whether or not as a result of a modification (for instance a change of frequency), the Administration concerned shall immediately so inform the I.F.R.B. The I.F.R.B. shall publish this information in a special section of its weekly circular.

Annex / A /

Tolerances relating to changes in transmitter sites

Tolerances relating to changes in transmitter sites are as follows :

1. Cases where sea gain does not apply

The tolerable re-siting distance is shown in column Δd_t of the following tables (as a function of distance d between the interfering transmitter and the transmitter suffering interference).

2. Cases where sea gain applies

2.1 For a change in site which does not result in the transmitter being moved to a point less than 100 km for MF and 200 km for LF from the sea in the direction of the transmitters suffering interference, the tolerable re-siting distance is shown in column Δd_t of the following tables (as a function of distance d between the interfering transmitter and the transmitter suffering interference).

2.2 For a change in site which results in the transmitter being moved to a point less than 100 km for MF and 200 km for LF from the sea, or, where the transmitter is already within these distances from the sea, in the direction of a transmitter suffering interference, the tolerable re-siting distance is given in columns Δd_m of the following tables (as a function of distance d between the interfering transmitters and the transmitter suffering interference).

MF

Δd_t (km)	Δd_m (km)	d (km) same channel	d (km) adjacent channel
50	2	> 1000	> 700
25	2	500-1000	200-700
5	2	< 500	< 200

LF

Δd_t (km)	Δd_m (km)	d (km) same channel	d (km) adjacent channel
50	25	> 1000	> 400
10	10	\leq 1000	\leq 400

A N N E X 2

ARTICLE

NOTIFICATION OF FREQUENCY ASSIGNMENTS

1. Whenever an Administration intends to put into use an assignment in conformity with the Agreement, it shall notify this assignment to the I.F.R.B. in accordance with the provisions of Article 9 of the Radio Regulations. Any such assignment recorded in the Master International Frequency Register as a result of the application of the provisions of Article 9 of the Radio Regulations, shall, in addition to a date in Column 2a or Column 2b, bear a special symbol in the Remarks Column.
2. Insofar as the relations between Contracting Administrations are concerned, all frequency assignments put into use in conformity with the Agreement and recorded in the Master International Frequency Register, shall be considered as having the same status, irrespective of the dates entered in Column 2a or Column 2b for such assignments.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 138-E

7 November 1975

Original : English

COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4/LPC TO COMMITTEE 4

1. Following the decisions of Committee 4, Working Group 4/LPC has organized the necessary coordination work.
2. The Working Group decided to propose that a draft resolution be adopted relating to stations in the LPCs, which were required and for which agreement could be reached before the date of entry into force of the Agreement, applying the simplified planning methods for LPCs. A draft Resolution is presented in the Annex.
3. Unfortunately, the Working Group had no opportunity to discuss this Report and the annexed draft. Committee 4 is therefore kindly requested to give delegations the opportunity to submit the comments they deem necessary at the committee level.

K. OLMS
Chairman of Working Group 4/LPC

Annex : 1



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A N N E X

RESOLUTION

on stations in the low power channels (LPCs)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- that the stations in the LPCs are planned in accordance with agreed methods of planning;
- that modifications or additions to the stations in the LPCs after the ... [date of entry into force] have to be coordinated if necessary in accordance with the procedure for modification of the Plan (see Article paragraph 3.3 of the Agreement);

considering

- that it was not possible during the course of the Conference to reach agreement on all requirements for LPCs;
- that agreement for all required stations on LPCs might be reached before ... [date of entry into force];

resolves

- that for stations in LPCs, which were required, but for which agreement could not be reached before the end of the Conference, agreement could be reached before ... [date of entry into force], applying the simplified planning methods for LPCs;

instructs the I.F.R.B.

- to publish, in due course, a revised list of stations in the LPCs which will have been coordinated before the ... [date of entry into force];
 - to render (upon request) the necessary assistance to administrations considered.
-

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 139-E

7 November 1975

Original : English

COMMITTEE 4

SUMMARY RECORD

OF THE

FOURTH MEETING OF COMMITTEE 4

(PLANNING)

Tuesday 21, Wednesday 22 and Thursday 23 October 1975

Chairman : Mr. V. ŽAGAR (Yugoslavia)

Subjects discussed :

Document No.

1. Coordination with countries not present at the Conference

-

2. Questions related to the work of the Planning Groups

39, 42, 60, 62,
63, 73, DT/5,
DT/21, DT/22,
DT/23, 65

3. General discussion on basic questions of planning

43, 52, 31, 55,
57, 59, 66, 67,
70, 74, 78, DT/25



1. Coordination with countries not present at the Conference

The Chairman announced that the item was scheduled for discussion by the Steering Committee at its next meeting later that day. Accordingly, Committee 4 might defer its consideration.

The delegate of Japan stressed the urgency of the problems arising from the fact that some countries Members of the I.T.U. had not yet sent delegations to the Conference, while some others had neither sent delegations nor submitted their frequency requirements. He proposed that the Committee should unanimously appeal to the countries concerned to attend or to submit their requirements as soon as possible, and in any case not later than by the end of the fourth week of the Conference.

The delegates of Turkey, Sweden, the U.S.S.R., Pakistan, Yugoslavia, Indonesia, Iran, India, Australia, Afghanistan, Poland, and the Netherlands supported that proposal.

The delegate of France, supported by the delegates of Italy and Spain, also endorsed the proposal but suggested that the matter should be left in the hands of the Steering Committee.

The delegate of Mauritania, while supporting the Japanese delegate's proposal, remarked that those countries which had not yet sent delegations to the Conference were presumably unable to do so; the question of coordination with those countries would therefore have to be solved in their absence.

The delegate of the United Kingdom agreed with the previous speaker as well as with those who had expressed themselves in favour of leaving the matter to the Steering Committee.

The Chairman, noting that the Japanese delegate's proposal had received general support, requested the delegate of Japan to submit the proposal in writing and suggested that the Committee should request the Steering Committee to give the matter urgent attention at its next meeting.

It was so agreed.

2. Questions related to the work of the Planning Groups (Documents Nos. 39, 42, 60, 62, 63, 73, DT/5, DT/21, DT/22, DT/23, 65)

The delegate of the U.S.S.R., presenting Document No. 39, said that his delegation had already held preliminary discussions with ten of the countries listed in the Annex to the document, as well as with a number of others. He congratulated the Chairman on his efforts to ensure efficient organization of the Committee's Working Groups and expressed optimism concerning the final outcome of the negotiations.

The delegate of India, presenting Document No. 42, said that his delegation had established contacts with four or five of the countries listed in the Annex to the document. Like the previous speaker, he appreciated the Chairman's efforts to promote the work of the various Working Groups and was optimistic about the prospects of an amicable solution being reached shortly.

The delegate of Australia, presenting Document No. 60, drew attention to the form appearing in the Appendix on page 4 of the document. While sharing the previous speakers' optimism about the prospects of a satisfactory solution of interference problems, he appealed to countries in his region to assist his delegation's efforts in that direction by refraining from making unilateral moves.

The delegate of Yugoslavia presented Document No. 62, which was self-explanatory.

The delegate of France said that Document No. 63 required no comment.

The delegate of Cameroon, presenting Document No. 73 said that his delegation had already commenced negotiations which would, he was confident, yield positive results. Although South Africa was among the countries listed in the Annex to the document, there was no question of his delegation's wishing to conduct any discussion whatsoever with that country. He wondered whether the problem of South Africa's interference on the 1 152 kHz frequency, which belonged to Cameroon, could be dealt with by the I.F.R.B.

The Chairman of the I.F.R.B. said that the I.F.R.B. was unable to intervene in such a case. In his view, the matter should be considered under the item entitled "Coordination with countries not present at the Conference".

The delegate of Cameroon agreed.

The Chairman suggested that, with their sponsors' consent, the Committee might also take note of Documents Nos. 45, 48 and 54 which were similar to the documents just disposed of but were not specifically listed in the Agenda of the present meeting.

It was so agreed.

The Director of the C.C.I.R., introducing Document No. DT/5, explained that the theoretical antenna diagrams shown in the document were merely examples. A computer programme was available for applying the method described. He would be glad to give further information on any question of detail.

The delegate of Australia said that the C.C.I.R. should be commended for its contribution.

The Chairman recommended the use of the technical possibility described in Document No. DT/5.

The Chairman introduced Document No. DT/21, with particular emphasis on the problems to which it referred. The Planning Groups were awaiting the Committee's guidance on how to produce a good MF Plan.

The delegate of Italy said that point 2 of Document No. DT/21 was of fundamental importance for the work of the Conference. Too much had been left to bilateral contact, which was unlikely to result in agreement. The question should be studied in detail under Agenda Item 2 with a view to making suggestions to Administrations.

The delegate of Bulgaria said that the fact that certain delegations had increased the power of their transmitters, as mentioned in point 3 of Document No. DT/21, had made the work of the Conference more difficult. The attention of the Steering Committee should be drawn to the difficulties as a matter of urgency, taking into account Documents Nos. 56, 61 and 76.

The Chairman drew the Committee's attention to the first sentence of point 4 of the document under consideration.

The delegate of Sweden said that the opinion that every new step in the planning should lead to a decrease in interference levels was valid. The idea that the results already achieved should be protected, as stated in the second part of the sentence, however, might mean that if a low level had been achieved on one channel while the level on another was high, any attempt to move a station from the higher to the lower channel would be denied even though the interference level on the worst channel might thereby be lowered. Such a move should, in his view, be permitted.

The Chairman said that the intention was that delegations should negotiate rather than take their own steps without the knowledge of other delegations concerned. The difficulty was probably a question of drafting rather than of substance.

The delegate of Finland, supporting the Swedish delegate's comments, said that the Committee should hold a basic discussion before considering the question of protection of results already achieved.

The delegate of the Netherlands, supporting the remarks of the delegate of Finland, said that there were two important principles : the first was that set forth in the first part of the first sentence of point 4 and the second was the basic principle of equality of all countries, which had not yet been achieved.

The delegate of Malaysia said that it would be useful to have a common basis in all the Working Groups for deciding on the worst cases. The data given in the Annex to the document differed from group to group.

The Chairman said that the Working Groups should work in accordance with the terms of reference of the Planning Groups. The analysis in the Annex had been provided for information purposes only.

The delegate of Spain supported the views expressed by the delegates of Sweden, Finland and Netherlands. In the present circumstances it would be dangerous to apply all the ideas in point 4. In its calculations based on some of the changes made during the past week his delegation had found that the usable field strength was reduced, for example, from 105 to 102 and from 97 to 95. It was impossible to achieve useful results in that manner. The question of the application of point 4 could more usefully be discussed after Agenda Item 2 had been dealt with.

The delegate of Pakistan said that the point made by the delegates of Sweden, the Netherlands and Spain was felt particularly acutely by his delegation, which had found that the usable field strength was reduced regardless of the channel used. Despite honest efforts during the past week to shift the frequencies with a view to improving the situation it had been found necessary to revert to the original frequencies. Point 4 of Document No. DT/21 could not be applied until the requirements had been rationalized.

The delegate of Roumania said that most Roumanian stations had suffered increased interference of between 3 and 10 dB since the beginning of the Conference. Discussion of Document No. DT/21 should be deferred until the Steering Committee had met.

The delegate of Mauritania said that his delegation could not support the principle of protection in point 4 if it meant the application of the rule of "first come first served". He shared the Italian delegate's anxiety. Nothing had been done to apply the provisions of the relevant resolution of the First Session of the Conference. Consideration should be given as a matter of priority to the means of planning increased power and new requirements.

The Chairman, agreeing with the Mauritanian delegate's observations, said that the intention of point 4 was to bring to the Committee's attention the need for giving general guidelines to the Coordination and Planning Groups.

The delegate of Denmark, speaking as Convenor of Planning Group 8, said that a further problem for discussion under Agenda Item 2 would be that of the balance between the Plan and the interests of individual countries. General guidelines on the subject from the Committee would assist the Planning Groups in their work.

Referring to the Malaysian delegate's comments on the differing ways in which the statistics had been presented, he said that it had been useful to compare them with a view to choosing the best among them. Experience had shown that Group 8 would do well in future to follow the procedure used by Group 2.

In reply to a point made by the Chairman, the delegate of Italy said that the Committee should not merely take note of the opinions expressed but should provide a structure on which a definite plan could be based. The Planning Groups should be organized so that they could each produce a plan for the groups of channels allotted to them and should be given the necessary guidance. The procedure applied in the case of the African Plan, which had given good results, should be followed. Each Convenor should be assisted by three persons from three other regions and by the I.F.R.B. Secretary in studying the situation in the relevant groups of channels and discussing the problem with the Administrations concerned.

The delegate of Sweden, supported by the delegates of Spain and Switzerland, said that the most important problem for discussion, at least for the European broadcasting area, was the reduction of requirements. Before deciding on planning structure, a discussion should be held on the basic questions of planning. He accordingly suggested that the Italian proposal should be deferred until Agenda Item 2 had been dealt with.

The delegate of Pakistan, agreeing with the Swedish delegate's proposal, said that any plan adopted had to be an improvement on the existing situation. It was necessary as a first step to bring law and order into existing usage. An effort should then be made to distribute any remaining gaps equitably according to the principle of equal rights adopted at the First Session of the Conference.

The delegate of Libya supported the Italian delegate's proposal but agreed with the Swedish delegate's suggestion that discussion on it should be deferred.

The delegate of Italy accepted that suggestion.

The Chairman, introducing Document No. DT/22, said that it was not intended that there should be a detailed discussion on it.

After a short discussion in which the delegates of Italy, the Netherlands, Roumania and Sweden took part, the Chairman suggested that the "Comments" column of the document should be deleted.

It was so agreed.

The Chairman of the I.F.R.B., introducing Document No. DT/23, said that it was intended simply to inform delegates of the procedure discussed in the Coordination Group, and was self-explanatory. He would be glad to provide further information if so requested.

The Chairman of Working Group 4/11, introducing Document No. 65, said that the word "of" after the words "the French transmitter" in the third paragraph should be replaced by the word "in". The documents referred to in the fourth paragraph (Documents Nos. 43 and 52) would be useful to delegations participating in the Working Group in drawing attention to the need to use the procedure of Article 9 of the Radio Regulations when bringing broadcasting stations into service in shared bands. The Group had been unable to consider the requirements of out-of-band broadcasting stations in Region 3 because of nonconformity with the table of frequency assignments in those Regulations.

The delegate of China said that his delegation deplored the statement that the Group had been unable to consider the out-of-band broadcasting stations in Region 3. China had made repeated reservations on the provisions for allocation and utilization of radio frequencies in the International Telecommunication Convention and Administrative Regulations. China had a right to use the long waveband assigned to it. It was willing, through friendly consultation on the basis of equality and mutual benefit, to do everything technically possible to solve the problem of interference caused by its long-wave broadcasting service.

In reply to the Chairman of Working Group 4/11 who asked for instructions on the procedure to be followed with regard to out-of-band allocations, the Chairman said that discussion might be postponed if the Committee was not ready to examine the point at present.

The delegate of Italy suggested that the matter be put to the Steering Committee on the understanding that that Committee would resubmit the matter either to Committee 4 or to the Plenary.

The suggestion was supported by the delegates of the Federal Republic of Germany and Spain.

It was so agreed.

3. General discussion on basic questions of planning Documents Nos. 43, 52, 31, 35, 57, 59, 66, 67, 70, 74 and DT/25)

The delegate of the Federal Republic of Germany, supported by the delegates of India and Greece, suggested the inclusion of Document No. 61 and the delegate of the U.S.S.R., supported by the delegates of Poland and the Netherlands, suggested that Documents Nos. 56 and 76 also should be considered.

The delegate of Mauritania, supported by the delegate of the United Kingdom, felt it wise to abide by the original agenda in view of the large number of documents already before the Committee.

The delegate of the Federal Republic of Germany said he would not press for immediate discussion of Document No. 61 provided such discussion took place before the final date for the next computer output.

The Chairman proposed that the Committee defer consideration of Documents Nos. 56, 61 and 76 pending the next meeting of the Steering Committee, on the understanding that they would be taken up as soon as possible.

It was so agreed.

The Chairman invited delegations to introduce their respective documents and said he would open general discussion on them after they had all been presented.

The delegate of India presented Document No. 43, urging the Conference to prepare a frequency plan in such a way as to avoid harmful interference to other radio services.

The delegate of Pakistan presented Document No. 52. He particularly wished to clear up any misunderstanding to the effect that Pakistan was opposed to broadcasting in the LF band in Region 3. His concern was that indiscriminate escalation of power such as had taken place in Region 1 was likely to endanger other services in Region 3.

Those views were supported by the delegates of Japan and of Korea who expressed concern in view of the large number of radiobeacon, radiolocation and related service stations.

The Chairman of the I.F.R.B., referring to the action by the I.F.R.B. mentioned in the third paragraph of the Pakistan document, said that Document No. DT/9 (which reproduced a document submitted by the I.F.R.B. to the First Session) set out the situation of frequency bands in Regions 1 and 3 and cited No. 117 of the Radio Regulations concerning equality of right to operate. A favourable finding was thus only recorded after examination of the effects on all other stations of other services. To assist the Conference in that respect, the I.F.R.B. had calculated the interference which would be caused by the frequencies requested and the result was available to all delegations in the office of the Technical Secretary. The calculations were based on the frequencies included at present in the Master Register and met the request contained in the last paragraph of Document No. 52.

At the Chairman's suggestion, it was agreed to assign the two documents above to Planning Group 4/11.

The delegate of Tunisia drew attention to Chapter 8, paragraph 8.4, of the Report of the First Session which recommended the avoidance of allocations which provided for sharing between the broadcasting service and other services.

The Chairman assured him that the recommendation would be taken into account.

The meeting was suspended at 1240 hours and resumed at 1500 hours.

The delegate of Nigeria presented Document No. 31, pointing out that at the end of the first proposal on page 2, the words "or by 7 km whichever is greater" should be deleted.

The First Session had decided that existing services should be accommodated in the nearest new frequencies; his Administration was now proposing that some degree of tolerance should be admitted in order to accommodate new services, particularly those of countries just beginning to develop their MF broadcasting facilities. The document also repeated the Nigerian proposal at the First Session that power should be limited to about 250 kW, varying slightly from zone to zone. Some Administrations had taken advantage of the decision to transfer existing services first and had increased the power of their transmitters (sometimes by as much as 20 dB); if some limits were not fixed it would be well-nigh impossible to improve on the present unsatisfactory situation.

The delegate of Mauritania, introducing Document No. 35, said that his Administration was not in a position to join the race to congest the frequency spectrum but wanted a clause included in the Plan to preserve the rights of developing countries not able at present to provide adequate coverage. He asked all Administrations to be a little more tolerant and admit reduction of interference to a minimum on a reciprocal basis. He explained that no precise figures for field strength had been quoted in the document (third paragraph, page 2) because they would differ according to the transmitter powers involved and it would not be fair to fix a standard value. At the end of the paragraph in question he wished to add "Coordination on the basis of this principle is obligatory only with the Administration whose transmissions are the most affected by the change". He added that the principle he was defending applied not only to Mauritania but to a whole zone with a similar economy.

The delegate of Italy reviewed Document No. 59. While the calculations were approximate and did not take account of submissions received after 15 May 1975 he thought the document could be used as a guide for discussions between Administrations in their attempts to reduce the number and power of requests.

The delegate of Pakistan, introducing Document No. 66, said that the proposal to decide on a validity period for the Plan had been introduced because of the widely varying and sometimes unrealistic periods for which countries' requirements were projected. Pakistan had suggested a ten-year period in view of the speed of technical developments, but was prepared to consider any other reasonable figure acceptable to all.

The delegate of Spain, introducing Document No. 67, said that the procedure proposed by his delegation constituted an attempt to ensure that every country could make its primary coverage requirements known and, after the necessary coordination by the I.F.R.B. with the results of the First Session, could indicate their additional requirements in the light of the usable field strength values obtained. That seemed to be an equitable basis for proceeding with the work and might result in a reduction of requirements.

The delegate of Tunisia, introducing Document No. 70, said his delegation was convinced that the adoption of the planning principles approved at the Conference of Non-Aligned Countries in Lima in August 1975 would help the Conference to draw up a Plan which would be satisfactory to all countries.

The delegate of Zambia, introducing Document No. 74, said that, in the absence of clearly defined planning procedures, his delegation had proposed the application of the agreement in the African Plan on maximum power limitations. It had also noted the wide response in the Planning Groups to the suggested use of LP channels as a means of broadcasting. The limitation figure in point 1 on page 3 of the document should be 5 dB, not 15 dB.

The Chairman of the I.F.R.B., introducing Document No. DT/25, said that that paper contained all the information requested in Document No. 36. After the table in the annex had been drawn up, it had been realised that no distinction had been made in cases where day operation had different characteristics from night operation; that might have led to some errors in the entries for certain countries.

The delegates of Thailand, Nigeria, Lesotho, Cameroon and Kenya indicated some changes which should appear in the entries against their countries.

The delegates of Spain and Pakistan said they considered that the large number of blanks in column 6 should be avoided, by expressing the power density in W/km^2 and fractions thereof.

The delegate of Sweden suggested some changes in the titles of the columns.

After some discussion, the Chairman of the I.F.R.B. said that the consensus seemed to be to leave columns 1, 2A, 2B, 3A, 3B, 5 and 7 unchanged, but to add a new column 2C entitled "Total power of requirements relating to assignments already in use", to change column 4 to "Sum of columns 2C and 3A" and to make the power density in column 6 the ratio between columns 4 and 5 expressed in W/km^2 . Separate figures would be given where a distinction between day and night operation was indicated.

The I.F.R.B. would issue a new document along those lines, but it should be noted that some of the changes suggested during the debate could not be made unless they were formally entered in box 20 of the requirement form.

The Chairman invited the Committee to hold a general discussion on the issues raised in the documents introduced earlier, with a view to reaching conclusions that would enable effective planning work to be started as soon as possible.

The delegate of Switzerland observed that the planning situation had not improved significantly since the beginning of the session; for physical reasons, a large number of requirements could not be placed in their proper frequency bands. It would not be possible to work out a Plan that was acceptable to all concerned unless requirements were substantially reduced. Regional groups, starting with one covering the European Broadcasting Area, should undertake that task forthwith. His Administration, which had calculated its frequency requirements with great care, taking into account linguistic considerations, did not have much leeway for reductions; however, in accordance with Section 9.2.2, paragraph e), of the Report of the First Session, it would be prepared to consider making certain reductions in night coverage by existing high-power stations, and it trusted that similar efforts would be made by other countries.

The delegate of Yugoslavia said that the question of power limitation and reduction of requirements were interdependent and should be considered together. His Administration had been forced, against its will, to deviate from the Copenhagen Plan by increasing power and seeking new outlets because action taken by some other countries had made its stations inaudible inside its own national frontiers. It would be only too glad to achieve complete national coverage with lower powers and fewer frequencies, if that were possible. For the purposes of the present Conference, it had limited its requirements largely to the MF band, thus alleviating the situation in the LF band. It would, however, be prepared to reduce its requirements even further on condition that other countries did likewise. In the prevailing atmosphere of goodwill and cooperation, it should be possible for the Conference to work out a Plan

that was acceptable to all, on the basis of the planning methods adopted at the First Session, the need to give each country the best possible coverage in the light of its specific situation, and the principle of furthering the advancement of the developing countries.

The delegate of Cameroon said the time had come to take an energetic decision that would enable work in the planning groups to proceed effectively, taking into account the basic consideration that priority should be given to stations already in service and to assignments contained in the earlier Plan. In his view, coverage of national territory should form the basis of the new Plan, since international programmes should be broadcast on the short wave band. His Administration did not oppose the idea of limiting power, on condition that such limitation was equitable and took into account the area of the various territories concerned.

The delegate of Sweden supported the views expressed by the delegate of Switzerland and said that Document No. 59 submitted by the Italian Administration demonstrated clearly the necessity to reduce requirements, at least in the European Broadcasting Area, even though the basis taken by that Administration for its calculations was open to some criticism on points of detail. Under certain conditions, and provided other countries - including those facing the sea - made similar efforts, his Administration was prepared to reduce its requirements.

The delegate of France said that the points raised by the delegate of Cameroon deserved consideration. In her view, however, the first tasks to be undertaken were those of harmonizing requests, determining whether they were well distributed over all parts of the band, and standardizing methods of calculation in order to make comparison possible. Regional groups of the type suggested by the delegate of Switzerland would be best qualified to tackle the first of those tasks, with a view to facilitating subsequent planning work.

The delegate of Pakistan supported the views expressed by the delegate of Cameroon. However, he did not consider that the problem could be solved merely by setting a limit on the maximum power of individual transmitters. What was needed was limitation of total or aggregate power; the concept of power density could be used as one of the criteria for determining maximum total power from the standpoint of single coverage of an area. The information in column 6 of Document No. DT/25 would be helpful in that connection once it had been converted into W/km^2 . He drew attention to the proposal he had made earlier in the meeting that planning should be divided into two main stages : first, law and order should be brought into existing usage in order to improve the present situation; then, any remaining gaps should be distributed equitably in accordance with the principle of equal rights for all countries and having particular regard to the needs of the developing countries.

The delegate of Italy, replying to the comments by the Swedish delegate, observed that the calculations in Document No. 59 were based on physical realities and quoted two examples which illustrated the need to take the presence of the sea into account. His delegation shared the concern expressed by the delegates of Switzerland and Yugoslavia, associated itself with their statements, and favoured the establishment of three regional groups (Europe, Africa, Asia and Australasia).

The delegate of Belgium said that the most effective way of achieving reduction of requirements would be for the planning groups to restrict themselves first to what was already in existence; thus, nobody would be forced to accept a Plan that was less satisfactory than the existing one. That approach would also have the advantage of enabling a certain number of reductions to be achieved easily and immediately.

The meeting was suspended at 1740 hours on Tuesday, 21 October 1975, and resumed at 1040 hours on Wednesday, 22 October 1975.

The Chairman of the Conference, speaking as Chairman of the Steering Committee, said that that Committee had considered four issues : first, the question raised in Document No. 65 concerning low-frequency transmitters in Region 3; secondly, the question raised by the Japanese delegation concerning the countries which were not represented at the Conference or which had not submitted requirements; thirdly, the matters dealt with in Documents Nos. 56, 61 and 76 concerning requirements additional to those published by the I.F.R.B. up to and including Circular-letter No. 337 of 17 September 1975; and, lastly, the question of the possible need for Saturday morning work.

A number of possible solutions had been suggested in connection with the first question, of which the Chairman of Committee 4 had been advised. On the second question, the Steering Committee had decided that its Chairman should send telegrams to the countries in question urging them to attend the Conference or to submit their requirements, or preferably both. Document No. 79 reinforced the discussion held in Committee 4 and the decision of the Steering Committee.

The Steering Committee had held a useful discussion on the third question and he was confident that Committee 4 would find a satisfactory solution.

With regard to the last question, it had become apparent that the Conference had begun to fall behind its schedule and that consideration should be given to the need for Saturday work. The Steering Committee would review the matter at its meeting the following evening.

At the outset of its work, the Conference had had before it some 10,000 requirements to fit into 120 channels. After 2½ weeks' work the situation remained substantially unchanged. There were two possibilities : to end either with a long list of frequency assignments or with a plan. The latter was the obvious objective but some urgent action would have to be taken if it was to be achieved. Only Committee 4 could take the necessary action to rationalize the thoughts on the subject and to effect the necessary compromise for a substantial reduction in the number and power of requirements. He had therefore suggested that that Committee should go on meeting until the problem had been solved.

The Chairman invited the Committee to discuss such urgent matters as the reduction of assignments and power, the principle involved, ways and means of taking the necessary action and related matters.

The delegate of the Federal Republic of Germany said that there appeared to be general agreement on the fact that no successful correlation of frequency requirements could be achieved unless they were noticeably reduced both in power and number, at least during night-time. The extent to which such action was necessary might vary from one area to another, but it was certainly needed urgently in the European broadcasting area. His delegation was prepared to take any necessary steps provided other countries in the area would do likewise. It would suggest as a first step that all assignments in operation in the European broadcasting area on 1 May 1975 should be taken into account. His proposal by no means precluded developing countries from taking account of stations not yet in operation.

The delegate of India made the statement which is reproduced in Annex 1.

The delegate of Egypt said that his delegation supported the proposal made the previous day by the Pakistan delegate. The most reasonable approach to a possible plan was to divide the work into two phases : the first to consider the existing situation and try to work out a plan to alleviate existing interference, particularly in the European zone; and the second, to fill any gaps on the basis of equality, with special consideration for the needs of developing countries. Such an approach could best be followed by regional groups, assisted by the I.F.R.B. His Administration had no objection to limitation provided it was applied to all countries equally.

Taking into consideration the rapid progress in communication techniques and the introduction of new broadcasting systems with the aim of improved utilization of the frequency spectrum, a 15-year period of validity for the plan might be considered.

Bearing in mind the characteristics of the majority of radio receivers, limitation of bandwidth might help to reduce interference by some 7 or 8 dBs.

The delegate of Sudan said that it was generally recognized that requirements, as well as power, had to be reduced if interference were to be eliminated. He supported the Italian proposal in Document No. 59. It was essential for the Conference to work on the basis of a plan if successful results were to be achieved.

The delegate of Tunisia, referring to the Annex to Document No. 70, said that the word "aggressor" in paragraph 3) should be replaced by the word "occupying".

The delegate of Libya said that his delegation shared the view that a reduction in requirements and power was needed. The Conference, which had so far failed to make any progress, should consider the true requirements of each country on the basis of the technical criteria adopted at its First Session and of Documents Nos. 59, 66 and DT/25. He supported the proposals made by the delegates of Pakistan and Italy.

Libya depended heavily on the educational and social programmes of its broadcasting services. It would nevertheless agree to reduce its requirements and power if all other countries were prepared to do likewise.

The delegate of Spain said that the question of the power and number of requirements should be the chief concern of the Conference. There was a large measure of agreement on the fact that, although the problem was a general one, its characteristics differed from region to region and that regional groups should be established to deal with it. His delegation supported that view. To retain the existing situation in a given region would be inequitable and would fail to produce useful results. His delegation had put forward a possible solution in Document No. 67.

The delegate of Iceland said that his Administration shared the concern of other delegations at the lack of progress made so far in the Planning Groups. His delegation could support either the Italian or the Spanish proposal but would prefer the idea of different classes of transmitters, a number of which would be assigned to each country according to area.

The suggestion that existing assignments should form the basis of further planning appeared to imply the rejection of the conclusions of the First Session of the Conference and the later decisions by the Plenary to uphold the principle of equality, and was unacceptable to his delegation.

With regard to the previous day's discussion on the area to be taken into consideration, that area should be the total area under the jurisdiction of the Government in question, whether land or sea. Information which the Conference might require on the subject for its planning work should be supplied by the Administrations concerned.

The delegate of New Zealand said it was apparent that before the Conference could proceed with its planning work the requirements submitted had to be reduced in number and power. His country's problem differed from that experienced in Europe or Africa but it had some occasion for concern in the Asian Pacific region. His delegation strongly supported the proposal for the establishment of regional groups, which might be divided into sub-groups. It could not agree that the work should proceed with the existing situation as a starting point.

The delegate of Italy agreed that real planning work - based on the principles determined at the First Session - could only be done in working groups and a working structure which did not recognize that problems and situations varied from region to region would run into difficulties. For practical reasons, therefore, he was in favour of a division into three regional groups. He pointed out that adoption of uniform channel spacing at the First Session had led to a reduction in inter-regional interference and should facilitate work on a regional basis.

He referred to Document No. 78 submitted by the delegation of Iran which proposed the creation of three such regional groups and recommended that a coordination group be appointed for each region. All Administrations in a given region should present a list of incompatibilities and the coordination group could study them and formulate proposals for discussions with the Administrations concerned.

The delegate of Iran appreciated the Italian delegate's support for his proposal which aimed at analysing the problems within a region and coordinating studies and proposals; in that way the work of the Planning Committee should be able to make headway.

The delegate of Pakistan said that it was a fact that countries had the sovereign right to submit any number of requirements but the exercise of rights without any restrictions could only result in anarchy. He found the optimistic picture given by the delegate of India impossible to accept. Usable field strengths of 82 - 85 dB had been quoted but the correct figure was 10 dB higher and there were threats of operating transmitters with a usable field strength as high as 104 dB.

The proposal for regional groups was not new; the idea had been given up earlier due to the difficulties of inter-regional coordination. In fact the discussions and coordination already carried out were quite naturally regional in nature. He feared that the regional groups might work just as unprofitably as the planning groups unless the practical aspects were dealt with immediately.

The delegate of Mauritania congratulated the delegation of Switzerland for having taken a first step in the right direction and the delegations of Yugoslavia, Sweden and others which had taken similar measures. He supported the German proposal, which was in line with that put forward by Pakistan. It was understood that differences in channel spacing caused enormous problems in Europe and between Europe and Asia and that the number of transmitters and their powers had increased considerably since the Copenhagen Plan; planning of channel spacing and those increases would already be a positive achievement as far as Europe was concerned. He himself took the existing situation as including present requirements, including those submitted by small Administrations with inadequate coverage. He thought regional groups should be set up but that there were four essential phases; firstly, exclusive consideration of the existing situation, secondly limitation of power for new requirements, thirdly, the formation of regional groups and lastly, indications given to those groups on the admissible volume of new requirements; in the above phases, due account would be taken of the different needs of each region. He concluded by saying that he could not agree to the principle of unity of coverage as it could not be applied to a country like his own which had multiple language requirements.

The delegate of Bulgaria had no objection to the setting up of the groups proposed, though he stressed that it was not merely a matter of studying problems but of finding solutions. He referred to a point raised the previous day concerning Document Nos. 56, 61 and 76 which had been passed back to Committee 4 by the Steering Committee. He thought Committee 4 should now deal with additional requirements and fix a deadline for their submission; he suggested that consideration should only be given to those requirements sent in by 1 May, with the exception of those countries which were not represented at the Conference and had not yet submitted any requirements at all. That would represent a move towards restricting the number of additional transmitters and frequencies which certain delegations had requested in a desire to protect their own interests.

The Chairman said that the three documents mentioned would be dealt with at a later stage; the problem was not only that of additional requirements but of the 10,000 or more requirements which had been submitted before the deadline.

The delegate of Papua New Guinea said that, as a new nation, Papua New Guinea had its own problems but if a solution were to be reached there would have to be extensive cooperation; he favoured the creation of regional groups, or even sub-groups if required, and hoped to make an effective contribution.

The delegate of Albania said that his delegation had come to the Conference with the intention of doing its best to ensure that every country was provided with adequate planning facilities so that its broadcasting programmes were spared interference from other transmitters. He was concerned, therefore, that no results had yet been achieved. Many delegations had departed from the principles decided at the First Session by asking for incompatible assignments and by insisting on them. He wondered whether the Planning Committee could state whether requirements were acceptable or not, and thus work with concrete data corresponding to the real needs of countries. He referred also to Document No. DL/13 which was incorrect because it made no mention of Albania, whose transmitters were subjected to worse interference than many of those listed. He also expressed concern about the working methods of the planning groups; many delegations were concerned only to know another's plans and in those circumstances it was impossible to give exact replies and settle problems. He recommended strongly that the Chairman of Committee 4 - on the basis of the decisions taken at the First Session - turn to practical proposals and state what the real requirements were, and which ones were justified.

The Chairman explained that he had permitted the convener of Planning Group 4/5 to publish Document No. DL/13 but it was only a restricted document for the internal needs of the group; it was not an official Conference document. He appreciated the delegate of Albania's general remarks and agreed on the necessity to avoid errors and misunderstandings. The remarks would be noted and he would consult the convener of Planning Group 4/5.

The meeting was suspended at 1230 hours and resumed at 1500 hours.

The delegate of Sweden said he was convinced that substantial reductions were essential, at least in the European broadcasting area, if a serviceable Plan was to be drawn up. Since the situations in the different areas varied, he supported the Iranian proposal, provided the regional groups concerned devoted their attention to the reduction of requirements, to enable the existing Planning Groups to proceed with their work. Moreover, the regional groups must work on an ad hoc, not a permanent, basis and, in his opinion, should not base reductions on the status quo, since that would be prejudicial to the position of the developing countries : the situation had changed greatly since the adoption of the Copenhagen Plan, and countries should be free to choose between a few large stations with good protection and many smaller ones with less protection.

With regard to specific measures, Sweden was prepared, on condition that other countries in principle did the same, to make some substantial reductions. It had originally asked for eight HP stations with sky-wave protection which, according to the calculations in the Italian paper

(Document No. 59), would mean a total of 26 channels on LF as against 15 available channels and 140 channels on MF as against 120 available channels, giving a requirement-to-reasonable assignment ratio of 1.75 on LF and 1.2 on MF. If four requirements were transferred from class 1 to class 2 - i.e., sky-wave protection was waived for four stations - the result would be 19 LF channels against 15 available and 86 MF channels against 120 available, with a required-to-reasonable ratio of 1.3 on LF and .7 on MF, or below par for the two bands together. Sweden was, however, prepared to go even further and to have one class 1 and one class 2 station on LF and two class 1 and two class 2 on MF, which would give the ratio of 1.3 on LF and .5 on MF. Even greater reductions could be contemplated if other countries agreed to act likewise; he therefore urged all participants, especially those of the European area, to save the Plan from a failure which would be directly ascribable to the exorbitant and unrealistic requirements of the highly developed countries of Region 1.

The delegate of the United Kingdom said that he could support the Iranian proposal only on condition that the regional groups confined their work to broad principles and did not concern themselves with the actual planning for which satisfactory machinery had been established and on which a considerable amount of useful work had already been done. The Committee should try to give those Planning Groups specific directives in the light of some of the proposals it had considered : for example, it had been suggested that the existing usage should be taken as a starting point - although that was said to be to the disadvantage of the developing countries; other suggestions were to limit power on MF, with different limitations for LF, and to try to make one clear channel available to each country. Opinions on those and other specific subjects should be expressed in Committee 4, with a view to giving the Planning Groups the clear directives they so badly needed.

The delegate of Malaysia supported the Iranian proposal and the suggestion that the Committee should lay down precise guidelines for the regional groups. He did not consider that the status quo should be taken as a basis for planning, since that would be detrimental to the developing countries.

The delegate of India expressed his support for the Iranian proposal, which coincided with the one he had made earlier in the meeting.

The delegate of Israel said that, with all good will, individual efforts would not suffice to break the vicious circle of interference, increased power and proliferation of frequencies to combat interference and consequently higher interference levels. The Conference needed the assistance of an experienced body which could, in the light of the spectrum resources and the total requirements, prepare a theoretical, tentative Plan, based on

programme coverage requirements rather than on specific powers, in which power levels would be generally reduced, frequencies not yet in use would be changed where necessary and practicable and coverage of all requirements would not be reduced in any way and might even be improved. From the engineering point of view, a Plan with a greatly reduced usable field strength would be feasible even before resorting to such devices as directional antennae, 20 dB backward protection, synchronized networks and modulation compression. Such a tentative Plan would serve as a good starting point for planning and negotiations, and the I.F.R.B. should be asked if it could undertake the task in the available time.

The delegate of Afghanistan delivered the statement appearing in Annex 2.

The delegate of Denmark, observing that he would confine his remarks to the European broadcasting area, said that he could endorse the statements of the Swiss and Swedish delegations, which alone had made specific promises to reduce their requirements. Denmark was prepared to go even further and to close down 40 % of its transmitters in actual service, which were all in conformity with the Copenhagen Plan or with agreed changes thereto. Such a measure was more realistic than a mere reduction of requirements, which would hardly improve the situation in the European area. On the other hand, his country would only take that step on condition that all the countries of the area agreed to restrictions on the same relative level. He could support the Iranian proposal, but considered that before the regional groups were set up the Committee must know whether all the countries of the European area were willing to make certain sacrifices; otherwise, all efforts would be in vain and the Conference would end with no plan at all.

The delegate of Australia, after reminding the Committee of the misgivings his delegation had expressed concerning the structure originally adopted for planning work, said that the Iranian proposal represented a good starting point for putting into practice the intention to cooperate and compromise that had been manifested during the debate. He would, however, go even further and suggest that each of the three regional groups should be divided into three sub-groups presided over by a delegate from the region concerned, and that the work of the sub-groups should again be subdivided into three blocks of channels. It had been recognized that slightly different criteria might be required for the three areas, but that coordination would of course be needed; accordingly, each sub-group should consist of a Chairman and a member from the region in question and of a member from each of the two other areas. Those 12 delegates working in three groups of four could set out criteria for their regions for submission to Committee 4.

The delegate of Burundi supported the Iranian proposal. In the African broadcasting area, the Geneva Plan could be used to settle any difficulties between African administrations, taking new requirements into account, while inter-regional interference could be taken care of by multilateral negotiations, with the help of the I.F.R.B.

The delegate of Roumania said that the failure of the Planning Groups to obtain results was due not to any shortcomings in their work, but to the inordinately large number of requirements. That difficulty would also confront the proposed regional groups, which should therefore be given the task of reducing requirements and powers. A good starting point would be to adopt the Pakistani proposal to set the period of validity of the Plan at ten years. Finally, he did not consider that requirements received after 13 October 1975 should be taken into account.

The delegate of Upper Volta said that he could support the Iranian proposal but could not understand the attitude of the delegations of developed countries which had stated that they could reduce their requirements only on condition that other countries did the same. He formally proposed that the power of all transmitters already in service should be reduced to 500 kW for the next ten years, to prevent the developed countries from causing interference to countries with lower power facilities.

The delegate of Algeria said that he had no objection to the establishment of regional groups, but that they must be given certain instructions. The first question to be put to them was whether they agreed to consider as a planning basis existing stations, together with stations regarded as being in service under the African Plan, and the principle of the special status of the requirements of the developing countries; the second question was whether, if the aforesaid principle was adopted, the regional groups agreed to instruct the Planning Groups to try to include new requirements, as set out in Documents Nos. DT/25 and 59, without causing the situation to deteriorate and taking into account the special requirements of the developing countries and the particular situations at the frontiers of Regions 1 and 3.

The delegate of the U.S.S.R. said that two proposals which formed a realistic basis for the work of the Conference and could help to reduce the number of requirements were that of his own delegation, the Federal Republic of Germany and Poland, to the effect that no requirements submitted after 1 May 1975 should be taken into account except for certain requirements of developing countries, and that of Pakistan to set a ten-year period for the validity of the Plan. With regard to the Iranian proposal, it had already been decided, on the basis of the experience of earlier conferences, to adopt the frequency principle rather than the regional one, which his delegation regarded as extremely dangerous.

The delegate of Turkey said that, in his opinion, the difficulty was not due to late submissions but to the number of exorbitant demands made. His Administration was willing to do more than its share to ensure the

success of the new Plan, but he was strongly against arbitrary measures such as the adoption of a cut-off date fixed at 1 May 1975. As for the setting up of regional groups, he had no objection provided countries situated at the interface of two regions were given due consideration.

The delegate of Bangladesh supported the Iranian proposal. Regional groups working under the supervision of, or in parallel with, Committee 4 would perhaps succeed in solving the problem, provided that the views of the I.F.R.B. were given overriding power. The existing situation, in his region at least, was not too unsatisfactory; it was after the new Plan went into force that a serious deterioration was likely to occur. In bringing requirements down to a reasonable level, the regional groups should, as the delegate of Algeria had suggested, give precedence to stations already in existence.

The delegate of the People's Republic of China supported the proposals contained in Document No. 78.

The delegate of Cameroon, supported by the delegate of Dahomey, suggested the establishment of a small Ad Hoc Group to work out, on the basis of the various statements made and of the Report of the First Session, a set of clear directives to be followed by the regional groups proposed by Iran or by the Planning Groups already in existence. The Ad Hoc Group might be composed of three delegations from Asia, three from Africa, two from Western Europe and two from Eastern Europe, and should be assisted by the I.F.R.B.

The delegate of Pakistan endorsed the views expressed by the delegates of the United Kingdom, Algeria and the U.S.S.R. to the effect that the proposed regional groups could not be expected to do useful work unless they were first given clear and precise directives.

The delegate of Jordan associated himself with the points made in Document No. 70 submitted by Tunisia and also reiterated the statement made by his delegation at the third Plenary Meeting to the effect that the Conference should refuse Israel's requirements of frequency assignments in the occupied Arab territories.

The delegate of Burundi urged the Committee to proceed immediately to the establishment of three regional groups as proposed in Document No. 78.

The delegate of Japan supported the proposal contained in Document No. 78.

The delegate of Poland associated himself with the views expressed by the delegate of the U.S.S.R. and drew attention to his delegation's position as stated in Document No. 76.

The delegate of Sweden moved the closure of the debate.

The delegate of Mauritania opposed the motion. He was not against the Iranian proposal but did not think that its adoption would serve any effective purpose unless the regional groups were clearly instructed what they were to do. Further discussion on fundamental issues was called for.

The delegates of the United Kingdom and of Cameroon opposed the motion on similar grounds.

The motion for the closure of the debate was rejected by 69 votes to 16, with two abstentions.

The delegate of Algeria, speaking in explanation of his vote, said that he had voted against the motion for the reasons given by the delegate of Mauritania.

The delegate of the United Kingdom said he had voted against the closure of the debate because the Iranian proposal, which was basically a good one, did not contain sufficiently clear instructions to the regional groups. He proposed that the groups should be given the following terms of reference : "to consider and make proposals for the reduction of overall requirements in their areas and report by 27 October to Committee 4". That proposal should be considered in conjunction with those by the Federal Republic of Germany concerning the legality of bids for frequencies (Document No. 61) as well as the comments and suggestions made during the course of the general discussion.

The delegate of the Federal Republic of Germany supported the United Kingdom proposal.

The delegate of Czechoslovakia said that the difficulties now being encountered did not originate in the structure and organization of the planning groups but in the number of requirements submitted and the fact that not all of them were consistent with the principles adopted the previous year, particularly those contained in Chapter 9 of the Report of the First Session. In his view, the following course of action should be adopted : first, the requirements submitted after 1 May 1975, with the exception of the well-founded ones submitted by developing countries, should be disregarded; second, requirements should be reviewed in the light of the Pakistani proposal concerning the validity period of the Plan (Document No. 66) and the planning principles adopted at the First Session, with particular reference to Document No. DT/5. It would then be possible for the Planning Groups to devote their attention to the elimination of discrepancies. To set up entirely new structures on a regional basis might slow down the work of the Conference. In any event, not three but four regional groups would be required and he supported the comments made by the U.S.S.R. delegate in that connection.

The delegate of Zaire said it was essential that the planning principles laid down in Chapter 9 of the Report of the First Session should be stringently applied. In order to facilitate the work of planning, he suggested that particular consideration should be given to Documents Nos. 59, 74, 78 and DT/25.

The delegate of Yugoslavia, referring to the criticisms formulated by the Federal Republic of Germany in paragraphs 1, 2 and 3 of Document No. 61, said that before the start of the current session his Administration had held bilateral negotiations with those countries with which it encountered serious problems. In some instances it had been possible to work out satisfactory solutions, but the negotiations with countries that had arbitrarily occupied frequencies assigned to Yugoslavia under the Copenhagen Plan had been unsuccessful. His Administration, which had long observed the provisions of the Plan most scrupulously, had recently been forced against its will to seek solutions outside those provisions. Consequently, his delegation could not accept the conclusion contained in the last sentence of Document No. 61, and considered that Document No. DT/25 gave a clear picture of the true state of affairs. To return to the situation of 1 May 1975 would, in certain cases, place the very countries that were advocating that course in a more favourable position than others. His delegation, which was ready to endorse any constructive proposal, was convinced that the real problem lay in the excessive requirements submitted before 1 May 1975 rather than in the new requirements submitted after that date. The Committee's main task was to draw up a methodology and criteria which would enable countries' different and specific needs to be met, and in that connection he supported the suggestions by the delegates of Dahomey and Mauritania.

The delegate of the German Democratic Republic welcomed the useful proposals by the U.S.S.R. Administration in Document No. 56. He shared the view that it would be dangerous to move from the frequency approach to a regional approach; rather, efforts should be concentrated on drawing up better guidelines for the existing planning groups.

The delegate of Indonesia supported the proposal by Iran. With regard to the terms of reference proposed by the United Kingdom delegate, he considered that the word "excessive" should be inserted before the word "requirements".

The delegate of Spain reaffirmed his support for the establishment of regional groups. He also supported the proposal by the United Kingdom delegate subject to the insertion, after the words "in their areas", of a phrase along the following lines: "taking into account the principles of equity". Documents Nos. 59, 67 and DT/25 were among those that should be referred to the regional groups.

The delegate of Cameroon stressed the need to draw up practical guidelines for the work of the planning groups. That was why his delegation had proposed the establishment of an ad hoc working group to study issues such as power limitation, reduction of requirements, the possibility of reducing existing services and the validity period of the plan, having due regard to the needs of the developing countries.

The delegate of Ireland supported the proposals by Iran and the United Kingdom.

The delegate of Pakistan supported the Iranian proposal. He proposed that an ad hoc group, composed of three representatives from each region, should be set up to work out terms of reference for the regional groups on the basis of all the comments made during the general discussion, including the proposal by the United Kingdom delegate.

The delegate of Sweden supported the United Kingdom proposal. With regard to the validity period of the plan, it would be extremely difficult to take any decision before the results of the planning work were known, since the period to be set would depend very much on the qualities and defects of the plan itself.

The delegate of Portugal supported the Iranian proposal.

The delegate of Egypt supported both the Iranian proposal and the United Kingdom proposal as amended by the delegates of Indonesia and Spain. He also supported Document No. 70 as amended by its author.

The delegate of Guinea associated himself with the views expressed by the delegates of Yugoslavia and Cameroon. His delegation agreed that regional groups should be established, but only after precise guidelines had been laid down for continuation of the planning work.

The delegate of Bulgaria recalled the statement he had made earlier in the meeting concerning Documents Nos. 56, 61 and 76, which raised certain questions of principle that were being somewhat neglected in the present discussion. His delegation would not oppose the establishment of regional groups if they would enable any real progress to be made. However, he agreed with the U.S.S.R. delegate that the first issue to be settled was that of the additional requirements submitted after 1 May 1975.

The delegate of Mauritania said that the guidelines he had suggested earlier in the meeting required modification in the light of the subsequent discussion. Accordingly, he proposed for consideration the following course of action, which took into account most of the opinions expressed : first, requirements submitted after 1 May 1975 should be excluded, with the exception of those from developing countries having made no submissions prior to that date; second, the present situation existing in countries with power density of more than 0.01 kW/km^2 (Document No. DT/25) should be taken as the starting point; third, the total requirements submitted by countries with power density no greater than 0.01 kW/km^2 should be retained; only then should the regional groups proposed by Iran be set up and instructed, on the basis of the foregoing points, to study limitations of power in their regions and make proposals to Committee 4 by 27 October 1975. The groups should also be instructed to undertake planning with a view to reducing interference in their respective regions, and to give their attention to the situation existing between neighbouring regions (Europe and Asia, Europe and Africa).

The delegate of Lesotho drew attention to the problems created by the absence from the Conference of certain Administrations, both those which had been invited but were not present and those which had not been invited. In order to facilitate matters, he proposed that the planning groups should continue their work, taking into account the requirements of absent Administrations. The latter should be kept informed, through the I.F.R.B., of all changes or modifications envisaged. He supported the Iranian proposal.

The Chairman declared closed the general discussion on basic planning questions.

The meeting was suspended at 1820 hours and resumed at 2015 hours.

The Chairman, summing up the discussion, said that the two major issues before the Committee were, first, whether or not to establish regional groups and, second, whether or not to introduce a cut-off date for submissions, such as 1 May 1975.

The delegate of Yugoslavia, while generally agreeing with the Chairman's summing up of the situation, recalled that a number of delegations, including his own, had expressed the view that concrete and binding guidelines for future planning should be drawn up in the light of the discussion which had taken place. That discussion had been so wide-ranging and important that it would be beyond the powers of any one man to summarize it. Accordingly, he proposed the immediate establishment of an ad hoc group consisting of the Chairman and Vice-Chairman of Committee 4, the convenors of the planning groups, the Technical Secretary and the Chairman of the I.F.R.B., to review and to systematize all the

proposals made in the course of the general debate and to prepare concrete proposals for the work of the planning groups or any other groups that might be set up. The ad hoc group, which would, of course, be also guided by the Report of the First Session, should be instructed to report back to Committee 4 not later than the evening of the following day. If the Committee then failed to reach any clear-cut decision, the whole question of planning would have to be referred to the Plenary.

The delegate of Sweden agreed with the previous speaker that concrete guidelines were needed, but felt that the two main issues calling for immediate decision were those defined by the Chairman. Once the regional groups had been set up, they could proceed to work out the necessary guidelines.

The delegate of the U.S.S.R. supported the proposal made by the delegate of Yugoslavia. In addition to several existing documents which had a direct bearing on the problem of planning and which the Committee had not yet discussed, a number of proposals of substance had been made orally in the course of the general debate. All those proposals and points of view had to be taken into account.

The delegate of Zambia, while supporting the idea of setting up an ad hoc group, did not think that its composition should be as suggested by the delegate of Yugoslavia. The workload of the Chairman of Committee 4 and the convenors of the various planning groups was already very great. In his opinion, the ad hoc group should work in conjunction with the Steering Committee.

The delegates of Japan and New Zealand associated themselves with the remark made by the delegate of Sweden.

The delegates of the German Democratic Republic, Czechoslovakia and Guinea fully supported the proposal made by the delegate of Yugoslavia.

The delegate of Mauritania emphasized that the proposed cut-off date of 1 May 1975 would apply only to supplementary requirements. Those Administrations which had not yet submitted their requirements were still free to do so. On the question of the establishment of regional groups, he did not think that such a step would serve any practical purpose unless those groups - or, indeed, the planning groups already in existence - were first given clear directives by the Committee.

The delegate of Cameroon agreed with the proposal made by the delegate of Yugoslavia except as regards the composition of the proposed ad hoc group.

The delegate of Iran said that, before proceeding any further, the Committee should decide whether the terms of reference of the proposed regional groups ought to be laid down by those groups themselves or by the Committee.

The delegate of the Federal Republic of Germany noted that a large majority of delegations appeared to favour the establishment of regional groups. A decision on that issue should be taken forthwith; to set up another ad hoc group would, in his view, entail an unnecessary loss of time. _

The delegates of Italy and Belgium concurred.

The delegate of Algeria thought that the Committee should adopt both the Iranian and Yugoslav proposals, since it was evident that the Committee as a whole could not synthesize all the views expressed in the general debate. He agreed with the delegate of Cameroon, however, that the composition of the proposed ad hoc group should be different from that suggested by the delegate of Yugoslavia.

The delegate of Malaysia pointed out that the Iranian and Yugoslav proposals were not mutually exclusive. The Committee should take a decision on both those proposals before it rose.

The delegate of India agreed with the delegate of the Federal Republic of Germany that the time was ripe for a positive decision on the establishment of regional groups. After taking such a decision, the Committee should proceed to formulate the terms of reference of those groups, taking account of the important issue raised in Documents Nos. 56, 61 and 76.

The delegate of France formally moved that the Committee should dispose of the procedural question as to whether to establish regional working groups. If an affirmative decision were taken, he would have suggestions to make regarding the coordination of the regional groups' work with that of the planning groups already in existence.

The delegate of the U.S.S.R., while emphasizing that he was not opposed to any solution which would assist the work of the Conference, remarked that the Yugoslav proposal, which had been duly seconded by at least two delegations, should take precedence over the French delegate's motion.

The delegate of Norway pointed out that the United Kingdom proposal, also duly seconded, had been made before the Yugoslav proposal.

The delegates of Italy and Sweden supported the proposal made by the delegate of France.

The delegate of Mauritania opposed the proposal, pointing out that a similar motion introduced by the delegate of Norway earlier in the meeting had been defeated by a large majority.

The delegate of the U.S.S.R., pointing out that the areas referred to in the Iranian proposal were not clearly defined in I.T.U. basic documents, proposed the addition of the "East European and Northern Asian area" to the list in paragraph 1 of Document No. 78.

The Chairman of the I.F.R.B. said that, whereas the European and African broadcasting areas were defined in Nos. 133 and 330.1 of the Radio Regulations, respectively, there was no such definition for "Asia and Pacific". If the U.S.S.R. amendment were adopted, the remaining European and the African countries would probably have to be asked whether they wished to be grouped in any special way.

The delegate of the United Kingdom, supported by the Chairman of the Conference, proposed that the U.S.S.R. delegate's addition should be accepted and followed by the words "as defined in the Radio Regulations or on the basis of consultations by the Chairman of Committee 4". That would give the grouping the necessary flexibility to enable the Committee to continue with its work.

The delegate of the U.S.S.R. withdrew his amendment in favour of that proposal.

The delegates of France, the Federal Republic of Germany, the Netherlands, Italy, Spain, Greece and Sweden said that the United Kingdom proposal was unacceptable. The Conference was not competent to alter the regional grouping laid down in the Torremolinos Convention and in the Radio Regulations. Moreover, the amendment was incompatible with the original proposal under No. 504 of the Torremolinos Convention. The question was not procedural or political but substantive, for the European and African areas had been defined in the Radio Regulations on the basis of propagation conditions. Delegations' instructions from their administrations were based on the three areas listed in the document. Finally, there was nothing to prevent any country from belonging to two regions or areas.

The delegate of India supported the United Kingdom proposal and suggested that the areas in question might be those of the members of the I.F.R.B., as defined in the relevant Administrative Council resolutions.

The delegate of Spain pointed out that that was a political division adopted by the Administrative Council for its own purposes, and that it did not appear either in the Convention or in the Radio Regulations.

The delegate of the U.S.S.R. observed that the European broadcasting area defined in the Radio Regulations comprised only one-fifth of the territory of the Soviet Union. The United Kingdom proposal represented a satisfactory compromise.

The delegate of the United Kingdom pointed out that the regional groups would be operating on an ad hoc basis with the sole purpose of reducing the number of requirements to a reasonable level. The proposed grouping would not have the far-reaching effects envisaged by the opponents of the amendment, but was merely a flexible organizational device to facilitate the work of the Conference.

The delegate of Sweden, supported by the delegates of the Netherlands and the Federal Republic of Germany, moved that the United Kingdom amendment was incompatible with the Iranian proposal in Document No. 78, under No. 504 of the Torremolinos Convention.

The Swedish motion was carried by 29 votes to 23, with 24 abstentions.

The delegate of the U.S.S.R. said he wished it to be recorded that his delegation intended to participate in the work of both the Asia and Pacific and the European broadcasting area regional groups.

The Chairman put the Iranian proposal (Document No. 78) to the vote.

The proposal was approved by 62 votes to 6, with 11 abstentions.

The delegate of Mauritania, explaining his negative vote, said that the approval of the Iranian proposal solved none of the outstanding problems and in no way advanced the Committee's work.

The delegate of Roumania said that he had voted against the proposal because paragraph 3 of the document had not been discussed, with the result that no terms of reference had been laid down for the regional groups.

The delegate of France suggested that, in order to meet the objection that the work of the regional groups would duplicate that of the Planning Groups already established, the Convenors of the latter Groups should be asked to draw up the terms of reference of the regional groups.

The meeting was suspended at 2245 hours on Wednesday, 22 October and resumed at 0930 hours on Thursday, 23 October 1975.

The Chairman said there were three suggestions before the Committee : to give the regional groups very broad terms of reference, to give them specific directives resulting from the various proposals made, and to set up a special group to draw up their terms of reference.

It was recognized that the absence of precise planning criteria was a major reason for the difficulties encountered in the planning groups but many delegations had expressed their goodwill by inviting negotiations or assigning members to different groups. It had become evident that some of the essential problems would have to be studied in the frame of different geographical areas, and that had led to the creation of the regional groups.

He proposed that an ad hoc group be formed to prepare a proposal (to be submitted to Committee 4 very rapidly) on the norms, directives, criteria, rules and principles which would permit planning. They would base the proposal on the review, discussion and synthesis of all the proposals made in general debate in Committee 4 (completed if necessary with the aid of the I.F.R.B.), take into account all the documents assigned to the Committee, bear in mind the efforts of the planning groups, and also the comments, suggestions and criteria adopted at the First Session.

The Chairman's proposal was supported by the delegate of the German Democratic Republic who suggested that the I.F.R.B. make available a list indicating which countries belonged to which region; he added that the time had now come to deal with Documents Nos. 56, 61 and 76.

The delegate of India also supported the proposal for an ad hoc group and suggested that the delegate of Iran act as its chairman.

The delegate of Sweden thought that perhaps the United Kingdom proposal for terms of reference of the regional groups would be acceptable. He stressed the importance of avoiding further delay in the actual planning work.

The delegate of the United Kingdom said that if an ad hoc group were to be set up, preferably under the guidance of the Chairman of Committee 4, it should submit its report the same day. Care should be taken to reflect all the pressures which had been manifested during the debate.

The delegate of Greece shared the concern expressed by the delegate of Sweden and felt that a decision on supplementary requirements should not be postponed.

The delegate of Pakistan also felt that further delay was dangerous. He agreed to the setting up of an ad hoc group and supported the Indian proposal that the delegate of Iran act as convener.

The delegate of Italy supported those two proposals.

The delegate of the Netherlands, while favouring the creation of the ad hoc group, stressed that the norms should be the same for both regions. That view was supported by the delegate of the German Federal Republic.

The delegate of Papua New Guinea said he was not convinced that the norms applicable to the South West Pacific were valid for other parts of Region 3 or for the European Broadcasting Area.

The delegate of Sweden said that as the majority appeared to be in favour of setting up an ad hoc group, he would accept that, but the terms of reference should not bind the different groups too closely together; they were being created precisely because of regional differences.

The principle of an ad hoc group having been accepted, the delegate of Iran agreed to act as its chairman.

The Chairman invited delegations to indicate their wish to take part in the group.

The delegate of Algeria, taking up a suggestion made by the delegate of Pakistan, proposed that the participation be restricted to three countries per region.

After consultation, the Chairman announced that the following delegations had been put forward : Iran, India, Pakistan and New Zealand (Asia/Pacific), France, United Kingdom, U.S.S.R. and Roumania (European Broadcasting Area), and Algeria, Nigeria, Cameroon and Mauritania (African Broadcasting Area).

The delegates of Algeria, Yugoslavia and the German Democratic Republic supported the Chairman's proposal.

The delegate of Mauritania proposed that the Chairman of the I.F.R.B. (or his representative) and the Technical Secretary of the Conference also be asked to participate.

The delegate of Saudi Arabia suggested that the delegation of Jordan represent the Arab countries in the Asia region.

The delegate of the Netherlands, supported by the delegate of Israel, recalled the earlier proposal that the task be entrusted to the conveners of the existing planning groups who were familiar with the problems involved. He feared that it might be suggested that the existing situation be taken as a basis for planning, which he found unacceptable.

The delegate of Sweden objected to restriction of participation in the ad hoc group and was afraid that in the absence of a consensus in the group the matter would simply be referred back to Committee 4.

The delegate of the Netherlands proposed that the list of countries read out by the Chairman should be enlarged to include also those countries that had submitted documents relevant to the question, namely, Israel, Italy, Spain and Tunisia.

The delegates of Norway, Greece, Ireland, Italy and Spain supported that proposal.

The delegate of the U.S.S.R. supported the Chairman's proposal, which was the result of consultations. He observed that some of the documents mentioned by the Netherlands delegate had not yet been discussed by the Committee and that one of them had not even been distributed in delegates' pigeonholes. It was also difficult to understand why only four of the far greater number of documents submitted had been selected.

The Chairman said that the ad hoc group would be required to take into account all the relevant documents assigned to the Committee and would therefore be at liberty to invite any delegation having submitted such a document to participate in its deliberations.

The delegate of the Netherlands said that he maintained his proposal, which constituted a formal amendment to the proposal by the Chairman.

The delegate of Cameroon considered that the Committee should vote without further delay on the Chairman's proposal. The Netherlands proposal, which his delegation opposed, should be considered not as an amendment but as a separate proposal.

In reply to a request for clarification by the delegate of the U.S.S.R., the Deputy Secretary-General said that, under No. 502 of the Convention, the Netherlands proposal constituted an amendment to the original proposal by the Chairman and should therefore be put to the vote first. In his view, the question of consideration of documents related to the terms of reference of the ad hoc group rather than to its composition, which was the subject of the Netherlands amendment. Document No. 5 submitted by the Israeli Administration had been assigned to Committee 4 at the beginning of the session, and he was not aware that any further documents had been submitted recently by that Administration.

The delegate of Libya supported the views expressed by the delegate of the U.S.S.R. His delegation did not consider that it would be proper to take into account documents which, like Document No. 5, had not been discussed by the Committee.

The delegate of Mauritania opposed the Netherlands amendment. If it was adopted, his delegation would insist that equitable regional representation be re-established in the ad hoc group by the inclusion of other countries.

The delegates of Morocco and Zambia opposed the Netherlands amendment.

The delegate of Pakistan requested that the necessary voting take place without further delay.

The Chairman put to the vote the Netherlands amendment.

The amendment was rejected by 63 votes to 12, with 11 abstentions.

The Chairman's proposal concerning the composition of the ad hoc group was adopted by 73 votes to 3, with 12 abstentions.

The Chairman suggested that the ad hoc group should be given the opportunity to meet as soon as possible and requested to report back to the Committee that evening.

It was so agreed.

Use of the outside computer and methods of calculation

The Chairman of the Conference said that the outside computer would be available over the coming week-end provided all requirements were submitted to the Secretariat by 1500 hours that day. However, it would not be available thereafter until the fifth week-end of the Conference. Apart from the LPC changes, concerning which a decision still had to be taken, only about 300 changes had thus far been made in the previous week's computer print-out. Under those circumstances, and given the cost of renting outside computer time, there might be little point in producing a new print-out for the following Monday.

The delegate of France observed that the information submitted by the various countries was not always compatible, since some administrations included antenna losses in their calculations even though the first session had decided that, for planning purposes, such losses should not be taken into account (Report of the First Session, page 47). In fact, taking antenna losses into account was a way of increasing - in some cases even doubling - transmission power. The French delegation was concerned about

that situation and, in the interests of justice and equal treatment for all, considered that the necessary corrections should be made as soon as possible. With regard to the question raised by the Chairman of the Conference concerning use of the outside computer over the coming week-end, the French delegation would prefer no calculations at all to erroneous or tendentious ones.

The delegates of Belgium, Australia and Austria supported the comments by the French delegate.

The Chairman of the I.F.R.B. said that, for cases involving simple vertical antennae, the I.F.R.B. would be able to make the corrections to which the French delegate had referred on the basis of the theoretical gain figures given in the C.C.I.R. books, although the exercise would take some time. Where simple vertical antennae were not involved, the corrections would have to be transmitted to the I.F.R.B. by the administrations concerned.

The delegate of France said that the procedure outlined by the Chairman of the I.F.R.B. would be acceptable to his delegation. The few requirements involving directional antennae could be dealt with in the planning groups themselves.

The delegate of Finland expressed the view that effective monopole radiated power, which had been used up to the present as the basis for the I.F.R.B. calculations, was the only reasonable and equitable way of expressing radiated power values.

The Chairman of the I.F.R.B., replying to questions by the delegates of the U.S.S.R. and Austria, said that the consequence of the corrections would be to increase apparent radiated power by a few dB in the case of some stations. The I.F.R.B. would only modify antenna gain in cases where administrations had indicated the height of the antenna in question; in cases where that information had not been provided, the gain notified by the administrations concerned would have to be retained.

The delegate of France said that the difficulty mentioned by the Chairman of the I.F.R.B. could be overcome by assuming an antenna gain of 0 dB for all transmitter powers of less than 10 kW and of 2 dB for all higher powers. Any administration that did not agree with that method of calculation would merely need to indicate the actual height of the antenna in question.

The delegate of the United Kingdom said that the question was a complex one and required careful consideration. Since there would certainly not be time to make the necessary corrections before the deadline mentioned by the Chairman of the Conference, it might be preferable not to ask for computer calculations to be made over the coming week-end.

The delegate of the U.S.S.R. considered that it would be most unwise to interrupt the work of the planning groups, even for a short time.

The Chairman of the I.F.R.B. said that the easiest and least time-consuming solution to the problem would be systematically to apply a zero gain to all simple vertical antennae. However, he realized that such a procedure would not fully meet the concern of the French delegation. Replying to a question by the delegate of Australia, he said that the consequence of his suggested compromise would be to exclude antenna losses which had been taken into account in previous computer print-outs, except in certain specific cases.

The delegate of France said that the solution suggested by the Chairman of the I.F.R.B. would be acceptable for the LF band but not for the MF band.

The Chairman of Working Group 4/11 said that the results obtained by Working Group 4/11 would need to be processed over the coming week-end in order to enable the Working Group to proceed with its work the following week.

The delegates of Yugoslavia and Mauritania considered it preferable to defer the computer calculations until the end of the following week.

The Deputy Secretary-General observed that the outside computer would not, in principle, be available at the end of the following week. If the Committee so desired, however, inquiries could be made about the possibility of using it during the course of the following week. It might also be possible to use the I.T.U. computer for some of the calculations needed by Working Group 4/11.

The delegate of the Federal Republic of Germany drew attention to Documents Nos. 56, 61 and 76 which, in his view, should be discussed by the Committee before the deadline for the computer input.

The Chairman of Working Group 4/LPC drew attention to the fact that several questions concerning LPCs needed to be settled before the next computer run.

The Chairman said it was clear that the problems raised during the discussion could not all be settled by that afternoon's deadline for submission of data. He suggested that the outside computer should be used over the coming week-end to make the fullest calculations possible, and that the Deputy Secretary-General and the Chairman of the I.F.R.B. should

be requested to inquire about the possibilities of renting computer time during the course of the following week and, depending on what facilities were available, to make the best possible arrangements for further calculations.

It was so agreed.

The meeting was suspended at 1305 hours and resumed at 2020 hours.

Report of the Ad Hoc Working Group on terms of reference for regional groups
(Document No. DT/26)

The Chairman of the Ad Hoc Working Group described the working methods adopted by the Group and introduced Document No. DT/26, pointing out that the French delegation had entered a reservation concerning paragraph 2.2 and that the validity period mentioned in paragraph 2.4 should, in the Group's view, be discussed by the Committee.

The delegate of Liechtenstein said there was one important omission in the document. After describing the situation of his country, which was the only one in the European region that had not yet done any broadcasting in the LF and MF bands, he said that his delegation would only be able to accept Document No. DT/26 if it was amended through the inclusion of a specific reference either to the principle of equal rights of all countries large or small or to the Report of the First Session. Unless that was done, the text would favour large countries whose position was already well-established.

The delegates of the Netherlands, Malta, Papua New Guinea and Spain supported that view.

The Chairman invited the Committee to consider Document No. DT/26 paragraph by paragraph.

Paragraph 1

The delegate of Spain observed that the wording of the paragraph reflected the proposal made earlier in the meeting by the United Kingdom delegate but not the amendments submitted to that proposal by his and the Indonesian delegation. Consequently, he proposed that the word "excessive" should be inserted after the word "overall", and that the phrase "taking into account the principles laid down in Section 9.1 of the Report of the First Session" should be inserted after the word "areas".

The delegates of Iceland and Indonesia supported that proposal.

After a discussion in which the delegates of Yugoslavia, New Zealand, the U.S.S.R., Dahomey and the United Kingdom took part, the delegate of Spain said that he would be prepared not to press for a decision on his proposal at the present stage. However, his delegation reserved the right to take the matter up again once the entire document had been considered.

Paragraph 1 was approved on that understanding.

Paragraph 2

Approved.

Paragraph 2.1

Approved.

Paragraph 2.2

The delegate of Spain said that the paragraph was not acceptable to his delegation because it was not consistent with the principles laid down in Section 9.1 of the Report of the First Session. His Administration had always considered that the status quo, which had been generally recognized to be inequitable and unacceptable, should not be taken as the starting point for planning work.

The delegates of the Byelorussian S.S.R., Poland, Yugoslavia, Mauritania and Iran pointed out that the text of the paragraph was the result of a compromise reached by a representative group and considered that it could be accepted without amendment.

The delegate of Sweden proposed the insertion of the words "a study of" at the beginning of the paragraph.

That proposal was rejected by 43 votes to 8, with 21 abstentions.

The delegate of the U.S.S.R. explained that he had voted against the proposal because he did not consider that there was sufficient time to carry out such a study.

The delegate of Ireland said that her delegation had serious reservations about the paragraph but would be able to agree to its retention if the phrase "subject to the principle of equal rights of all countries laid down in the Report of the First Session" was inserted after the words "already in use".

The delegate of Norway supported that amendment.

The amendment was adopted by 56 votes to none, with 21 abstentions.

The delegate of Papua New Guinea proposed that the phrase "taking due account of the requirements of the developing countries" should be replaced by the text of the second paragraph of Section 9.1 of the Report of the First Session.

That proposal was rejected by 33 votes to 1, with 30 abstentions.

The delegate of Liechtenstein explained that although he had voted in favour of the proposal, his delegation's concern had been met by the adoption of the Irish amendment.

The delegate of France said that his delegation would be able to withdraw its reservation concerning the paragraph if the word "spécialement" was inserted after the word "considération".

The delegate of Sweden, supported by the delegates of Spain and Papua New Guinea, proposed that the phrase "the requirements of the developing countries" should be replaced by the words "needs with regard to development".

That proposal was rejected by 46 votes to 7, with 17 abstentions.

The delegate of Guinea said that the assignments in the 1966 Africa Plan which were not already in service should be re-allocated on the basis of the 1975 situation. He proposed the addition of the following sentence at the end of the paragraph : "New requirements will be distributed according to the principle of equal rights for all countries, large and small".

The delegate of Upper Volta supported that proposal.

The proposal was rejected by 33 votes to 3, with 38 abstentions.

Paragraph 2.2, as amended, was approved.

Paragraph 2.3

The delegate of Italy, supported by the delegate of Liechtenstein, proposed that the phrase "and other documents approved by the Conference" should be replaced by the phrase "and other relevant documents submitted to the Conference".

The Italian proposal was adopted by 35 votes to 10, with 25 abstentions.

Paragraph 2.3, as amended, was approved.

Paragraph 2.4

The delegate of Sweden recalled the comments he had made earlier in the meeting concerning the difficulty of taking a decision on the validity period before the results of the planning work were known. In his view, therefore, the paragraph might be deleted.

Paragraph 2.4 was approved.

Paragraph 2.5

Approved.

The Chairman indicated that a revised version of the terms of reference thus adopted would be issued (Document No. 86).

The delegate of Spain said he was unable to agree with the first part of paragraph 2.2 as amended to the effect that the planning work would start by taking into account the assignments already in use as that conferred a right on certain countries which was in contradiction to the planning principle in Section 9.1 of the Report of the First Session which read : "The plan will be drawn up in accordance with the principle that all countries, large and small, have equal rights". His delegation reserved the right, already mentioned when its requirements were submitted, to take appropriate measures to defend a country's right to equitable coverage.

In reply to a query by the delegate of Italy as to whether certain technical characteristics were included in "assignments already in use", the Chairman of the I.F.R.B. said that at the First Session, in answer to that same question, the competent Committee had stated that the frequencies concerned were those with the powers noted in box 20 of the form for submission of requirements; in the case of the Africa Plan the frequencies were those given in the Plan.

As the Conference would need to know the present situation (i.e. that resulting from stations in service on the new carriers) he suggested that a calculation be made the coming week-end for the LF band and a calculation of existing stations in place of the MF band. The Deputy Secretary-General had said that a computer would be available the following week-end to make the calculations for the MF band.

The delegate of Pakistan pointed out that the analyses carried out had all been based on the total requirements submitted and asked whether a computer calculation had been made of assignments already in use.

The Deputy Secretary-General replied that the print-out in question would be available the following Monday morning.

The delegates of Iran, Finland and Algeria were nominated as chairmen of the regional groups for Asia and the Pacific, the European Broadcasting Area and the African Broadcasting Area respectively.

The meeting rose at 2300 hours.

Acting Secretary :

A.A. MATTHEY

Chairman :

V. ŽAGAR

Annexes : 2

A N N E X 1

STATEMENT BY THE DELEGATE OF INDIA

The Indian delegation has heard with considerable interest the various views expressed on the floor of this house on aspects of planning, difficulties in proceeding with the work of planning, fears on the impossibility of producing a plan due to large requirements and power of transmitters. Many opinions were expressed in regard to the future procedure to be adopted to evolve a plan, to bring out order from complete disorder, if I may quote a distinguished delegate. Many opinions were given to Committee 4, some supported and some contradicted. Mr. Chairman, we wish to take a few minutes to express our opinion on this subject and I beg your indulgence and that of the house to permit me to analyse the situation in my way and make some concrete proposals for your consideration.

Mr. Chairman, let us go back to the First Session of this Conference for a few moments. In Chapter 9 under Methods of Planning, the following is mentioned under paragraph 9.1 :

"The Regional Administrative LF/MF Broadcasting Conference will draw up a new LF/MF frequency assignment plan in Regions 1 and 3.

The Plan will be drawn up in accordance with the principle that all countries, large and small, have equal rights. It should also be based on the needs of administrations and should bring about satisfactory reception conditions for all peoples, having regard to the different conditions of the countries in Regions 1 and 3 and, in particular, the needs of the developing countries."

These are significant words which have recognized the requirements of all countries to develop their broadcasting, but a certain emphasis has been placed on the needs of the developing countries. In developed countries, alternative and very efficient means of broadcasting already exist and its furtherance does not come under the purview of MF and LF broadcasting. The need for improving MF broadcasting in developing countries has thus been rightly recognized by the Conference.

Mr. Chairman, when the First Session concluded on 25 October 1974, the administrations present went home with the common purpose of making their plans for broadcasting which would meet their current and future requirements. Nowhere has it been said in the Report of the First Session that future plans should cater for limited requirements and limited power of transmitters. On the other hand, it has been mentioned time and again and in different chapters and sections that agreement between the countries concerned is a prerequisite for evolving an acceptable plan.

Pursuant to the directives of the First Session, the administrations in Regions 1 and 3 prepared their broadcasting plans and sent them on to the I.F.R.B. - some by the due date, some later and yet some with additional requirements, even when this Second Session was in progress. But there was no doubt in the mind of any administration that this Second Session would take into consideration both existing and projected requirements. This is evident from Document No. DT/25 where the I.F.R.B. has given an analysis of the requirements of all countries. If you will kindly go through this document, you will notice from column 3A of the Annex that there is hardly any country which has not given its projected requirements. Of course, these projections have varied from country to country, presumably depending upon their requirements. But to say that some administration has not projected its requirements for a long-term plan and now finds itself in a helpless situation due to other countries projecting large requirements is not a convincing argument for arriving at a conclusion. If a country has given modest requirements one can take it that this country's needs are modest. But if another country has given large requirements, it would be unfair to call these requirements unrealistic and "proposed for two countries". Each administration is at liberty to develop its broadcasting in its own way and no other administration can challenge the authority of another administration as to how the latter should develop.

Turning to India, Mr. Chairman, yes, we have given a fairly large number of requirements for the development of broadcasting in India. But there has been a misconception, a gross misunderstanding about India's total requirement. Even the I.F.R.B. forgot to separate India's day-time and night-time requirements and had given a wrong impression in the yellow flags put up in the maps in the halls below. India has a distinct day-time requirement and has been operating such transmissions with success for a long time. We find it necessary and we could continue to do so. But we would ensure that such operations, as hitherto, do not cause any interference to any other country.

Mr. Chairman, India is a large country. It has 360 districts in 31 states. Each state is bigger than some of the countries in Western Europe. Its population is the second largest in the world. Its area is 3.28 million square kilometres with a population of 574 million. India has 826 languages with 1652 dialects. India's broadcasting network has to cater for the languages and dialects besides radiating national programmes, programmes for schools, rural and urban areas and programmes for farmers, women and others. We do have a formidable problem and the requirements we have submitted are nowhere near the optimum required. It is a compromise between our actual needs for broadcasting and the investment we can make within a reasonable period. We feel that our problems have not been understood and just taking the figures for our requirements in isolation from the diverse need for broadcasting is an unfair representation of India's case. We have often heard indirect references being made to India's large requirements. But I would like to maintain, with all the emphasis in my command, that our requirements are not large compared to our multifarious needs.

Mr. Chairman, let us take a close look into India's requirements. Our total number of transmitters operating at present is 167 and the total power we are radiating at nights is 5,245.8 kW. Our total projected requirement is 500 with a total power of 24,732 kW, of which 352 are LPCs. This leaves us with 148 which is even lower than the number of transmitters in present operation.

Let us now come to an overall situation confronting the Conference. Many countries have given their projected requirements and the total number has become very large to be accommodated within the 120 channels we have. Similarly, large powers have been indicated bringing a reduction of service area. This problem has to be faced and ways and means found to solve the situation.

Many suggestions have been made on the floor of this house as to how to tackle the situation. The distinguished delegation of Pakistan had asked in Document No. 36 for some information from the I.F.R.B. and to work out the aggregate power for different countries under different categories. This has been done and discussions held. It would be difficult to come to a decision to reduce power and requirements based on the information given in Document No. DT/25.

We have often heard from many delegations the words "reduction of power" and "curtailing the number of requirements". Can we impose a blanket reduction of power and requirements for all administrations? Even if we do so, what would be the criterion for such reduction? Can this be accepted by all here? Will not such a proposal get bogged down

in endless discussions, numerous reservations and perhaps indecision? There are strong arguments, often advanced on the floor of this house, in favour of increasing power of transmitters as the most economical means of giving wider coverage. What can be achieved then by proposing a reduction? The real problem facing us cannot, in our opinion, be solved by reduction of power requirements as proposed by many, for there will be formidable difficulties in all countries coming to an agreed value for such reductions. No, Mr. Chairman, the problem needs to be tackled some other way.

Yesterday, the distinguished delegate of Pakistan made the following proposal as a planning procedure. He said that planning should be done in two steps :

- a) Firstly, law and order in existing usage to improve the present situation.
- b) Secondly, after the first step is done, the remaining gaps to be equitably distributed to the projected requirements, giving due consideration to the needs of developing countries.

The first step we all agree to, for it is the mandate of the First Session which we have all accepted. But the second step puts a completely new concept and binds the administrations to accept certain channels even when they need some others. Here too, the requirements on the equitably distributed channels will be equally large and some bottlenecks as exist today will arise. No, Mr. Chairman, the solution is not there.

We would like to venture a proposal for your consideration and the consideration of this house to take us out of this impasse and get on with the job for which we have all come here.

Mr. Chairman, if we analyse the requirements of MF, we find that the situation is different in different regions. In Europe it is above the critical point but in certain parts of Africa and certainly in Asia the situation is different. Let me speak about Asia, a region to which I belong. Let me also take the example of India which has submitted, according to some delegations, a fairly large number of requirements, to prove my point.

We have analysed this interference to and from Indian requirements to other neighbouring countries in Asia and the Middle East. We find that the worst interference India is having from other countries on India's requirements seldom exceeds on the average a value of about 80-85 dB. We have also found that with mutual goodwill and understanding the incompatibilities can be removed by bilateral

discussion of antenna directivity, reduction of power in certain cases and changing frequencies, if necessary. In fact, India has already removed mutual incompatibilities with four countries. Good progress has been made with two other countries and we hope that this incompatibility will soon disappear. I understand that the result is similar with some other countries in the Asian region.

Could we not, therefore, agree to have regional planning groups, say Asia, Western Europe, Eastern Europe, Africa and the Middle East? In these regional groups, countries concerned will sit together, look at the mutual interference and attempt to remove this by whatever means is at their disposal. For Asia, there would not be a need to reduce requirements, nor power, in an overall manner, but in isolated cases such concessions may have to be resorted to. Certainly Asia would not interfere with Western Europe or Africa or vice versa and the standards for negotiation would be different. So long as these standards are mutually acceptable and administrations agree to find a workable solution, a plan can be evolved. In Europe, especially Western Europe, the situation is indeed difficult, for small countries with small areas have asked for large requirements. There again the administrations concerned could sit together and reduce their requirements or perhaps agree to a decrease of power or both to find a solution. In these countries, Mr. Chairman, MF broadcasting is an alternative means of broadcasting, unlike Asia and Africa where broadcasting is the only means for reaching the masses. The European countries could, therefore, make more concessions to come to an agreement for otherwise an agreed plan will be difficult to find.

We would, therefore, propose that regional groups be set up with concerned countries to sit together and work out a solution. It is not necessary to have uniform standards for all the groups, for what obtains in Europe is not the case in Asia. So long as an agreed solution is found the Conference will have a success. It may be necessary to have consultation amongst the regional groups for countries situated in the interface, but that should pose no problem. The details of the regional groups can be worked out by the I.F.R.B. which has the overall picture before it, and the present planning groups may take over the task of these regional groups with suitable modifications.

Mr. Chairman, we have all come here with the fond hope of evolving an agreed plan. We have also come here with a flexible mind to give and take. We, on our part, Mr. Chairman, can assure you and through you the house that we are prepared to make concessions when our neighbours' interest is vitally affected and we expect similar reciprocity from them also for our vital needs. But given goodwill, cooperation, tolerance and mutual respect for each other's needs, we have every hope that an agreed plan will emerge.

A N N E X 2

STATEMENT BY THE HEAD OF THE
DELEGATION OF AFGHANISTAN

Mr. Chairman,

Our delegation has listened with interest to the many delegations which have expressed the desire and hope of reaching a positive and generally acceptable result. Yet we now see that the results obtained are not as encouraging as those expected at the beginning of this Conference.

We came here, Mr. Chairman, in the hope of finding a solution of our problems and our difficulties, since the young Government of the Republic of Afghanistan attaches great importance to the MF broadcasting service for informing our people and providing them with better facilities. In view of the material and financial difficulties with which we are faced, we have asked for a very limited number of frequencies for minimum MF broadcasting coverage of our territory. In order to find a better solution and to prepare a plan acceptable to all, we support the Iranian proposal set out in Document No. 78 of 21 October 1975, with special emphasis on paragraph 3 of this document.

I can assure you Mr. Chairman, that the delegation of the Republic of Afghanistan will bend all its efforts towards securing the success of this Conference. We are convinced that that is also the goal of many delegations present here, and we are determined to unite our endeavours with theirs. We are absolutely sure, Mr. Chairman, that thanks to the spirit of international cooperation and mutual understanding which prevails in our Union and especially in our Committee we will be able to obtain the most effective possible results.

In conclusion, I wish to express sincere thanks to the members of I.F.R.B., to its technical staff and above all to its Chairman, Mr. Berrada, for the outstanding work they have done and will do in the future.

Thank you, Mr. Chairman.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 140-E

7 November 1975

Original : French

COMMITTEE 5

DRAFT RECOMMENDATION

concerning the convening of a conference competent
to revise the Plan

Regional Administrative LF/MF Broadcasting Conference (Regions
1 and 3), (Geneva, 1975)

considering

- a) that it has set a limit on the duration of the Agreement and the annexed Plan;
- b) that the main factors which led to the setting of the Agreement's duration at years were :
- the rapid development of broadcasting techniques,
 - the future requirements of the developing countries, which may be substantial both in the LF and in the MF bands, if these countries are to be in a position to meet the requirements of their national broadcasting services.
- c) that it is therefore absolutely essential for the Agreement and the annexed Plan to be revised as soon as they cease to be valid,

recommends to the Administrative Council

to arrange for the convening of a conference competent to revise the Agreement and the annexed Plan in / /, if possible.

M. LO
Chairman of the Ad Hoc Drafting Group



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 141-E(Rev.1)

8 November 1975

Original : French/
English

COMMITTEE 5

DRAFT RESOLUTION No....

concerning the accession to the Agreement of
countries not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be fully comprehensive unless it takes into account the requirements of all countries in Regions 1 and 3 without qualification;
- b) that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, either to participate in its work or to inform it of their frequency requirements;
- c) that countries which are not at present Members of the Union should be encouraged to accede to the Agreement after they accede to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in getting their frequency requirements included in the Plan in a satisfactory way;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall inform it immediately of this Resolution and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;



2. that if the assistance of the I.F.R.B. is requested, it shall undertake any studies or examinations required and communicate to the Administration concerned the results of its studies or examinations;

3. that the Administration concerned shall apply either directly or through the I.F.R.B. the procedure provided for in Article / 3 / of the Agreement;

4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, particularly by agreeing to an increase in the usable field strength above the value given in Article / 3 /, paragraph / 3.2.5 / of the Agreement.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 141-E

7 November 1975

Original : French/
English

COMMITTEE 5

DRAFT RESOLUTION No....

[]

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be fully effective unless it takes into account the requirements of all countries in Regions 1 and 3 without distinction;
- b) that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, to participate in its work or to inform it of their requirements;
- c) that some countries are at present in the process of regaining their sovereignty and should be encouraged to accede to the Agreement when they accede to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in getting their frequency requirements included in the Plan in a satisfactory way;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall inform it immediately of this Resolution and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;



2. that if the assistance of the I.F.R.B. is requested, it shall undertake any studies or examinations required and communicate to the Administration concerned the results of its studies.
 3. that in agreement with the Administration concerned, the I.F.R.B. shall apply the procedure provided for in article /3/ of the Agreement;
 4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, particularly by agreeing to an increase in the usable field strength above the value given in paragraph /3.2.4/.
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BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 142-E(Rev.2)

13 November 1975

Original : French

English

COMMITTEE 5

DRAFT RESOLUTION No.

regarding the use of LF bands shared between
the broadcasting service and the other
radiocommunication services

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva 1975,

noting

that the use of the LF bands by broadcasting stations could adversely affect the stations of other radiocommunication services to which these bands are allocated in Regions 1 and 3, and particularly stations in the aeronautical radionavigation service and the maritime mobile service involving the safety of human life;

considering

- a) the terms of Chapter 8 of the Report of the First Session;
- b) that the Plan has increased the number of broadcasting transmitters in these bands as well as the power of transmitters already in use so that the probability of harmful interference to the safety services is considerably increased;

taking into account

the provisions of Nos. 116 and 117 of the Radio Regulations;

resolves

- 1. that new LF broadcasting transmitters shall not be brought into use, nor changes be made to the characteristics of existing LF assignments until after the World Administrative Conference, 1979, has decided about the allocation of LF bands between the radiocommunication services concerned;



2. that if such changes or additions do not increase the probability of harmful interference to the stations of the other radiocommunication services, they may be brought into use;

3. that if such changes or additions increase the probability of harmful interference to the stations of the other radiocommunication services, they may be brought into use only with the agreement of the Administrations whose frequency assignments to such stations, in conformity with the Table of Frequency Allocations, have been recorded in the Master Register.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION) GENEVA, 1975

Document No. 142-E(Rev.1)
12 November 1975
Original : French
English

COMMITTEE 5

DRAFT RESOLUTION No.

Regarding use of shared LF bands

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva 1975,

noting

that the use of the LF bands by Broadcasting Stations could adversely affect the stations of other radiocommunication services to which these bands are allocated, and particularly stations in the aeronautical radionavigation service and the maritime mobile service involving the safety of human life;

considering

- a) the terms of Chapter 8 of the Report of the First Session;
- b) that the Plan has increased the number of broadcasting transmitters in these bands as well as the power of transmitters already in use so that the probability of harmful interference to the safety services is considerably increased;

taking into account

the provisions of Nos. 116 and 117 of the Radio Regulations;

resolves

that new LF broadcasting transmitters shall not be brought into use, nor changes be made to the characteristics of existing LF assignments, until after the conditions of sharing the LF bands between the radiocommunication services concerned has been decided by the World Administrative Radio Conference, 1979, unless special agreements have been reached between all the Administrations concerned and those Administrations whose services, operating in accordance with the Table of Frequency Allocations, are liable to be affected.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 142-E

7 November 1975

Original : English

COMMITTEE 5

DRAFT RESOLUTION No.

Regarding use of shared LF bands

The Regional Administrative LF/MF Broadcasting Conference,
(Regions 1 and 3), Geneva 1975,

noting

that the use of the LF bands by Broadcasting Stations could adversely affect the stations of other radiocommunication services to which these bands are allocated, and particularly stations in the aeronautical radionavigation service and the maritime mobile service involving the safety of human life;

considering

- a) the terms of Chapter 8 of the Report of the First Session;
- b) that the Plan has increased the number of broadcasting assignments in these bands as well as the power of transmitters so that the probability of harmful interference to the safety services is considerably increased;

taking into account

the provisions of Nos. 116 and 117 of the Radio Regulations;

resolves

that new LF broadcasting assignments shall not be brought into use, nor changes be made to the characteristics of existing LF assignments, until after the conditions of sharing the LF bands between the radiocommunication services concerned has been decided by the World Administrative Radio Conference, 1979, unless special agreements have been reached between all the Administrations concerned and those Administrations whose services, operating in accordance with the Table of Frequency Allocations, are liable to be affected.



INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Document No. 143-E(Rev.1)
12 November 1975
Original : French/English

COMMITTEE 5

DRAFT RECOMMENDATION No. ...

concerning the sharing of the LF band between the
broadcasting service and the other radiocommunication
services (Region 1)

1. The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3) (Geneva, 1975)

noting

- a) that the sharing, on a basis of equality, of the band 255-285 kHz
between the broadcasting service in a part of Region 1 and the aeronautical
radionavigation service results in practice in harmful interference to
aeronautical radiobeacons;
- b) that the aeronautical radionavigation service is a safety
service (No. 69 of the Radio Regulations) and its adequate protection
against harmful interference is essential to the safeguarding of human life;

considering

that it would be desirable to avoid allocations which permit
sharing between the broadcasting service and other services, such as the
maritime mobile and aeronautical radionavigation services;

recommends

that the World Administrative Radio Conference, 1979, should
examine this question, bearing in mind the interests of each of the
services concerned.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 143-E

7 November 1975

Original : French

COMMITTEE 5

DRAFT RECOMMENDATION No. ...

concerning the elimination of sharing between
radiocommunication services

1. The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3) (Geneva, 1975)

noting

- a) that the sharing, on a basis of equality, of the band 255-285 kHz between the broadcasting service in a part of Region 1 and the aeronautical radionavigation service (in all three Regions) results in practice in harmful interference to most aeronautical radiobeacons in the western part of the European Broadcasting Area, where this band is allocated exclusively to the aeronautical radionavigation service;
- b) that the aeronautical radionavigation service is a safety service (No. 69 of the Radio Regulations) and its adequate protection against harmful interference is essential to the safeguarding of human life;
- c) that there is in all parts of the world a constant need for LF and MF aeronautical radiobeacons and that the signatory States of the International Civil Aviation Convention, under Articles 28 and 37 of this Convention, have undertaken to install them;

considering

- a) the Recommendation adopted by the European Broadcasting Conference (Copenhagen, 1948) concerning the need to separate emissions of the maritime and aeronautical services from those of the broadcasting service;
- b) the opinion expressed by the First Session of the Conference (1974) (see paragraph 8.4 of Chapter 8 of the Report of that session) that sharing between the broadcasting service and other services, such as the maritime mobile and aeronautical radionavigation services, should be avoided;



recommends

that, in revising the Table of Frequency Allocations, the World Administrative Radio Conference, 1979, should avoid allocating a frequency band, on a basis of equality, to the broadcasting service, aeronautical radionavigation service, and to other radiocommunication services.



**Documents of the Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3) (2nd session) (Geneva, 1975)**

Document No. 144 REV.1

Not available

Pas disponible

No disponible

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 144-E

8 November 1975

Original : French

COMMITTEE 5

DRAFT RECOMMENDATION

concerning the convening of a conference competent to revise
the LF/MF Broadcasting Agreement (Regions 1 and 3)
and the annexed Plan

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

considering

- a) that it has not been possible to accommodate in a satisfactory manner on a long term period in the frequency bands allocated to LF/MF broadcasting the requirements that have been submitted;
- b) the rapid development of broadcasting techniques;
- c) the future requirements of the developing countries, which may be substantial both in the LF and in the MF bands, if these countries are to be in a position to meet the requirements of their national broadcasting services;
- d) that consequently the validity period of the Agreement has been set at ... years;
- e) that it is therefore absolutely essential for the Agreement and the annexed Plan to be revised as soon as they cease to be valid,

recommends to the Administrative Council

to arrange for the convening of a conference competent to revise the Agreement and the annexed Plan in /...../, if there is no need to convene such a conference earlier according to the provisions of the Convention.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 145-E

10 November 1975

Original: English

PLENARY MEETING

COMMITTEE 5

FOURTH REPORT OF COMMITTEE 4 (PLANNING)

Low power stations in the low power channels (1485 kHz, 1584 kHz and 1602 kHz)

1. The Committee agreed that, as a result of co-ordination of a number of low power requirements in the above low power channels, there will result two categories:
 - a) one, of stations either co-ordinated with countries with which co-ordination was necessary, or for which no co-ordination was deemed necessary, and communicated to the Secretariat by Friday, 14 November 1975 at 12 hours noon; and
 - b) the other, of those low power stations which have not yet been successfully co-ordinated at the Conference.
2. The Committee also agreed to invite Committee 5 kindly to decide on the manner in which these data will be included in the Final Acts of the Conference.

V. ŽAGAR
Chairman



INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Corrigendum No. 1 to
Document No. 146-E
Original : French
English
Spanish

PLENARY MEETING

SECOND REPORT OF COMMITTEE 5

On page 4, Article [B], Definitions, the definitions of the terms "Radio Regulations" and "Regions 1 and 3" should be replaced by the following :

Radio Regulations : The Radio Regulations;

Regions 1 and 3 : The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations, Geneva, 1959;



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 146-E

10 November 1975

Original : French

PLENARY MEETING

SECOND REPORT OF COMMITTEE 5

(AGREEMENT)

Subjects discussed : Title of the Agreement, Preamble, Articles A to J
and final formula
Recommendation on methods of forecasting
sky-wave propagation.
Recommendation on the publication of a handbook
giving directional antenna radiation diagrams.

Committee 5 unanimously adopted the annexed texts.

A. PETTI

Chairman of Committee 5

Annexes : 3



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A N N E X 1

REGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

PREAMBLE

With the object of facilitating relations, mutual understanding
and cooperation in the field of LF/MF broadcasting;

with a view to improving the use of the frequency bands allocated
to the broadcasting service in order to ensure satisfactory reception of
the broadcasting service for all countries;

recognizing that all countries large and small have equal rights
and that the needs of all countries and in particular the needs of the
developing countries shall be fulfilled as far as possible in the
implementation of this agreement;

the delegates of the following Members of the I.T.U., meeting in
Geneva for a Regional Administrative Conference convened under the
provisions of the International Telecommunication Convention (Malaga-
Torremolinos 1973), have adopted, subject to the approval of their
respective competent authorities, the following special arrangements
relating to the broadcasting service in Regions 1 and 3 for the medium
frequency bands and in Region 1 for the low frequency bands.

.....

ARTICLE [A]

Frequency bands

The provisions of the present Agreement apply to the frequency bands between 150 and 285 kHz and between 525 and 1605 kHz allocated to the broadcasting service under Article 5 of the Radio Regulations.

ARTICLE [B]

Definitions

For the purposes of the present Agreement, the following terms shall have the meanings defined below:

Union: The International Telecommunication Union;

Secretary-General: The Secretary-General of the Union;

I.F.R.B.: The International Frequency Registration Board;

C.C.I.R.: The International Radio Consultative Committee;

Convention: The International Telecommunication Convention;

Radio Regulations: The Radio Regulations, Geneva, 1959;

Regions 1 and 3: The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations;

Agreement: The whole of the present Agreement including the Plan and the other annexes;

Plan: The Plan forming Annex to the Agreement;

Contracting Member: Any Member of the Union which has approved or acceded to the Agreement;

Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Convention and the Radio Regulations.

ARTICLE [C]

Execution of the Agreement

1. The Contracting Members shall adopt for their broadcasting stations operating in Regions 1 and 3 in the frequency bands referred to in the Agreement, the characteristics specified in the Plan.
 2. The Contracting Members shall not put assignments complying with the Plan into use, change the technical characteristics of stations specified in the Plan, or put into use new stations, except under the conditions provided for in Articles and of the present Agreement.
 3. The Contracting Members shall endeavour to agree on the action required to reduce any harmful interference caused by the application of the Agreement.
-

ARTICLE [D]

Accession to the Agreement

1. Any Member of the Union in Regions 1 and 3 which has not signed this Agreement may accede thereto at any time. Such accession shall extend to the Plan as amended at the time of the accession and shall be made without reservation. The Secretary-General shall be notified thereof, and he shall inform the other Members of the Union.
2. Accession to the Agreement shall take effect on the date on which the notification of accession is received by the Secretary-General.

ARTICLE [E]

Termination of participation in the Agreement

1. Any Contracting Member shall have the right at any time to terminate its participation in the Agreement by a communication sent to the Secretary-General, who shall inform the other Members of the Union.
2. Such termination of participation shall take effect after a period of one year from the date of receipt, by the Secretary-General, of the said communication.

ARTICLE [F]

Effective date of the Agreement

The Agreement shall enter into force on at
.... hours G.M.T.

.....

ARTICLE [G]

Scope of application of the Agreement

1. The present Agreement shall bind Contracting Members in their relations with one another but does not bind those Members with non-Participating countries.
2. If a Member makes reservations with regard to any provision of the present Agreement, other Members shall be free to disregard the said provision in their relations with the Member which has made such reservations.

ARTICLE [H]

Approval of the Agreement

Members shall notify their approval of this Agreement, as promptly as possible, to the Secretary-General who shall at once inform the other Members of the Union.

ARTICLE [I]

Duration of the Agreement

The Agreement and the annexed Plan have been established with a view to meeting the requirements of the broadcasting services in the bands concerned for a period of .. years after the Agreement enters into force.

The Agreement shall remain in force until it is revised by a competent Conference of the Members of the Union of Regions 1 and 3, convened in accordance with the procedure specified in the Convention in force.

ARTICLE [J]

Special Arrangements

In addition to the procedures provided for in article [] of the Agreement and with a view to facilitating the application of these procedures for improving the utilization of the Plan, Contracting Members may conclude special arrangements in accordance with the pertinent provisions of the Convention and of the Radio Regulations.

In witness whereof, the undersigned Delegates of the Members of the Union mentioned above have, on behalf of their respective competent authorities, signed the present Agreement in a single copy in the Chinese, English, French, Russian and Spanish languages, in which, in case of dispute, the French text shall be authentic. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member in Regions 1 and 3.

Done at Geneva,

A N N E X 2

RECOMMENDATION ...

[]

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

considering

- a) that the calculation criteria adopted at the First Session of the Conference and contained in their essentials in Annex ... to the Agreement require a knowledge of the antenna gain in the direction of propagation;
- b) that the presentation of antenna patterns in the Plan would be complex and cumbersome;
- c) that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae,

recommends the C.C.I.R.

to prepare, for publication, a handbook describing the radiation diagrams of the directional antennae that can be used in the LF/MF broadcasting service, together with the measured radiation patterns of complex antennae,

requests

Administrations to communicate to the Director of the C.C.I.R. all information they may have resulting from measurements on this subject.

A N N E X 3

RECOMMENDATION ...

[]

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

that the methods of forecasting sky wave propagation used in
drawing up the Plan are likely to undergo improvement in the future;

recommends

that in their bilateral negotiations on modifications to the
Plan, Administrations should use the methods most recently adopted by the
C.C.I.R. for forecasting sky wave propagation or any other methods on
which they may agree.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 147-E

13 November 1975

Original : English

COMMITTEE 4

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 4

(PLANNING)

Tuesday, 28 October 1975, at 1650 hrs

Chairman : Mr. V. ŽAGAR (Yugoslavia)

Subjects discussed

Document No.

1. Approval of the summary records of the first and second meetings

53, 69

2. Reports of the Regional Groups

95, 99, 101, 103

1. Approval of the summary records of the first and second meetings
(Documents Nos. 53 and 69)

Summary record of the first meeting (Document No. 53)

Approved, subject to the replacement of the word "transmodulation" by "cross-modulation" four lines from the bottom of page 4 and to drafting changes in the statement of the Chairman of the I.F.R.B. on page 5 (see Corrigendum to Document No. 53).

Summary record of the second meeting (Document No. 69)

Approved, subject to amendments on pages 2 and 12 (see Corrigendum to Document No. 69)

2. Reports of the Regional Groups (Documents Nos. 95, 99, 101 and 103)

The Chairman of Working Group 4A, introducing the Group's report (Document No. 103), said that that body had examined Document No. 86 in the light of the terms of reference of the regional groups and had decided to set up three sub-groups to consider the relevant problems as they affected the South Pacific and South East Asia, North East Asia and Central and West Asia. The sub-groups had been convened by the delegates of Australia, the Philippines and Iran, respectively. Ad hoc groups had been established to deal with various documents connected with Document No. 86, dealing in particular with technical ways of removing incompatibilities in the Region - a subject examined in Document No. 101, which would be introduced separately - the validity period of the Plan and the treatment of additional submissions. He commended the report to the Committee.

The delegate of Australia, speaking as the convenor of the ad hoc group on removal of incompatibilities, introduced Document No. 101, on usable field strength targets, which was intended to establish planning machinery for the reduction of over-all requirements, using the data in the I.F.R.B. printouts and based on the fundamental philosophy of trying to reduce mutual interference. Four tables and four graphs were annexed to the document, one table and graph for each of the sub-regions defined in paragraph 1 and one containing a summation for the whole region, giving a weighted average of the interference effects which varied greatly from country to country. The application of that theory to the I.F.R.B.'s figures might promote the reduction of requirements in an orderly and mechanical manner. The group had thought that two or three calculations would have to be carried out to establish a proper target, but meanwhile submitted the basic procedure to the Committee for consideration.

The Chairman of Working Group 4B, introducing the Report of the Working Group (Document No. 99), said that the Working Group's proposal to adopt a period of 15 years as the duration of validity of the Plan was not an inflexible one but was subject to discussion with the other Regional Groups. The proposed 15-year period would start at the end of the Conference and would thus include the period elapsing between the signing of the Agreement and the entry into operation of the Plan.

On the subject of reduction of requirements, he emphasized the modest number and power of requirements from the whole of the African continent as compared with those from the other two regions. While Working Group 4B had unanimously accepted the principle of reducing requirements considered excessive in relation to the period of validity of the Plan, it felt that the same principle should also be adopted by the other Regional Groups.

As regards planning work, the Working Group had decided to confine itself to stations already in use and to treat problems of internal interference wherever possible, i.e., where there was no interference from other regions. A certain number of power reductions had been agreed upon and directional antennae were to be introduced in several cases. However, as had already been pointed out, the existing situation did not reflect the development potential of most African countries in the broadcasting field, and the Working Group recommended to Committee 4 that assignments should be revised in the light of new requirements. The criteria adopted by the Working Group for examining new requirements (point 4 of Document No. 99) were undoubtedly rather simple ones, but that simplicity reflected the fact that all the countries of the African Region were in a very similar situation to one another and the mean power density was very low (less than 2 W/Km^2).

After reporting on the setting up of a Mediation Group and on the views adopted by the Working Group on the subject of interference from stations in other Regions, he stressed the spirit of cooperation shown by all the African countries and their will to bring the Conference to a successful conclusion. If others took the same attitude, the Conference would surely be able to accomplish this task.

The Chairman of Working Group 4C introduced the Working Group's first Report to Committee 4 (Document No. 95). Referring to the question of the technical validity of the Plan, he pointed out that under the Working Group's proposal the total implementation period of the Plan would be about 12-14 years. On the subject of requirements to be taken into consideration in planning, he drew attention to the two reservations referred to in paragraphs 5 and 6 of the Document.

Going on to make an oral presentation of the Working Group's Second Report, which had not yet been distributed in writing, he said that no consensus had been reached on the question of reduction of requirements on the basis of power limitation or on that of a method for reducing the number of requirements; however, a majority of delegations had expressed willingness to consider reducing the number of their requirements provided that a common yardstick could be adopted. The Working Group had considered the question of the installation of stations in another country or Region to be outside its terms of reference; on the subject of elimination of incompatibilities, a number of suggestions had been made but no common set of proposals had been agreed upon. The Working Group had not had sufficient time to discuss points 2.2, 2.3 and 2.5 of Document No. 86.

The Chairman thanked the Chairmen of the three Regional Groups, all the delegations which had participated in their work and the representatives of the I.F.R.B. for their efforts and noted that a measure of agreement had been reached among the Groups on a number of issues, such as the period of implementation of the Plan, the establishment of Mediation Groups and, possibly, the cut-off date. However, there was still no agreement on certain other problems of a fundamental nature. That being so, and in view of the length of time already spent on discussion in the Committee, he proposed to refer the matter forthwith to the Plenary Meeting.

The meeting rose at 1810 hours.

The Acting Secretary :

A.A. MATTHEY

The Chairman :

V. ŽAGAR

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 148-E

10 November 1975

Original : English

COMMITTEE 4

SUMMARY RECORD

OF THE

SIXTH MEETING OF COMMITTEE 4

(PLANNING)

Friday, 31 October 1975, at 2045 hrs

Chairman : Mr. V. ŽAGAR (Yugoslavia)

Subjects discussed

1. Approval of the Summary Record of the Third Meeting
2. Additional requirements
3. LPC questions
4. Computer print-outs - computations of 27 October 1975
5. Day-time operation

Documents Nos.

98 + Corr.

56, 61, 76, 92

DT/32

-

-



1. Approval of the Summary Record of the Third Meeting (Document No. 98 and Corr.)

Approved, subject to corrections requested by the delegates of Italy and the Federal Republic of Germany (see Annex).

2. Additional requirements (Documents Nos. 56, 61, 76 and 92)

The delegate of the U.S.S.R., introducing Document No. 56, said that his delegation's proposals required some modification in the light of the discussions held and the decisions taken since the document had been issued. First, the requirements submitted by the countries to which the Chairman of the Conference had sent telegrams (Document No. 96) should be accepted unconditionally; those which were received within the next week should be taken into account by the Planning Groups themselves, and the Conference should give the I.F.R.B. the proper authority to handle those received towards the end of the Conference. Second, all additional requirements submitted by developed countries after 1 May 1975 should be rejected. Third, all additional requirements submitted before 1 October 1975 by developing countries which had participated in the First Session should be considered in Joint Group meetings with the participation of the countries concerned, and then referred to Committee 4 for approval by 3 November 1975. Finally, any additional requirements that did not come under one or other of the above categories should be considered in the light of the decision taken by Working Group 4C.

The delegates of the Federal Republic of Germany, Poland and Bulgaria introduced, respectively, Documents Nos. 61, 76 and 92.

The delegate of the United Kingdom said that Working Group 4C had discussed the problem of additional requirements at some length and had made a recommendation that was set out in Document No. 95. In his view, the proposals made by the Working Group should be adopted.

The delegate of Japan drew attention to the consensus reached in Working Group 4A on the question (Document No. DL/32, page 2, last paragraph) to the effect that an Ad Hoc Group should be set up to consider the justification of additional requirements.

The Chairman said that it would be desirable to use the existing structure of the Conference to deal with the problem of additional requirements.

The delegate of Australia said it should be acknowledged that mistakes or omissions had been made and that all countries should have an opportunity to correct them. Consequently, all so-called "late" submissions should be dealt with on an equal footing.

The Chairman of the Conference observed that the number of requests he had received for additions had decreased considerably since the establishment of the Mediation and Liaison Groups of the three regional Working Groups. That being so, the Committee might wish to give favourable consideration to the possibility of referring the study of such requests to the Mediation and Liaison Groups.

The delegate of Liberia said it would be interesting to know what progress had been made in dealing with the problem during the period which had elapsed since the issue of the four documents introduced earlier in the meeting.

The delegate of Australia supported the suggestion by the Chairman of the Conference.

The delegate of the Byelorussian Soviet Socialist Republic said that no Plan would be achieved if requirements submitted after the deadline were admitted. He supported the U.S.S.R. proposal.

The delegate of the Federal Republic of Germany said that no action was needed on the documents before the Committee or on requirements submitted after the beginning of the Conference, since the Plenary had already decided that planning work should start with stations in service including the Africa Plan.

The delegate of Japan said that on reflection he would support the suggestion made by the Chairman of the Conference: any minor requirements could be negotiated by the countries concerned.

The delegate of the United Kingdom, amending his earlier suggestion, said that he would support what had been said by the Chairman of the Conference. The proposals referred to the Joint Mediation and Liaison Group should be dealt with in accordance with the recommendations in Document No. 95.

The delegates of New Zealand and the U.S.S.R. agreed with the United Kingdom delegate.

The delegate of Algeria supported the Chairman. The decision already adopted by the Plenary was set out in Document No. 110. Additional requirements should be considered as each channel was dealt with.

The Chairman proposed that the procedure laid down in Document No. 110 be followed and that each case should be dealt with within the existing Committee machinery.

It was so agreed.

3. LPC questions (Document No. DT/32)

The Chairman of Working Group 4/LPC said that Document No. DT/32 had not yet been discussed by the Working Group. The figures in paragraphs 1.1 and 1.2 were provisional: numerous changes had already been considered in the Planning Groups which had not been taken into account. The figures would be revised soon.

The possible transfer of low power stations (e.m.r.p. ≤ 1 kW) to an LPC would depend on the situation in the country concerned.

Paragraph 1.3 of the Document listed stations still on LPCs but with a power greater than 1 kW. The transfer of two had been initiated but not concluded. The station for Morocco with I.F.R.B. Serial No. 2806 could be deleted as the transfer had been concluded.

In paragraphs 2 and 3 he had outlined the approach which the Working Group might adopt by initiating coordination procedures, whenever necessary, according to the principles laid down in paragraph 9.6 of the First Session's Report.

Working Group 5B would adapt values for coordination distance in the table on page 33 of the First Session's Report, taking account of the fact that the three frequencies chosen as LPCs were situated at the upper end of the MF band while the propagation curves in the table on page 34 were valid for 1 MHz.

Such preparatory work would not exclude the introduction of stations into LPCs later according to the simplified procedure already agreed upon.

He proposed that Committee 4 should provide Committee 5 with a list of coordinated stations in LPCs and a list of those LPC stations which were required by administrations but which had not been coordinated at the Conference. They could be included by Committee 5 when drafting the final version of the Plan.

The Chairman said that the Committee might recommend to administrations the transfer of low-power stations to LPCs every time they found that possible. Document No. DT/32 showed the possibilities of such transfers. Approximately half the stations were in LPCs mainly because planning work had been concentrated on high-power stations.

The delegate of Australia said that if the Chairman meant to make it mandatory that transmitters of 1 kW or less should be transferred to LPCs, he could not agree.

The Chairman said that a recommendation might be made to administrations to make such a transfer when they found it possible and reasonable. LPCs ought to be adequately used. There was no need to make the transfer mandatory.

The delegate of Australia, speaking as Chairman of Working Group 4/10, said that some countries still had requirements listed as LPCs for which they had not specified frequencies, apparently being unaware of the need to do so.

Frequencies 1 485 kHz, 1 584 kHz and 1 602 kHz had been designated as low-power channels (LPC). The transfer of "LPC requirements" into these channels had not been done automatically as some people mistakenly believed. The Planning Groups concerned were waiting for countries to declare their preferred choice of LPC and if these were received the work could be completed within the next few days.

The Chairman's proposal was adopted.

The Chairman proposed that stations of more than 1 kW should be removed as a matter of urgency from the LPC channels to other channels. High-power stations occupying LPCs could be reduced in power or the frequency could be changed.

The delegate of Australia, speaking as Chairman of Working Group 4/10, said that difficulties might arise over certain high-power stations in LPCs. It had been proposed that they might go over to 1 kW within fourteen years.

The Chairman pointed out that the Committee had decided against allowing any exceptions.

The delegate of Australia referred to the clause of exception sought by some delegations (Document No. DT/14, paragraph 6) and to the proviso concerning the different conditions of the countries in Regions 1 and 3 mentioned in paragraph 9.1 of the Report of the First Session, and said that Australia was a special case. It would be unreasonable to impose on that country the same conditions as on others in Regions 1 and 3. Australia had stations with powers of a higher level which would not cause interference greater than a 1 kW level.

Australia should be exempt from the proposed limitation.

The Chairman of Working Group 4/LPC said that the clause of exception was referred to in the Working Group's Report (Document No. 44, paragraph 7), but as would be seen from page 4 of the summary record of the Committee's third meeting (Document No. 98), it had been decided that there should be no exceptions to the provisions of the First Session's Report.

The delegate of Sweden said that Australia's requirements could be met under Rule 115 of the Radio Regulations.

The delegate of Australia said that if Australia were permitted to operate transmitters in excess of 1 kW on LPCs, provided that caused no interference, that would be satisfactory.

The Chairman noted that there seemed to be no support for the Australian position.

The delegate of Australia said that in that case he would have to reserve his position.

The Chairman concluded that the Committee was in favour of urging administrations to remove stations of over 1 kW to other channels.

It was so agreed.

The Chairman said that the LPC Working Group, with the assistance of the I.F.R.B., would start its work of coordination in accordance with the provisions of the First Session's Report.

The Chairman of the I.F.R.B. observed that Working Group 5B had examined paragraph 9.6.2.2 of the Report of the First Session and had noted that the basis of calculation in that paragraph should be changed to 1.5 MHz, now that LPC had been introduced into the upper part of the band. The table on page 33 and the graph on page 34 required to be modified accordingly, and the United Kingdom delegation had offered to submit the relevant figures. That work had now become urgent, in order to enable the LPC Working Group to begin its activities.

The delegate of Italy pointed out that the table on page 33 only affected modifications which could be made after the Conference and that priority should therefore be given to changing the graph on page 34.

The delegate of the United Kingdom said that the modifications would be ready for the LPC Group's next meeting.

The Chairman pointed out that the work of the LPC Working Group would result in two lists, one of stations coordinated in the planning procedure and the other of stations not thus coordinated. He suggested that the possibility of later submissions in accordance with the modification procedure should be made available.

It was so agreed.

The delegate of Australia said that, since frequency 1 593 kHz lying between two of the LPCs, had an adjacent channel protection ratio of 20 dB, high-power stations operating on 1 593 kHz might interfere with channels 1 602 kHz or 1 584 kHz, thus making LPC operation less useful than the Conference hoped it would be. Accordingly, the power to be used on that channel might be examined with a view to its possible limitation.

The Chairman suggested that the needs of LPCs should be taken into account as far as possible by the Planning Groups, especially by Working Group 4/10, with due consideration for the parameters recommended at the First Session.

It was so agreed.

4. Computer print-outs - computations of 27 October 1975

In reply to the delegate of Denmark, who considered that the calculations made by the I.F.R.B. on 27 October in accordance with the decision of Committee 4 seemed to be more theoretical than practical in using an antenna length of half a wavelength, the Chairman of the I.F.R.B. said that the problem probably arose from the fact that the rule proposed by the French Delegation had been applied to both MF and LF and that its application to LF had caused difficulties. As some African delegates had pointed out, the method of calculation would probably have to be revised to show a theoretical antenna gain as a function of physical height, not of an approximate rule. The I.F.R.B. would try to introduce the necessary change into the programme for the following week's calculations.

5. Day-time operation

The Chairman proposed than an Ad Hoc Group of experts should be set up to prepare a report on day-time operation, on the basis of all documents on the subject. The group should consist of delegates of Italy, the Federal Republic of Germany, India and Yugoslavia, which had all submitted relevant documents, and of two or three other experts, including the C.C.I.R. Secretariat.

It was so decided.

The delegate of New Zealand said that his Delegation wished to be represented on the Group.

The delegate of India, supported by the delegate of New Zealand, nominated the delegate of the Federal Republic of Germany as Convenor of the Group.

The delegate of the Federal Republic of Germany accepted the nomination.

The meeting rose at 2235 hours.

The Acting Secretary :

A. MATTHEY

The Chairman :

V. ŽAGAR

Annex : 1

A N N E X

CORRECTIONS TO THE SUMMARY RECORD OF THE THIRD MEETING
OF COMMITTEE 4 (DOCUMENT No. 98)

Page 5

Delete the second part of the penultimate paragraph (intervention by the delegate of Italy), so that the sentence ends after the word "acceptable".

Page 6

In the first paragraph, invert the figures "1 584" and "1 593".

Page 8

In the final paragraph, amend the last sentence to read :
"In a spirit of cooperation, however, and without formally giving up the reservation expressed in the Working Group, he accepted the compromise proposal on the fixed understanding that an acceptable alternative frequency could be found."

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 149-E(Rev.1)

11 November 1975

Original : English

PLENARY MEETING

Note by the Secretary-General

DOCUMENT No. 128, SECOND REPORT OF WORKING GROUP 5A, ANNEX 1

The attached Note by the C.C.I.R. Secretariat is submitted to the Conference.

M. MILI

Secretary-General

Annex : 1 (with 1 Annex)



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A N N E X 1

Note by the C.C.I.R. Secretariat

DOCUMENT No. 128, SECOND REPORT OF WORKING GROUP 5A, ANNEX 1

Annex 1 to Document No. 128 contains a Recommendation addressed to the C.C.I.R. requesting that this organ should prepare a handbook of radiation diagrams of antennae usable in the LF/MF broadcasting service, supplemented by the results of measurements of the radiation diagrams of real antennae.

Since a new antenna handbook is already in course of production, it is thought that the Recommendation would more realistically represent the present state of the problem if it were to be modified on the lines suggested in the Annex to this Document.

Annex : 1

Annex

Draft Recommendation

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

considering

- that the calculation criteria adopted at the First Session of the Conference and contained in their essentials in Annex ... to the Agreement require a knowledge of the antenna gain in the direction of propagation;
- that the presentation of antenna patterns in the Plan would be complex and cumbersome;
- that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae;
- that a handbook of radiation diagrams of directional antennae that can be used in the LF/MF broadcasting service is at present in production by the C.C.I.R. Secretariat in accordance with C.C.I.R. Recommendation 414 and Resolution 59;
- that it would be useful for measured values of the radiation diagrams of antenna arrays to be available for comparison with the calculated radiation diagrams,

requests

Administrations to communicate to the Director, C.C.I.R.
all information they may have resulting from measurements on this subject.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 149-E

10 November 1975

Original : English

COMMITTEE 5

C.C.I.R. Secretariat

DOCUMENT No. 128, SECOND REPORT OF WORKING GROUP 5A, ANNEX 1

Annex 1 to Document No. 128 contains a Recommendation addressed to the C.C.I.R. requesting that this organ should prepare a handbook of radiation diagrams of antennae usable in the LF/MF broadcasting service, supplemented by the results of measurements of the radiation diagrams of real antennae.

Since a new antenna handbook is already in course of production, it is thought that the Recommendation would more realistically represent the present state of the problem if it were to be modified on the lines suggested in the Annex to this Document.

Annex : 1



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A N N E X 1

DRAFT RECOMMENDATION

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

considering

- that the calculation criteria adopted at the First Session of the Conference and contained in their essentials in Annex ... to the Agreement require a knowledge of the antenna gain in the direction of propagation;
- that the presentation of antenna patterns in the Plan would be complex and cumbersome;
- that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae;
- that a handbook of radiation diagrams of directional antennae that can be used in the LF/MF broadcasting service is at present in production by the C.C.I.R. Secretariat in accordance with C.C.I.R. Recommendation 414 and Resolution 59;
- that it would be useful for measured values of the radiation diagrams of antenna arrays to be available for comparison with the calculated radiation diagrams,

requests

Administrations to communicate to the Director, C.C.I.R.
all information they may have resulting from measurements on this subject.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 150-E
14 November 1975LIST OF DOCUMENTS

(Documents 101 to 150)

No.	Origin	Title	Destination
101	W.G. 4A	Report of the Chairman of Working Group 4A "Asia and Pacific Region" to Committee 4. Usable field strength "Target"	C.4
102	W.G. 4C	Second Report by Working Group 4C (Europe) to Committee 4	C.4
103	W.G. 4A	Report of the Chairman of Working Group 4A "Asia and Pacific Region" to Committee 4	C.4
104 + Corr.	France	Modifications to the Plan - Calculation of the increase in usable field strength	W.G. 5B and C.5
105	India	Planning of daytime operations	C.4
106	S.G.	Note by the Secretary-General concerning a letter from the Federal Republic of Germany	PL
107	S.G.	Note by the Secretary-General concerning a letter from France	PL
108	C.3	Summary Record of the Second Meeting of Committee 3	C.3
109	S.G.	Situation concerning expenditure for the Broadcasting Conference at 25 October 1975	C.3
110	Chairman	Note by the Chairman of the Conference - Planning methods (as adopted by the Fourth Plenary Meeting)	PL



No.	Origin	Title	Destination
111	Regional Group 4C	Note by the Chairman of Regional Group 4C (Europe) Elimination of incompatibilities	C.4 and all Groups of C.4
112	C.4	Note by the Chairman of Committee 4 concerning a letter from Saudi Arabia	C.4
113	C.4	Note by the Chairman of Committee 4 concerning a letter from People's Republic of Albania	C.4
114	W.G. 5A	First Report of Working Group 5A	C.5
115	W.G. 4/ Ad Hoc	Report by Working Group 4/Ad Hoc to Committee 4 - Definition of daytime hours of operation	C.4
116	India	Reduction of requirements and power	C.4 and PL
117 (Rev.1)	S.G.	Transfer of Powers (Kingdom of Tonga)	C.2
118	W.G. 5C	First Report of Working Group 5C to Committee 5	C.5
119	PL	Minutes of the Fourth Plenary Meeting	PL
120	C.4	First Report of Committee 4 to the Plenary (being prepared)	PL
121	C.6	Summary Record of the First Meeting of Committee 6	C.6
122	S.G.	Situation concerning expenditure for the Broadcasting Conference at 31 October 1975	C.3
123	S.G.	Cost of printing the Final Acts	C.3

No.	Origin	Title	Destination
124	W.G. 5C	Second and Last Report of Working Group 5C to Committee 5	C.5
125	PL	Note by the Chairman of Committee 5 Explanatory Information about the Abrogation of the European Broadcasting Convention (Copenhagen, 1948)	PL
126	C.4	Second Report of Committee 4	PL and C.5
127	C.5	First Report of Committee 5	PL
128	W.G. 5A	Second Report of Working Group 5A	C.5
129	C.4	Third Report of Committee 4	PL and C.5
130	C.4	Note by the Chairman of Committee 4 concerning letters from the Kingdom of Saudi Arabia	C.4 and all W.G.'s of C.4
131	S.G.	Delegation of Powers (Nauru)	C.2
132	C.3	Summary Record of the Third Meeting of Committee 3	C.3
133	C.4	Note by the Chairman of Committee 4 concerning a letter from Czechoslovakia	C.4
134	W.G./C.2	Second Report by the Working Group of Committee 2	C.2
135	W.G. 5/ Ad Hoc	Report of the Ad Hoc Group	C.5
136	W.G. 5A	Third and Last Report of Working Group 5A	C.5
137	W.G. 5B	Report from Working Group 5B to Committee 5	C.5

No.	Origin	Title	Destination
138	W.G. 4/LPC	Second Report of Working Group 4/LPC to Committee 4	C.4
139	C.4	Summary Record of the Fourth Meeting of Committee 4	C.4
140	C.5	Draft Recommendation concerning the convening of a conference competent to revise the Plan	C.5
141 (Rev.1)	C.5	Draft Resolution concerning the accession to the Agreement of countries not represented at the Conference	C.5
142	C.5	Draft Resolution regarding use of shared LF bands	C.5
143	C.5	Draft Recommendation concerning the elimination of sharing between radiocommunication services	C.5
144	C.5	Draft Recommendation concerning the convening of a conference competent to revise the LF/MF Broadcasting Agreement (Regions 1 and 3) and the annexed Plan	C.5
145	C.4	Fourth Report of Committee 4 - Low Power Stations in the Low Power Channels	PL and C.5
146	C.5	Second Report of Committee 5	PL
147	C.4	Summary Record of the Fifth Meeting of Committee 4	C.4
148	C.4	Summary Record of the Sixth Meeting of Committee 4	C.4
149 (Rev.1)	S.G.	Note by the C.C.I.R. Secretariat - Document No. 128, Second Report of Working Group 5A, Annex 1	PL
150	-	List of documents	-

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 151-E

11 November 1975

Original : English

PLENARY MEETING

Federal Republic of Germany, Belgium, Vatican City State,
Denmark, Spain, France, Greece, Ireland, Italy, Monaco,
Norway, Netherlands, Portugal, United Kingdom and Turkey

CONSIDERATION OF W/KM^2 FORMULA FOR REDUCTION OF REQUIREMENTS

1. The main problem facing the Conference has been the need to reduce the number of frequencies and transmitted power, in order that a valid plan can be produced which satisfies the technical criteria in the Report of the First Session.
2. This has been a common problem both to Western and Eastern Europe. In attempting to find a technical solution several propositions have been advanced and have been discussed by Western European countries with those countries adjacent to their eastern borders through the medium of the European Broadcasting Area Liaison Group. The problem was not made easier by the apparent existence of a coordinated frequency plan for the countries in Eastern Europe. The existence of this plan made the opportunity for negotiation less flexible. In addition it became clear that where the level of Eastern European power was high the raising of powers and consequent interference between Eastern and Western Europe was inescapable. Eastern European countries, including the U.S.S.R. have an overall power density of $22W/km^2$ but those Eastern European countries on the borders of Western Europe have an overall power density of $47W/km^2$.
3. In an endeavour to produce a formula which would enable a Plan to be produced, the Plenary meeting of 29 October adopted a proposal in which power requirements would be judged qualitatively on the basis of W/km^2 . This was to be studied in the regional groups, it being specified that this would take into account the situation in each country. This was also considered in the European Liaison Group and an overall reduction to $20W/km^2$ for both Eastern and Western Europe was proposed. The reduction in power involved in adherence to such a formula presented very grave problems for Western European nations, in particular because, if the formula was applied on a sub-area basis only, the inequity dealt with in the previous paragraph left them at a



serious disadvantage. Nevertheless in an endeavour to provide a basis for a Plan to be drawn up the Western European countries offered to reduce power in accordance with a $20W/km^2$ formula by night on a country by country basis, so long as there was a reciprocal agreement by the countries of Eastern Europe, and allowing for the situation of some countries (in particular very small countries and countries comprising many islands) to be looked at flexibly, in line with the decision of the Plenary.

4. This offer was rejected. A further compromise offer to make special provision for adjoining countries on the borders of Western and Eastern Europe at a higher level of $30W/km^2$, was also rejected. Reasons for these rejections were sought, but no adequate explanation, other than the lateness of the proposal, was offered. While it is accepted that there is little time left, it is nevertheless true that no other acceptable formulae have been put forward within the scope of the formula endorsed by the Plenary.

5. This central difficulty is obstructing progress towards a Plan. While Western European countries are continuing to plan on a bilateral basis and some fruitful progress has been made on a limited scale, the prospects for a valid Plan have been much diminished. While the Western European countries remain ready to continue negotiations on any basis within the scope of decisions taken so far, the conference is invited to take into consideration the difficulty that has arisen in the European Liaison Group, and press for a resolution of the problems along the lines suggested in paragraphs 3 and 4.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 152-E

11 November 1975

PLENARY MEETING

B.1

1st SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE
TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first
reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C5	127	Annex 1 : Title Columns of the Plan Information included in the columns of the Plan
		Resolution A : Relating to the determination of the service areas of the stations in the Plan

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 to 6



A N N E X 1

OF THE

REGIONAL AGREEMENT CONCERNING THE USE BY
THE BROADCASTING SERVICE OF FREQUENCIES
IN THE MEDIUM FREQUENCY BANDS IN REGIONS 1 AND 3
AND IN THE LOW FREQUENCY BANDS IN REGION 1

PLAN D'ASSIGNATIONS DE FREQUENCE AUX STATIONS DE RADIODIFFUSION DANS LES BANDES DES ONDES HECTOMETRIQUES (A L'EXCEPTION DES STATIONS UTILISANT LES CANAUX
POUR EMETTEURS DE FAIBLE PUISSANCE) DANS LES REGIONS 1 ET 3 ET DANS LES BANDES DES ONDES KILOMETRIQUES DANS LA REGION 1
PLAN FOR THE ASSIGNMENT OF FREQUENCIES TO BROADCASTING STATIONS IN THE MEDIUM FREQUENCY BANDS (OTHER THAN TO STATIONS USING LOW-POWER CHANNELS)
IN REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1
PLAN DE ASIGNACIÓN DE FRECUENCIAS A LAS ESTACIONES DE RADIODIFUSIÓN EN LAS BANDAS DE ONDAS HECTOMÉTRICAS (EXCEPTO LAS ESTACIONES QUE UTILIZAN LOS CANALES DE
BAJA POTENCIA) EN LAS REGIONES 1 Y 3 Y EN LAS BANDAS DE ONDAS KILOMÉTRICAS EN LA REGIÓN 1

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	Rayonnement autorisé Authorized radiation Radiación autorizada		Limitations de rayonnement Restrictions on radiation Limitaciones de radiación (Pour antennes directives seulement) (For directional antennae only) (Sólo para antenas directivas)		Antenne Antenna Antena		Conductivité du sol (mS/m)	Horaire de fonctionnement (TMG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Rayonnement maximal Maximum radiation	Azimet de rayonnement maximal Azimuth of maximum radiation	Azimuts définissant le secteur à rayonnement limité Azimuths defining the sector of limited radiation	Rayonnement maximal dans le secteur Maximum radiation in the sector	Type	Hauteur Height	Ground Conductivity (mS/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Radiación máxima (dB)	Acimut de radiación máxima	Acimuts que definen el sector con radiación limitada	Radiación máxima en el sector (dB)	Tipo	Altura (m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

INFORMATION INCLUDED IN THE COLUMNS OF THE PLAN

- Column 1 : Channel frequency (kHz).
Channel number; this number is shown in brackets.
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in degrees and minutes.
- Column 5 : Necessary bandwidth (kHz); the value in kHz is preceded by the symbol A, B, C or D indicating the curve in Figure ... in Annex ... that is to be employed in calculating the usable field strength (see paragraph ... in Annex ...).
- Column 6 : Carrier power (kW)
- Column 7 : Maximum radiation in dB relative to 300 V c.m.f. or 1 kW e.m.r.p. / determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses /.
- Column 8 : Azimuth of maximum radiation in degrees (clockwise) from True North.
- Column 9 : Azimuths defining the sector of limited radiation in degrees (clockwise) from True North.
- Column 10 : Maximum radiation in the sector, in dB relative to 300 V c.m.f. or 1 kW e.m.r.p. / determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses /.
- Column 11 : Type of antenna. The symbol A indicates a simple vertical base-fed antenna and the symbol B any other type of antenna described in Appendix / A / to the Plan.
- Column 12 : Height (metres) for a simple vertical antenna only.

- Column 13 : Ground conductivity (in millisiemens/metre).
- Column 14 : Hours of operation (GMT) in hours and minutes, e.g., 0730 - 1800, 0000 - 2400 or 0500 - 0230.
- Column 15 : Remarks indicated by symbols which are explained in Appendix / B / to the Plan.

RESOLUTION A

relating to the determination of the service areas
of the stations in the Plan

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

that the work of the Conference has been based on calculations made
of the usable field strength of each frequency assignment in the direction
of the main interfering transmitter;

considering

- a) that it may be useful to know the contours of the service areas
resulting from the Plan;
- b) that time did not permit such contours to be determined during
the Conference;

instructs the I.F.R.B.

to prepare for publication by the Secretary-General a document
indicating, in 18 azimuths around each of the stations included in the Plan
when its power is equal to or greater than 20 kW or when a directional
antenna is used, the following values :

- the usable field strength of the ground wave by day and the
corresponding distance,
- the usable field strength of the ground wave by night and the
corresponding distance,
- the usable field strength of the sky wave and the corresponding
distance.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 153-E

11 November 1975

Original : French

English

Spanish

COMMITTEE 5

DRAFT RESOLUTION ...

relating to bandwidth saving modulation systems

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) the improved efficiency in the use of the LF and MF frequency bands that might be achieved by the application of bandwidth saving modulation systems;
- b) the difficulties associated with transmitters and receivers, and with frequency planning if transition to bandwidth saving modulation systems is contemplated;

invites

the C.C.I.R. to expedite its studies of bandwidth saving modulation methods with particular reference to the technical, operational and economic aspects of single-sideband and independent sideband modulation, taking into account the problems of compatibility with existing receivers;

resolves

to request the next competent World Administrative Radio Conference to decide, in the light of the results of the C.C.I.R. studies, on the feasibility of introducing such techniques in the LF/MF broadcasting service.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 154-E

11 November 1975

Original : Russian

PLENARY MEETING

Byelorussia, Bulgaria, Hungarian People's Republic, People's Republic
of Poland, German Democratic Republic, Ukrainian S.S.R., Roumania,
Czechoslovakia and U.S.S.R.

URGENT MEASURES DESIGNED TO COMPLETE WORK ON THE ELABORATION OF THE PLAN

The Second Session of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), which is to prepare an International Agreement and Plan for the allocation of frequency channels for the coming 14 years, has now entered its final phase.

The above countries are guided strictly by the general principles and technical criteria adopted at the Conference's First Session which are based on the sovereign right of each country to plan the development of its broadcasting network and on the need to take the particular interests of the developing countries into account.

Application of these generally recognized principles in planning must ensure the compatibility of the requirements of all countries concerned.

We have submitted technically justified requirements and, as had been generally agreed, have not presented any documents which might divert the Conference from concentrating on its main task.

During the Second Session, after the decision was adopted to limit the term of validity of the Agreement, we amended our requirements, completely freeing some frequency channels and reducing the power of certain transmitters.

In addition, we have used all technical facilities recommended by the Conference, including synchronized networks, directional antennae, reduction of the emission band and so on.



We deem it necessary to inform the Conference of the fact that all countries which have signed this Document have mutually coordinated their requirements for the forthcoming Plan and have also coordinated their requirements with many other countries participating in the Conference.

At the same time, we share the concern of many delegations at the fact that so far it has not been possible to achieve a general reduction of the number of requirements and powers of stations and, what is more, that some Western European countries have submitted additional requests for the increase of transmitter powers. Also, the fact that the frequency bands are limited natural resources has not been understood.

At the present juncture, the success of the Conference largely depends on the coordination of frequency requirements among the countries of Eastern and Western Europe, where both objective and subjective difficulties exist. Many of the countries concerned, which have a large network of broadcasting stations operating with considerable powers experience certain difficulties in planning, which must be taken into account. There is no need to aggravate these difficulties. Today, the power density per km^2 in the Eastern and Western European countries is about the same. However, the Western European countries are asking for an increase of the order of 75 MW, the Eastern European countries of 35 MW.

Even more unjustified are the attempts to provide in the Plan channels for broadcasting stations intended for commercial and other purposes, the number and power of which is increasing, despite the limited possibilities of the spectrum which were referred to above.

Having regard to the urgent need for a realistic Plan taking the interests of all countries of Regions 1 and 3 into account and to the difficulties experienced by some delegations, we are prepared, on the basis of the decisions of the Conference's First Session and of Document No. 110, to limit the mean power density at the regional European level to a value not exceeding 20 W per km^2 , having in mind that the value will be calculated for the countries of Eastern Europe as a whole on the one hand and for Western Europe on the other and that this will lead to a real reduction in the level of interference in the channels used.

This proposal was made at a meeting of the European Regional Liaison Group by the representative of the North African Region.

We have previously not submitted any criteria in terms of figures, because we considered the decisions of the First Session, which were confirmed at the Second Session, to be adequate and universally acceptable.

In presenting the above proposal, we reserve the right to adhere strictly to the decisions adopted previously by the Conference, if our proposal continues to fail to receive the support of delegations of the Western European countries.

We are convinced that, having regard to the provisions of the Final Act of the Conference on Security and Cooperation in Europe (Helsinki, 1975), we can and must prepare an Agreement and a Plan for the allocation of frequencies which will raise the cultural and educational levels among the peoples of all countries of Regions 1 and 3 and thus help to strengthen peace and friendship among peoples.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 155-E

11 November 1975

Original : French

PLENARY MEETING

FINAL PROTOCOL

For the Kingdom of Morocco :

Among the frequency requirements dealt with by the Conference, the delegation of the Kingdom of Morocco has noted, on the one hand, two assignments for El Ayoun and two for Villa Cisneros and, on the other hand, two assignments for Sebta and Melillia submitted by Spain.

The Moroccan delegation fully supports the principle adopted at the First Session of the Conference that all countries, large and small, have equal rights.

The Moroccan delegation bears in mind the efforts made by the Kingdom of Morocco in its approaches to Spain and to the appropriate international authorities to restore to Morocco its lawful rights to the parts of its territory which remain under Spanish domination.

The delegation of the Kingdom of Morocco, aware of the purely geographical nature of radio frequency assignments, declares that its participation in the preparation of the present Plan for Regions 1 and 3 and its acceptance of the frequency assignments for the stations of El Ayoun, Villa Cisneros, Sebta and Melillia in no way signifies a renunciation of the claims formulated by the Government of the Kingdom of Morocco to the parts of its territory in which these stations are situated.

Jamal Eddine TANANE
Head of the Moroccan delegation



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 156-E

11 November 1975

PLENARY MEETING

B.2

2nd SERIES OF TEXTS SUBMITTED BY THE
EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for first reading :

<u>Source</u>	<u>Document</u> <u>No.</u>	<u>Title</u>
C5	146	Preamble
		Art. A Frequency bands
		Art. B Definitions
		Art. C Execution of the Agreement
		Art. D Accession to the Agreement
		Art. E Termination of participation in the Agreement
		Art. F Effective date of the Agreement
		Art. G Scope of application of the Agreement
		Art. H Approval of the Agreement
		Art. I Duration of the Agreement
		Art. J Special Arrangements
		Final Formula
		<u>Recommendation AA</u>
		Relating to the Publication of a Handbook of Radiation Diagrams of Directional Antennae for the use of the Broadcasting Service
		<u>Recommendation BB</u>
		Relating to Methods of Predicting Sky-Wave Propagation

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 to 8



REGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

PREAMBLE

With the object of facilitating relations, mutual understanding and cooperation in the field of LF/MF broadcasting;

with a view to improving the use of the frequency bands allocated to the broadcasting service in order to ensure satisfactory reception of the broadcasting service for all countries;

recognizing that all countries large and small have equal rights and that the needs of all countries and in particular the needs of the developing countries shall be fulfilled as far as possible in the implementation of this agreement;

the delegates of the following Members of the International Telecommunication Union, meeting in Geneva for a Regional Administrative Conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973), have adopted, subject to the approval of their respective competent authorities, the following provisions relating to the broadcasting service in Regions 1 and 3 for the medium frequency bands and in Region 1 for the low frequency bands.

ARTICLE / A /Frequency bands

The provisions of the present Agreement apply to the frequency bands between 150 and 285 kHz and between 525 and 1 605 kHz allocated to the broadcasting service under Article 5 of the Radio Regulations.

ARTICLE / B /Definitions

For the purposes of the present Agreement, the following terms shall have the meanings defined below :

Union : The International Telecommunication Union;

Secretary-General : The Secretary-General of the Union;

I.F.R.B. : The International Frequency Registration Board;

C.C.I.R. : The International Radio Consultative Committee;

Convention : The International Telecommunication Convention;

Radio Regulations : The Radio Regulations;

Regions 1 and 3 : The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations, Geneva, 1959;

Agreement : The whole of the present Agreement including the Plan and the other annexes;

Plan : The Plan forming Annex to the Agreement;

Contracting Member : Any Member of the Union which has approved or acceded to the Agreement;

Administration : Any governmental department or service responsible for discharging the obligations undertaken in the Convention and the Radio Regulations.

ARTICLE / C /Execution of the Agreement

1. The Contracting Members shall adopt, for their broadcasting stations operating in Regions 1 and 3 in the frequency bands referred to in the Agreement, the characteristics specified in the Plan.
 2. The Contracting Members shall not bring assignments complying with the Plan into use, change the technical characteristics of stations specified in the Plan, or bring new stations into use, except under the conditions set out in Articles and of the present Agreement.
 3. The Contracting Members shall endeavour to agree on the action required to reduce any harmful interference caused by the application of the Agreement.
-

ARTICLE / D /Accession to the Agreement

1. Any Member of the Union in Regions 1 and 3 which has not signed this Agreement may accede thereto at any time. Such accession shall extend to the Plan as amended at the time of the accession and shall be made without reservation. The Secretary-General shall be notified thereof, and he shall inform the other Members of the Union.
2. Accession to the Agreement shall take effect on the date on which the notification of accession is received by the Secretary-General.

ARTICLE / E /Termination of participation in the Agreement

1. Any Contracting Member shall have the right at any time to terminate its participation in the Agreement by a notification sent to the Secretary-General, who shall inform the other Members of the Union.
2. Such termination of participation shall take effect after a period of one year from the date of receipt, by the Secretary-General, of the said notification.

ARTICLE / F /Effective date of the Agreement

The Agreement shall enter into force on
at hours G.M.T.

ARTICLE / G /Scope of application of the Agreement

1. The present Agreement shall bind Contracting Members in their relations with one another but does not bind those Members with respect to non-Contracting countries.
2. If a Member makes reservations with regard to any provision of the present Agreement, other Members shall be free to disregard that provision in their relations with the Member which has made such reservations.

ARTICLE / H /Approval of the Agreement

Members shall notify their approval of this Agreement, as promptly as possible, to the Secretary-General who shall at once inform the other Members of the Union.

ARTICLE IDuration of the Agreement

1. The Agreement and the annexed Plan have been established with a view to meeting the requirements of the broadcasting services in the bands concerned for a period of .. years from the date of entry into force of the Agreement.
2. The Agreement shall remain in force until it is revised by a competent Conference of the Members of the Union in Regions 1 and 3, convened in accordance with the procedure specified in the Convention in force.

ARTICLE JSpecial Arrangements

In addition to the procedures provided for in Article I of the Agreement and to facilitate their application with a view to improving the utilization of the Plan, Contracting Members may conclude special arrangements in accordance with the pertinent provisions of the Convention and of the Radio Regulations.

In witness whereof, the Delegates of the Members of the Union mentioned above have, on behalf of their respective competent authorities, signed the present Agreement in a single copy in the Chinese, English, French, Russian and Spanish languages, in which, in case of dispute, the French text shall prevail. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member in Regions 1 and 3.

Done at Geneva,

RECOMMENDATION AA

Relating to the Publication of a Handbook of Radiation Diagrams
of Directional Antennae for the Use of the Broadcasting Service

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the calculation criteria adopted at the First Session of the Conference, the essentials of which are contained in Annex ... to the Agreement, require a knowledge of the antenna gain in the direction of propagation;
- b) that the inclusion of antenna patterns in the Plan would be a complex task and would make the Plan a cumbersome document;
- c) that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae,

recommends the C.C.I.R.

to prepare, for publication, a handbook describing the radiation diagrams of the directional antennae that can be used in the LF/MF broadcasting service, together with the measured radiation patterns of complex antennae,

requests

administrations to communicate to the Director of the C.C.I.R.
all the results they may have of relevant measurements.

RECOMMENDATION BB

Relating to Methods of Predicting Sky-Wave Propagation

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

that the methods of predicting sky-wave propagation used in
drawing up the Plan may be improved in the future;

recommends to administrations

that in their bilateral negotiations on modifications to the
Plan, they use the methods most recently adopted by the C.C.I.R. for
predicting sky-wave propagation or any other methods on which they may
agree.

INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Document No. 157-E
12 November 1975
Original : English

COMMITTEE 5

Federal Republic of Germany

RESOLUTION

Regarding the provisional use of bandwidth saving modulation systems

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva 1975,

noting

- a) that the C.C.I.R. is invited to study bandwidth saving modulation methods with particular reference to the technical, operational and economic aspects of single sideband and independent sideband modulation;
- b) that the next competent World Administrative Radio Conference is requested to decide, in the light of the results of the C.C.I.R. studies, on the feasibility of introducing such techniques in the LF/MF broadcasting service;
- c) that the "Technical Data used in the preparation of the Plan and to be used in the application of the Agreement" have been established for systems with double sideband amplitude modulation with full carrier (A3);

considering

- a) that the decisions taken by the next W.A.R.C. could not generally be introduced before the next revision of the LF/MF Broadcasting Agreement (Regions 1 and 3);
- b) that it would be advantageous, however, to gain experience at a limited scale before the next Planning Conference concerning the LF/MF broadcasting service;



c) that such activities would encourage manufacturers to develop broadcast receivers usable for such advanced classes of emission for the LF/MF bands;

resolves

a) that broadcasting stations may provisionally use other classes of emission (bandwidth saving modulation methods) on condition that interference in the same or adjacent channels concerned caused by other than double sideband modulation does not exceed the interference resulting from the application of double sideband modulation with full carrier (A3);

b) that an Administration planning such activities shall inform the I.F.R.B., which shall publish the information received in the special section of the weekly circular.

INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Document No. 158-E(Rev.1)
13 November 1975
Original : French
English
Spanish

COMMITTEE 5

Mauritania (Islamic Republic of)

DRAFT RESOLUTION

relating to the part of the Agreement concerning
the LF Plan

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

noting

- a) that the World Administrative Radio Conference to be held in 1979 may modify the conditions governing the use of the 150-285 kHz band in Region 1;
- b) that this frequency band is not allocated to broadcasting in part of Region 1;
- c) that no measures have been adopted to provide information on the possibilities of using the LF band in the African Broadcasting Area;
- d) that, apart from one or two cases, no country in the African Broadcasting Area has submitted any requirement in this band;

considering

that this should not be interpreted to mean that these countries are willing to forego the use of this band for broadcasting;

resolves

- 1) that, if one of the Contracting Members in the African Broadcasting Area proposes to bring a broadcasting station into service in the 150-285 kHz band in accordance with the Radio Regulations, the procedure laid down in Article / 3 / shall be applied;
- 2) that administrations shall endeavour to find a solution meeting the needs thus expressed, particularly by accepting an increase of the usable field strength above the value laid down in Article / 3 /, paragraph / 3.2.5 / of the Agreement.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 158-E

12 November 1975

Original : French

COMMITTEE 5

Mauritania (Islamic Republic of)

DRAFT RESOLUTION

relating to the part of the Agreement concerning

the LF Plan

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

noting

- a) that the next world conference to be held in 1979 may modify the conditions governing the use of the 150-285 kHz band in Region 1;
- b) that this frequency band is not allocated to broadcasting in part of Region 1;
- c) that no measures have been adopted to provide information on the possibilities of using the LF band in the African Broadcasting Area;
- d) that, apart from one or two cases, no country in the African Broadcasting Area has submitted any requirement in this band;

considering

that this should not be interpreted to mean that these countries are willing to forego the use of this band for broadcasting;

resolves

- 1) that, if one of the countries of the African Broadcasting Area having signed the Agreement proposes to bring a broadcasting station into service in the 150-285 kHz band in accordance with the Radio Regulations, the procedure laid down in Article / 3 / shall be applied;
- 2) that administrations shall endeavour to find a solution meeting the needs thus expressed, particularly by accepting an increase of the usable field strength above the value laid down in Article / 3 /, paragraph / 3.2.5 / of the Agreement.



INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Corrigendum to
Document No. 159 (Rev. 1.)-E
16 November 1975
Original: English

PLENARY MEETING

Corrigendum to the
THIRD REPORT OF COMMITTEE 5

Kindly replace page 5 by the attached page.

A. PETTI
Chairman of Committee 5



A N N E X 2

DATA TO BE ENTERED IN THE COLUMNS OF THE TABLE IN ANNEX 1

- Column 1 : Channel frequency (kHz)
(Channel number).
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in degrees and minutes.
- Column 5 : Necessary bandwidth (kHz); the value in kHz is to be preceded by the symbol A, B, C or D indicating the protection ratio to be employed in calculating the usable field strength.
- Column 6 : Carrier power (kW)
- Column 7 : Effective monopole radiated power (kW)
- Column 8 : Height for a simple vertical antenna (metres).
- Column 9 : Ground conductivity (s/m).
- Column 10 : Hours of operation (GMT); use the symbol H24 for 24 hour transmission, and indicate a particular schedule by the time of the beginning and the end of transmission (e.g. 00 - 18) in other cases.
- Column 11 : Remarks

3 This assignment is to be co-ordinated (see
Resolution No.)

4/... Co-ordination of this assignment has been
successful with /... .., however it is still to
be completed with other countries.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 159-E(Rev.1)

17 November 1975

Original : English

PLENARY MEETING

THIRD REPORT OF COMMITTEE 5

Subject discussed : Stations in low-power channels

Committee 5 decided that all assignments in low-power channels should be included in an Appendix to the Plan. These assignments will be grouped in two categories :

- a) those which did not require coordination and those which have been coordinated;
- b) those which it has not been possible to coordinate during the Conference. A symbol in the Remarks column will indicate, if appropriate, with which country(ies) agreement has been achieved.

In the presentation the columns and headings of the Plan will be used, but columns 7, 8, 9 and 10 will be replaced by a single column containing the effective monopole radiated power in kW and column 11 will be deleted.

The draft texts are reproduced in the Annexes.

A. PETTI

Chairman of Committee 5

Annexes 1 and 2



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ANNEXE 1 - ANNEX 1 - ANEXO 1COLONNES DU PLAN - COLUMNS OF THE PLAN - COLUMNAS DEL PLAN

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	Puissance apparente rayonnée d'une antenne simple (p.a.r.v.) (kW)	Hauteur de l'antenne	Conductivité du sol (S/m)	Horaire de fonctionnement (TMG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Effective monopole radiated power (e.m.r.p.) (kW)	Antenna height	Ground Conductivity (S/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo designativo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Potencia radiada aparente (p.r.a.v.) (kW)	Altura de la antena	Conductividad del suelo S/m)	Horario de funcionamiento (TMG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11

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A N N E X 2

DATA TO BE ENTERED IN THE COLUMNS OF THE TABLE IN ANNEX 1

- Column 1 : Channel frequency (kHz)
(Channel number).
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in
which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in
degrees and minutes.
- Column 5 : Necessary bandwidth (kHz); the value in kHz is to be
preceded by the symbol A, B, C or D indicating the protection
ratio to be employed in calculating the usable field strength.
- Column 6 : Carrier power (kW)
- Column 7 : Effective monopole radiated power (kW)
- Column 8 : Height for a simple vertical antenna (metres).
- Column 9 : Ground conductivity (s/m).
- Column 10 : Hours of operation (GMT); use the symbol H24 for 24 hour
transmission, and indicate a particular schedule by the time
of the beginning and the end of transmission (e.g. 00 - 18)
in other cases.
- Column 11 : Comments.

The symbol "coord" indicates that it has not been possible to examine or obtain agreement of the other administrations concerned during the Conference. If the symbol "coord" is followed by (a) country symbol(s) it indicates those countries with which agreement has been achieved but coordination is not yet completed.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Corrigendum No. 1 to

Document No. 159-E

14 November 1975

Original : French
English
Spanish

PLENARY MEETING

THIRD REPORT OF COMMITTEE 5

Concerns only the French text.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 159-E

13 November 1975

Original : French

PLENARY MEETING

THIRD REPORT OF COMMITTEE 5

Subject discussed : Stations in channels for low-power transmitters

Committee 5 decided that all assignments to stations in channels for low-power transmitters should be included in an annex to the Plan. These assignments will be grouped in three categories :

- a) those which did not require coordination;
- b) those which have been coordinated;
- c) those which it has not been possible to coordinate during the Conference.

A symbol in the Remarks column will indicate to which of these three categories the assignments belong.

In the presentation the columns and headings of the Plan will be used, but columns 7, 8, 9 and 10 will be replaced by a single column containing the effective radiated power.

A. PETTI
Chairman of Committee 5



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 160-E(Rev.1)

14 November 1975

Original : English

COMMITTEE 5

Report of the Ad Hoc Group

As requested by the Chairman of Committee 5, a meeting was held with the delegates of Mauritania and Liberia to resolve the points raised in Committee 5 on 11 November about the arrangements proposed in Document No. 135 for abrogating the Regional Agreement for the African Broadcasting Area, Geneva, 1966.

Proposals based on a unanimous decision of the African delegates representing their respective Administrations at the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975, and now submitted on behalf of the African Members parties to the Regional Agreement for the African Broadcasting Area, comprise :

- at Annex 1, a revised article, for inclusion in the new Agreement, which refers to an Additional Protocol relating to the abrogation of the African Agreement;
- and at Annex 2, the text of the proposed Additional Protocol for inclusion in the Final Acts of this Conference.

The proposals are presented for consideration of Committee 5.

A.O. CARTER

Chairman of the Ad Hoc Group

Annexes : 2



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A N N E X 1

ARTICLE / K /

Abrogation of the Regional Agreement for the
African Broadcasting Area, Geneva, 1966

The Additional Protocol to the Final Acts of the Conference provides for the abrogation of the Regional Agreement for the African Broadcasting Area, Geneva, 1966, and the Plan annexed thereto.

A N N E X 2

ADDITIONAL PROTOCOL ...

abrogating the Regional Agreement for
the African Broadcasting Area (Geneva, 1966)

The delegates of the following countries Members of the
International Telecommunication Union :

.....

parties to the Regional Agreement for the African Broadcasting Area
(Geneva, 1966), and meeting in Geneva for the Regional Administrative LF/MF
Broadcasting Conference (Regions 1 and 3), convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

that the Regional Agreement for the African Broadcasting Area
(Geneva, 1966) shall be abrogated and replaced by the Agreement / new
title /
on the date of entry into force of this new Agreement.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 160-E

12 November 1975

Original : English

COMMITTEE 5

Report of the Ad Hoc Group

As requested by the Chairman of Committee 5, a meeting was held with the delegates of Mauritania and Liberia to resolve the points raised in Committee 5 on 11 November about the arrangements proposed in Document No. 135 for abrogating the Regional Agreement for the African Broadcasting Area, Geneva, 1966.

Proposals now put forward by the delegate of Mauritania on behalf of the African Members who are parties to the Regional Agreement for the African Broadcasting Area comprise :

- at Annex 1, a revised article, for inclusion in the new Agreement, which refers to an Additional Protocol relating to the abrogation of the African Agreement;
- and at Annex 2, the text of the proposed Additional Protocol for inclusion in the Final Acts of this Conference.

The proposals are presented for consideration of Committee 5.

A.O. CARTER
Chairman of the Ad Hoc Group

Annexes : 2



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A N N E X 1

ARTICLE / K /

Abrogation of the Regional Agreement for the
African Broadcasting Area, Geneva, 1966

The Additional Protocol to the Final Acts of the Conference provides for the abrogation of the Regional Agreement for the African Broadcasting Area, Geneva, 1966, and the Plan annexed thereto.

A N N E X 2

ADDITIONAL PROTOCOL ...

abrogating the Regional Agreement for
the African Broadcasting Area (Geneva, 1966)

The delegates of the following countries Members of the
International Telecommunication Union :

.....

parties to the Regional Agreement for the African Broadcasting Area
(Geneva, 1966), and meeting in Geneva for the Regional Administrative LF/MF
Broadcasting Conference (Regions 1 and 3), convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

that the Regional Agreement for the African Broadcasting Area
(Geneva, 1966) shall be abrogated and replaced by the Agreement / new
title /
on the date of entry into force of this new Agreement.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 161-E

14 November 1975

Original : English

COMMITTEE 2

THIRD REPORT BY THE WORKING GROUP OF COMMITTEE 2

(CREDENTIALS)

1. The third (and last) meeting of the Working Group of Committee 2 took place on 14 November 1975, under the chairmanship of Mr. D.S. Variyan (Malaysia). The meeting was attended by participants from the following delegations : Australia, Bulgaria, Japan, Norway and Switzerland.

2. The Working Group examined the credentials of the delegations mentioned in the Annex to this Report.

These credentials were considered to be in order and the Working Group recommends to Committee 2 that they be accepted as such.

3. The Secretary of Committee 2 was requested to contact the telecommunications Administration of Lebanon to obtain clarification of the credentials submitted by the Delegation of that country.

D.S. VARIYAN
Vice-Chairman of Committee 2

Annex : 1



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A N N E X

Indonesia (Republic of)

Iceland

Mali (Republic of)

Mozambique (People's Republic of)

Roumania (Socialist Republic of)

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 162-E

13 November 1975

Original : French
English

COMMITTEE 4

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 4

(PLANNING)

Monday, 3 November 1975, at 2000 hrs

Chairman : Mr. V. ŽAGAR (Yugoslavia)

Subjects discussed

Document No.

1. Daytime operation
Report of the Ad Hoc Working Group

DT/36, 11, 58,
85, 97, 105

2. Review of outstanding documents

2.1 AF bandwidth limitation

88

2.2 Reduction of requirements

91

2.3 Frequency band 255-285 kHz
Protection of the Aeronautical
Radionavigation Service

82



1. Daytime operation
Report of the Ad Hoc Working Group (Documents Nos. DT/36, 11, 58, 85, 97 and 105)

At the proposal of the delegate of the Federal Republic of Germany, it was agreed that, for formal reasons, Documents Nos. 11, 58, 85, 97 and 105, submitted respectively by New Zealand, Italy, Yugoslavia, the Federal Republic of Germany and India, should be included under the item together with Document No. DT/36.

The Chairman of the Ad Hoc Working Group recalled the Group's composition and said that it had held two meetings, which had been attended also by representatives of the I.F.R.B. It had considered the documents referred to it by the Committee and just included under the agenda item. Following its discussions, it had drafted Document No. DT/36, to which it had subsequently made several changes which would be reflected in the revised version to be issued the following day as Document No. 115.

The substance of Document No. DT/36 called for the following explanations :

Paragraph 1 contained introductory comments designed to encourage Administrations to make better use of the frequency spectrum and to obtain better coverage.

Paragraph 2 contained a definition of daytime, which varied considerably with geographic latitude and with the season of the year.

Paragraph 3 described a model which could be used in respect of daytime for planning purposes, both at the Conference itself and after the end of the Conference. Three different zones were envisaged, as shown at the bottom of page 1.

Paragraph 4 concerned the polar zones.

Paragraph 5 gave a definition of daytime in the temperate zones; comprehension of the text would be facilitated by consulting the curves in Figure 1, which had been taken from Document No. 97 submitted by the Federal Republic of Germany. In that figure, daytime was centred round noon and limited from night time by two curves. The reference latitudes chosen were 50° (in winter) and 30° (in summer). For the reasons given in the second sub-paragraph, it was recommended not to use frequencies in excess of approximately 1 300 kHz for daytime operation. That would be easy to fulfil because the administrations concerned intended to make use of the lower part of the MF band where propagation was better.

Paragraph 6 resembled paragraph 5 but concerned the equatorial zone.

Paragraph 7, to which the Group had made some minor changes, left administrations free either to use the same schedule throughout the year or to adapt it to changing day and night time conditions.

Paragraph 8 dealt with transmitters operating with different characteristics during day and night; in order to provide a simple rule, it was recommended that such transmitters should not operate with daytime characteristics at any time outside the limits set.

Paragraph 9, which was practical in scope, dealt with interference calculations for the most delicate situations arising at the limit of day and night time. The second sub-paragraph mentioned the possibility of correcting the computer print-outs manually by 20 dB in cases of interference caused by daytime transmitters.

Paragraph 10 stressed that daytime transmitters should be coordinated among the administrations concerned, both during and after the end of the Conference.

He then read out the modifications to Document No. DT/36 which would be incorporated in Document No. 115, placing particular emphasis on the substantial changes made in the curves in Figure 2 in order to give the countries of the equatorial zone more flexibility.

The Chairman thanked the Chairman of the Ad Hoc Working Group for the Group's excellent work and frequent assistance to the Committee. He also thanked the administrations which were responsible for the documents included under item 1 of the agenda and whose delegations had participated in the preparation of Document No. DT/36.

In reply to a question by the delegate of France, the Chairman of the Ad Hoc Working Group said that, in English at least, local time applied to a longitude whereas local mean time applied to a longitudinal range.

On a proposal by the delegate of Pakistan, supported by the delegates of Spain and Egypt and by the Chairman of the Ad Hoc Working Group, it was decided to defer consideration of Document No. DT/36 until the Committee's next meeting, when the revised version of the document would be available.

2. Review of outstanding documents

2.1 AF bandwidth limitation (Document No. 88)

The delegate of Yugoslavia said that even a serious reduction of requirements concerning the number and power of transmitters would not eliminate the need to reduce the radio-frequency protection ratio. The use of a filter limiting the bandwidth of the audio-frequency modulating signal to 4.5 kHz would be of advantage in diminishing that ratio.

The delegates of Italy and Belgium supported that proposal.

The delegate of France said that she would agree to the bandwidth of her country's transmitters being reduced on condition that the same was done with regard to emissions in the adjacent bands.

The delegates of the Federal Republic of Germany, Spain, Netherlands, Sweden and the United Kingdom shared that position, the last speaker adding that the question was already dealt with in the Report of the First Session of the Conference. Appendix C (page 63 of the Report) spoke of an audio-frequency bandwidth of the order of 4.5 kHz, and in paragraph 5.2 (page 13) of the Report it was stated that the Appendix C curves could be used subject to agreement between the Administrations concerned.

The delegate of the U.S.S.R. also recalled that the question had been examined at the First Session, and regretted being unable to accept the Yugoslav proposal.

In reply to an observation by the delegate of Australia, the delegate of Pakistan said that the 9th and 10th lines of the first paragraph of Document No. 88 were perfectly clear. There could be no doubt that the proposed measures applied solely to Region 1.

The delegate of Iceland said that he could not accept the limitation proposed by Yugoslavia; however, the countries adjacent to his own would not have any serious problems as a result.

The delegate of Indonesia, taking the Australian delegate's remarks to be addressed to him, said that he had no objection to the Yugoslav proposal if, in fact, it concerned only the European area.

The delegate of India said that he would like to receive some clarifications. He wished to be sure that, on the one hand, there was no question of adopting any norms different from those set by the First Session (cf. Chapter 3, page 9 of the Report) and, on the other hand, that the Yugoslav proposal affected only the European broadcasting area.

The Chairman replied that, as already stated, the area concerned was indeed only the European area, where interference was such that a means of reducing it had to be sought as a matter of urgency. Furthermore, there was no question of modifying the criteria adopted at the First Session, and the Administrations concerned were invited to select the suggested bandwidth values on the understanding that the same steps would be undertaken - by mutual agreement between those Administrations - with regard to emissions in the adjacent channels.

The delegate of Yugoslavia said the the words "of the European part of Region 1" should be inserted after the words "other countries" in the 3rd line of the last paragraph of Document No. 88.

In reply to the delegate of France, who asked whether, in the event of the reduction of the bandwidth, that factor could be taken into account in the I.F.R.B.'s new calculations, the Chairman of the I.F.R.B. said that, in view of the short time remaining for the Conference, it would be impossible to introduce into the computer programme a distinction or differentiated calculation of the protection ratio in the adjacent channels. Delegations wishing to do so might nevertheless use another protection ratio by making the necessary corrections manually.

In reply to a further question by the delegate of France, who wished to know whether the I.F.R.B. would not take interference caused by the adjacent channels into account in its subsequent calculations, the Chairman of the I.F.R.B. read out paragraph 5.2 of the Report of the First Session, starting with the second sentence of that paragraph (see page 13 of the Report), and added that the question raised by the French delegate should be considered in Committee 5, which would decide whether the text he had read out should be reproduced or whether to give the I.F.R.B. new instructions.

In reply to the delegate of the United Kingdom, who considered that it should not be difficult to change the computer programme, the Chairman of the I.F.R.B. explained that although that was true, he had wished to point out in his preceding statements that, in view of the short time available, it would be hard to change the programme with any certainty of obtaining reliable results. In any case, if the Yugoslav proposal was adopted, the I.F.R.B. would of course carry out the work in the most appropriate manner.

The delegate of Tunisia said that, although he was in favour of limiting the bandwidth, he thought it advisable to leave it to the administrations concerned to decide among themselves on the extent of that limitation.

The Chairman, briefly summarizing the debate, said that the majority of Committee 4 seemed to agree to accept a limitation of the bandwidth, provided that that did not constitute a general rule and that the same provisions would be applied to transmissions in the adjacent channels.

The delegate of Spain suggested that the Chairman of the Liaison Group for the European broadcasting area should be requested to ascertain which of the European Administrations were willing to adopt the proposal contained in Document No. 88, and to transmit that information to the I.F.R.B.

The delegate of Italy supported that suggestion.

After further discussion in which the delegates of France, Australia and the United Kingdom took part, the Chairman of the I.F.R.B. suggested that any Administration wishing to apply Curve D of Appendix C (Report of the First Session, page 63) should notify the Technical Secretary of the Conference not later than by noon on Thursday, 6 November. The I.F.R.B. Secretariat would then draw up a list of the countries concerned and would use it in calculating mutual interference in adjacent channels between countries appearing in the list.

It was so agreed.

2.2 Reduction of requirements (Document No. 91)

The delegate of Pakistan, introducing Document No. 91, said that the practice adopted by some Administrations of operating several co-channel stations within their country's territory gave those Administrations an unfair advantage over their neighbours, particularly those which were developing countries with limited financial resources. The interference caused by such co-channel stations could, in effect, stop those countries' broadcasting development altogether. In his opinion, the practice could serve no purpose other than that of enabling the Administrations concerned to change the location of their transmitters without having recourse to the modification procedure being drafted by Committee 5. The proposal contained in the document offered an option whereby the overall number of requirements might be considerably reduced while at the same time reinforcing the principle of equal rights adopted at the First Session.

The delegate of Italy agreed with the delegate of Pakistan that assignments should not run counter to the principles or the technical norms adopted at the First Session. In that connection he noted that in certain cases where an Administration had indicated a whole range of frequencies rather than any one particular frequency, the assignment given by the I.F.R.B. had resulted in a useful field strength of over 100 dB, thus rendering some channels unusable owing to interference.

The Chairman of the I.F.R.B. explained that when a country's requirement listed a whole set of frequencies rather than any particular one, the I.F.R.B. had systematically included the requirement in all the frequencies mentioned and had then tried to ascertain the level of interference which the station would cause. It had then attempted to select that frequency which would cause the least interference. The method had produced useful results in some cases, but in others where the number of requirements was extremely large the usable field strength had indeed gone beyond 100 dB.

The delegate of the Ukrainian S.S.R. said that the point made by the delegate of Italy was a valid one. His own country's broadcasting had suffered serious disadvantage as a result of the situation described. While recognizing the difficulties with which the I.F.R.B. had to contend, he hoped that similar planning errors would be avoided in future.

The delegate of Pakistan said that the issue raised by the delegate of Italy was an important one which he would be interested in discussing under another agenda item; it was not, however, directly relevant to his own proposal.

The delegate of Nepal said that his country had asked for a small number of frequencies with very modest powers. Up to the present it had not been allocated a single frequency which was usable. It would clearly be very much better if countries which had asked for a large number of frequencies with very high powers could agree to reduce their requirements.

The delegate of Spain remarked that the problem referred to by the delegate of Pakistan was just another aspect of the wider issue of how to deal with excessive requirements, to which no solution had as yet been found.

The delegate of India said that it would be a mistake to conclude that an Administration which asked for a number of co-channels did so purely for bargaining purposes; such requests might well be motivated by genuine programme needs, and so long as no interference to other countries beyond the limits set at the First Session were caused, he saw no reason why co-channel stations should not be allowed.

The Chairman suggested that the Committee might adopt a decision along the following lines :

"In cases where co-channel stations operating within one country are causing interference to each other and to other countries, the Administrations may have the option to retain any such stations only subject to negotiations between the countries concerned and subject to consideration by the Mediation Group."

The delegate of India agreed to that formulation but suggested the deletion of the words "to each other".

The delegate of the United Kingdom wondered whether the proposal contained in Document No. 91 might not be construed as ruling out the use of synchronous networks as recommended in Recommendation AA of the Report of the First Session.

The Chairman said that such a construction would be entirely erroneous, as would be seen from the record of the discussion.

The delegate of Pakistan, referring to the decision suggested by the Chairman, said that his proposal, which offered a practical means of reducing the overall number of requirements, was about to go the way of other proposals made earlier in the Conference with a view to producing a workable Plan. The Committee seemed to be leaving everything to negotiations instead of taking real policy decisions itself. He did not consider that such action could result in a Plan acceptable to all countries.

The Chairman suggested that the Committee should take note of Document No. 91 and of the statement just made by the delegate of Pakistan.

It was so agreed.

2.3 Frequency band 255-285 kHz. Protection of the Aeronautical Radionavigation Service (Document No. 82)

The delegate of Belgium, introducing Document No. 82, said that his delegation wished to draw the attention of the Conference to the need to protect aeronautical radionavigation devices in the band 255-285 kHz shared with the broadcasting service. For some years, the increased power of broadcasting stations operating in the band under the Radio Regulations had interfered dangerously with navigation equipments on board aircraft. It had already been stated during the First Session that LF broadcasting and aeronautical radionavigation were not really compatible in the same band; the annex to his delegation's document listed radiobeacons which were not only in danger of interference, but were already to some extent subject to interference from broadcasting stations. Moreover, some additional assignments in the 255-285 kHz band had been requested in Working Group 4/11. The Conference should try not to create new incompatibilities, but should safeguard the possibility of an appropriate revision of Article 5 of the Radio Regulations by the 1979 Administrative Radio Conference. The proposals in the last two paragraphs of the document were fully in line with Chapter 8 of the Report of the First Session.

The delegate of the United Kingdom supported the Belgium proposals, but suggested that the words "should modify" in the second and third lines of the penultimate paragraph be replaced by "should consider the modification of", since the Broadcasting Conference could not issue directives to the Administrative Radio Conference.

The delegate of Belgium accepted that amendment.

It was so agreed.

The representative of I.C.A.O. said that aeronautical radionavigation planning was based on the rigorous application of high standards of safety and that the fact that the aeronautical radionavigation service shared the band 255-285 kHz with the broadcasting service was a source of serious problems, affecting all countries whose aircraft flew in European air space. Articles 28 and 37 of the International Civil Aviation Convention, to which

most of the countries attending the Conference had subscribed, laid down obligations to provide LF and MF radiobeacons; yet in the European area, including North Africa, there were 40 beacons in the 200-255 kHz band, 200 in the 255-285 kHz band - many of them used for approaches and landings - and no less than 1 900 in the 285-415 kHz band; for the European and North African area, with its frequent bad weather and often mountainous terrain, the aeronautical radionavigation service had only 90 kHz exclusively, as against 165 kHz for Region 3. The impracticability of coexistence between the two services was pointed out in Documents Nos. 43 and 52. Radiobeacons had had to be moved as a result of broadcasting interference problems : in the past few weeks, beacons had been moved in frequency in the United Kingdom and Yugoslavia, and in both cases it had been very difficult to find new assignments. Moreover, the changes in the broadcasting use of the 255-285 kHz band, including the adjacent channel 254 kHz, envisaged by the Conference would render the band virtually unusable by the aeronautical radionavigation service, and no alternative band space was available.

I.C.A.O. therefore strongly supported the Belgian proposal, as amended by the United Kingdom, but would go further to suggest that, if band sharing between the two services was eliminated, probably at the expense of the aeronautical radionavigation service, alternative band space should be found to meet the needs of that service.

The delegate of Italy supported the Belgian proposals.

The delegates of India, Sweden and Japan also supported the proposals as amended by the United Kingdom, but considered that the Broadcasting Conference was not competent to discuss matters relating to the aeronautical radionavigation service, which should be dealt with at the 1979 Radio Conference.

The delegate of France also supported the amended proposals, and proposed that they should be studied in greater detail by Working Group 4/11 with a view to the preparation of a draft resolution and draft recommendation; that certain parts of those texts should be transmitted by Committee 4 to Committee 5 for insertion in the Agreement; that, taking into account Resolution C of the First Session, studies should be undertaken on compensations and transfers to aeronautical radionavigation for possible implementation after the 1979 Conference; and that the I.F.R.B. should consequently be requested to make preliminary studies to seek, if necessary, extensions for the broadcasting service below 550 kHz and for the aeronautical radionavigation service above 415 kHz.

The Chairman of Working Group 4/11 said that, since his Group had a very heavy agenda and was composed of technicians, not of jurists, it would be better for the resolution and recommendation to be drawn up by the appropriate Working Group of Committee 5.

The delegate of France pointed out that the appropriate body of Committee 4 must provide Committee 5 with the necessary technical information to enable it to draft texts for incorporation in the Agreement which would allow for the necessary protection measures. That procedure had been applied with regard to the protection of the maritime service in the Copenhagen Plan.

After some discussion, it was agreed that the Chairman of Working Group 4/11, with the assistance of the French delegation, would submit the required texts for onward transmission to Committee 5.

The meeting rose at 2320 hours.

The Acting Secretary :

A.A. MATTHEY

The Chairman :

V. ŽAGAR

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 163-E

13 November 1975

Original : English

COMMITTEE 4

SUMMARY RECORD

OF THE

EIGHTH MEETING OF COMMITTEE 4

(PLANNING)

Tuesday, 4 November 1975, at 2000 hrs

Chairman : Mr. V. ŽAGAR (Yugoslavia)

Subjects discussed :

Document No.

- | | |
|---|-----|
| 1. Announcement by the Chairman | - |
| 2. Report of Working Group 4/Ad Hoc | 115 |
| 3. Status of frequencies chosen by the I.F.R.B. | - |



1. Announcement by the Chairman

The Chairman, further to a request from the Conveners' Coordination Group, informed the meeting of progress in the planning work and suggested action which might be taken by delegations. He drew attention firstly to the appeal for reduction of requirements which had resulted in a reduction of approximately 13 megawatts (see Document No. DT/42).

Secondly, according to the programme of work, negotiations should be completed and the results handed to the Secretariat by noon on Thursday, 6 November. He would attempt to obtain a further two days the following week for final refinement of planning. A comprehensive machinery had been set up consisting of the basic Planning Groups, each with its Convener and I.F.R.B. engineer, assisted by the Mediation and Liaison Groups and the three Regional Groups and considerable goodwill had been shown. The Conveners' Coordination meeting appealed to delegations to finalize the results of their studies and negotiations so that the Planning Groups could complete their tasks within the time allotted.

Finally, many small delegations were seeking expert assistance in their studies; the volume of assistance available from I.F.R.B. resources was exhausted and the Conveners had therefore requested the Chairman to appeal to delegations which could offer such assistance to contact the Conveners and offer their services.

The delegate of India added that Document No. 116, just distributed, mentioned a further reduction of power of 4.5 megawatts.

2. Report of Working Group 4/Ad Hoc (Document No. 115)

Mr. Eden (Federal Republic of Germany), Chairman of the Working Group, introduced Document No. 115, which was an endeavour to find a definition for daytime operation which could be used as a guideline for planning purposes.

He explained, in reply to a query by the delegate of the United Kingdom, that 50° latitude had been selected as a compromise reference for the temperate zone on the understanding that administrations would make any modifications necessary in the course of negotiations.

The delegate of Italy congratulated the Chairman of the Working Group on the very useful document which provided a simple method of defining daytime service and offered Administrations some flexibility.

Administrations which had submitted requirements for limited time operation should indicate whether their transmitters were considered as daytime transmitters (in which case the hours of operation should be limited as described in the document and they would be indicated simply as "HJ"), otherwise they would be considered as working on a 24-hour basis.

The delegate of Pakistan said that the enormous variety of individual cases made it impossible to apply the simple model described in the document and hours of operation would have to be decided between negotiating parties. He suggested that a remark, along the lines of No. 115 of the Radio Regulations, be inserted to the effect that the transmitters in question would operate on a non-interference basis during the marginal hours, so as to safeguard the interests of other countries using the frequencies at night also.

The delegate of Italy, referring to another point made by the delegate of Pakistan that interference levels would change with distance, said that statistically the total interference would not be greatly modified. If stations were subjected to the additional restriction just suggested by that delegate, Administrations would have no alternative but to keep their transmitters in service on a 24-hour basis and thus increase the amount of interference caused. He repeated that the "HJ" formula as described in Document No. 115 would simplify work both for Administrations and for the I.F.R.B. when subsequent modifications were made to the Plan.

The delegate of France also considered that the document was of value. However, as many of the requirements submitted referred to hours of operation which exceeded the period 0800 - 1530 hours, a value corresponding to the greatest interference and to the winter timetable should be used. She saw two possible solutions : the first, to indicate the exact timetable of operation, using the curves in Document No. 115 to find by how many dB the interference field must be reduced, and the second to accept the indication "HJ" (within the curves in Document No. 115 which should be annexed to the Agreement as part of the technical data). If the operating schedule exceeded the minimum indicated, even in one season, the exact timetable would have to be given and the values indicated in the I.F.R.B. calculations would have to be corrected.

The Chairman of the Working Group said that the Group's idea had been that a country whose station was operating, for instance, from 0600 to 1800 hours in the temperate zone would not indicate it as a daytime station and in that case the interference would be treated differently from the stations which were restricted to daytime operation as defined in the document. He also said that he would issue a revised version of the document in order to explain further the concepts of local time and local mean time.

The delegate of the United Kingdom said that in view of the complexity of defining daytime operation, he preferred to enter the hours of service as hitherto, though he appreciated the value of the document in enabling Administrations to decide in their own case which hours of service they would identify as daytime operation. He was in favour of the document being noted by the Committee and commended to those Administrations which wished to employ such daytime operation.

The delegate of Pakistan supported those views as he considered that the contents of Document No. 115 could not be used as a calculating instrument or as a criterion for determining interference. The delegate of India also supported the comments by the delegate of the United Kingdom.

The delegate of Italy pointed out that if all stations were considered as being in service 24 hours a day (which would be the case of Italian transmitters should the restrictions mentioned be imposed) it would amount to losing a valuable opportunity for making a reduction of requirements of some 30%.

The delegate of Israel believed that the "HJ" concept was most valuable for the purpose of planning; on the other hand, possible misunderstandings could arise and he therefore suggested that "HJ" be used as an instrument for planning purposes throughout the Conference but that in the Plan the operating hours should be indicated expressly.

The delegate of Italy said he could accept that proposal, provided that the hours of operation fell within the curves given in the document. In order for the same procedure to be used when the Plan was modified successively, the document should be forwarded to Committee 5 for insertion in that part of the Agreement dealing with modifications to the Plan.

That proposal was supported by the delegates of the Federal Republic of Germany, Israel, Austria and Yugoslavia.

It was so agreed.

The Chairman concluded that the document would be used by the Committee as a guideline in the planning work, subject to negotiations between Administrations as required, and that the time of operation of transmitters would be notified by specific hours.

He thanked the Chairman and members of the Working Group. The Chairman of Working Group 4/Ad Hoc expressed his warm appreciation of the goodwill shown by the members of the Group and for their very hard work.

3. Status of frequencies chosen by the I.F.R.B.

The delegate of Pakistan said that negotiations in the planning groups were being hampered by the attitude of certain countries which had frequencies chosen by the I.F.R.B. and which regarded those requirements as having some kind of priority. Some of those requirements clashed with requirements concerning assignments which had been in use for ten to fifteen years and he therefore requested the I.F.R.B. to re-examine the situation and find alternative frequencies which would interfere less with existing stations.

That statement of the problem was supported by the delegate of Italy but he quoted the Report of the First Session to the effect that the frequencies selected by the I.F.R.B. were provisional and that the assignments would only be made in the course of planning. He suggested that the matter be dealt with in the planning groups by agreement between all the countries using the channel in question.

The Chairman of the I.F.R.B. confirmed that the I.F.R.B. had never let it be understood that the frequencies it selected had priority over any others. The Board made a selection pursuant to Resolution B of the First Session, but it was the Administration which remained the authority submitting the requirements for treatment in planning on the same basis as all others.

The kind of study requested by the delegate of Pakistan would take considerable computer time. However, a number of cases had already been pointed out and had been studied by the Board and he asked all Administrations which so wished to contact him or the I.F.R.B. engineers who would carry out special studies of particular cases.

The Chairman said he understood that a number of such problems had already been solved in the planning groups and urged delegations to continue their efforts in that direction.

The delegate of Roumania proposed that all assignments preceded by the letter B be considered only after discussion with all the countries concerned.

His proposal was supported by the delegates of Cameroon and Italy.

The delegate of Mauritania said he was finding it impossible to conduct all the negotiations required and that planning activities should not be terminated on the date indicated. He raised the question of whether in those conditions his delegation would be able to sign the Plan.

The delegate of Nepal said his Administration was making very few demands (11 in all, with a total power of less than 500 kW, of which 3 were preceded by the letter B) and he did not think that the assignments in question should be given less priority than those frequencies selected by Administrations.

The delegates of Cyprus, Liechtenstein, Israel and Nigeria said that in asking the I.F.R.B. to select frequencies they had felt they were facilitating planning work at the Conference. Probably the I.F.R.B.'s choice was better than one made by Administrations themselves and they saw no reason for being penalized. The delegate of Nigeria said also that in the negotiations his delegation had made no attempt to award special status to the assignments but had treated them as being exactly on the same basis as all others.

The delegate of India appreciated the helpful attitude of the I.F.R.B. and thought that an alternative frequency could be found in most cases by negotiation.

The delegate of Roumania said that he did not insist on a vote being taken on his proposal, provided it was understood by those countries with B assignments that they did not have priority.

The Chairman asked for comments on the Pakistani suggestion requesting the I.F.R.B. to transfer assignments so that they did not interfere with existing stations.

The delegate of Ireland said her understanding had been that subject to the principle of equal rights planning would begin with consideration of existing services but not that existing services had priority. If that were the case, her delegation would wish to enter a reservation.

That view was shared by the delegate of Nigeria and the delegate of Papua New Guinea who pointed out that the intentions of the delegate of Pakistan were in contradiction to the principles laid down in Document No. 110.

The Chairman said it was clear that the Committee had to conduct its work according to Document No. 110, and the comments just made would be forwarded to the Conveners of the Planning Groups.

At the request of the delegate of France, the Chairman said that the Planning Groups would be requested to circulate as much information as possible on frequency or power changes which were likely to affect stations of other Administrations.

The meeting rose at 2220 hours.

The Acting Secretary :

A.A. MATTHEY

The Chairman :

V. ZAGAR

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 164-E

13 November 1975

Original : Spanish

PLENARY MEETING

FINAL PROTOCOL

For Spain

With reference to its request for assignments for El Aaiun and Villacisneros, the Spanish Delegation wishes to state that it makes the request in accordance with Article 73 of the United Nations Charter, solely and exclusively in the interests of the inhabitants of Western Sahara, without prejudice to the results of the current process of decolonization.

As far as the Spanish stations of Ceuta and Melilla are concerned, the Spanish Delegation wishes to state that both towns are an integral part of Spanish territory and that it is not prepared to accept any discussion on that subject at all.

(Signed) José María Arto Madrazo

Head of the Spanish Delegation



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Corrigendum No. 1 to
Document No. 165-E
14 November 1975
Original : English

COMMITTEE 5

Japan

PROPOSAL CONCERNING REQUIREMENTS OF COUNTRIES NOT REPRESENTED

1. On page 4 after noting a) add :

a) bis that some of these requirements were submitted without being accompanied by important data required for the coordination of the requirements;
2. After noting c) add :

noting moreover

d) that assignments for the existing broadcasting stations of the countries not represented at the Conference, which are recorded in the Master Register, could be included in the Plan without any need for coordination.
3. On page 5, read resolves 1. as follows :
 1. that the frequency requirements of the countries not represented at the Conference for which coordination has not been completed during the Conference, as listed in Annex to this Resolution, shall be transferred to the Plan, if and when the result of the application of the coordination procedures indicated in 2 to 4 below is satisfactory.
4. After resolves 4. add :
 5. that the assignments for broadcasting stations of the countries not represented at the Conference, which are recorded in the Master Register, shall be included in the Plan.
5. Read the first paragraph under instructs the Secretary-General as follows :
 - to invite the countries Members of the Union mentioned in 1. above to accede to the Agreement as soon as possible.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 165-E

13 November 1975

Original : English

PLENARY MEETING

COMMITTEE 5

Japan

PROPOSAL CONCERNING REQUIREMENTS OF COUNTRIES NOT REPRESENTED

The Delegation of Japan proposes modifications to the draft Resolution in Document No. 141(Rev.1) as shown in Annex 1 and adoption of a new Resolution as shown in Annex 2.

T. ISHIKAWA

Head of the Delegation of Japan

Annexes : 2



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PAGE LAISSEE EN BLANC INTENTIONNELLEMENT

A N N E X 1

1. Change the title of the draft Resolution in Document No. 141(Rev.1) as follows :

"concerning the accession to the Agreement of countries which are neither represented at the Conference, nor have sent their frequency requirements".

2. Change the considering b) as follows :

"that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, to participate in its work and to inform it of their frequency requirements".

A N N E X 2

DRAFT RESOLUTION

Concerning the continuation of coordination of the frequency requirements of the countries which are not represented at the Conference but have sent their frequency requirements

The Conference

reminding

- a) that it has invited countries not represented at the Conference to submit their requirements and to attend the Conference in time for necessary bilateral and multilateral negotiations;
- b) that it has asked the I.F.R.B., in application of No. 479 of the R.R., to assist the countries not represented at the Conference, in the treatment of their requirements;

noting

- a) that certain Member Countries of the Union not represented at the Conference submitted their requirements in the course of the latter part of the Conference;
- b) that these requirements affect substantially the requirements of other countries;
- c) that the coordination of requirements between the countries mentioned in a) and b) above has not been completed due to the limitation of communication means available to the I.F.R.B. during the Conference;

considering

- a) that the requirements of the countries not represented at the Conference for which coordination has not been completed during the Conference may be coordinated after the Conference;
- b) that it is possible that such coordination could necessitate a change of frequencies or of other characteristics of an assignment included in the Plan;
- c) that it is possible that such change could affect the assignment of other Administrations than those whose requirements are affected directly by the requirements of countries not represented at the Conference;

resolves

1. that the frequency requirements of the countries not represented at the Conference for which coordination has not been completed during the Conference shall not be included in the Plan but be included in the List annexed to this Resolution;
2. that coordination of these requirements shall be continued after the Conference between the Administrations concerned through the I.F.R.B. Efforts should be made to complete the coordination before the date of entry into force of the Agreement;
3. that when the above coordination is completed, the Administrations concerned shall apply the procedure provided for in Article 3 of the Agreement;
4. that Administrations concerned shall endeavour to make satisfactory provision for the requirements in the annexed List, particularly by agreeing to an increase in the usable field strength above the value given in Article 3, paragraph 3.2.5 of the Agreement;

instructs the Secretary-General

- to invite the countries mentioned in 1. above to accede to the Agreement as soon as possible;

- to inform these countries of this Resolution;

instructs the I.F.R.B.

- to assist the Administrations concerned in reaching a satisfactory solution;

- to include in the master copy of the Plan the frequency assignment resulting from the successful application of the procedure mentioned in this Resolution.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 166-E

13 November 1975

Original : French/
English

COMMITTEE 5

DRAFT RESOLUTION ...

relating to bandwidth saving modulation systems

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975.

considering

- a) the improved efficiency in the use of the LF and MF frequency bands that might be achieved by the application of bandwidth saving modulation systems;
- b) the difficulties associated with transmitters and receivers, and with frequency planning if transition to bandwidth saving modulation systems is contemplated;

invites the C.C.I.R.

to expedite its studies of bandwidth saving modulation methods with particular reference to the technical, operational and economic aspects of single-sideband and independent sideband modulation, taking into account the problems of compatibility with existing receivers;

resolves

- a) that broadcasting stations might provisionally use other classes of emission (bandwidth saving modulation methods) on condition that interference in the same or adjacent channels concerned does not exceed the interference resulting from the application of double sideband modulation with full carrier (A3);
- b) that an Administration which envisages using these classes of emission follows the procedure foreseen in Article / 3 / of the Agreement.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 167-E

13 November 1975

Original : French

PLENARY MEETING

FOURTH REPORT OF COMMITTEE 5

(AGREEMENT)

Subjects discussed : Recommendation concerning the convening of a conference competent to revise the Agreement
Article of the Agreement and Additional Protocol relating to the abrogation of the European Broadcasting Convention, Copenhagen
Resolution concerning the accession to the Agreement of countries not represented at the Conference
Recommendation concerning the sharing of the LF band between the broadcasting service and the other radiocommunication services (Region 1)

Committee 5 unanimously adopted the texts reproduced in the annex.

A. PETTI
Chairman of Committee 5

Annexes : 4



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A N N E X 1

RECOMMENDATION ...

concerning the convening of a conference competent to revise the regional agreement concerning the use by the broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975

considering

- a) the rapid development of broadcasting techniques;
- b) the future requirements of the developing countries, which may be substantial both in the LF and in the MF bands, if these countries are to be in a position to meet the requirements of their national broadcasting services;
- c) that it has not been possible to accommodate in a satisfactory manner on a long term basis in the frequency bands allocated to LF/MF broadcasting the requirements that have been submitted;
- d) that consequently the Agreement has been prepared on the basis of requirements for the next 14 years and therefore it is absolutely essential for the Agreement to be revised as soon after that date as is practicable,

recommends to the Administrative Council

to arrange for the convening of a conference competent to revise the Agreement in /...../, if there is no need to convene such a conference earlier according to the provisions of the Convention.

A N N E X 2

ARTICLE / L /

Abrogation of the European Broadcasting Convention
Copenhagen, 1948, and annexed Copenhagen Plan

The Additional Protocol to the Final Acts of the Conference provides for the abrogation of the European Broadcasting Convention, 1948, and the annexed Copenhagen Plan.

ADDITIONAL PROTOCOL

Relating to the abrogation of the European Broadcasting Convention,
Copenhagen, 1948, and the annexed Copenhagen Plan

The delegates of the following Members of the International
Telecommunication Union:

.....
parties to the European Broadcasting Convention (Copenhagen, 1948), and
meeting in Geneva for the Regional Administrative LF/MF Broadcasting
Conference (Regions 1 and 3), Geneva 1975, convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

- 1) that the Regional Agreement and Plan for LF/MF broadcasting
stations in Regions 1 and 3, Geneva 1975, shall replace the European
Broadcasting Convention and annexed Copenhagen Plan which shall be abrogated*)
save that the rights and obligations in respect of the coast stations listed
in Chapter II of the Copenhagen Plan shall continue until modified by the
agreement of the parties concerned or by a competent conference;
- 2) that the abrogation of the European Broadcasting Convention and
Copenhagen Plan in accordance with 1) above shall take effect on the coming
into force of the (title) provided that each of the contracting
Governments to the European Broadcasting Convention shall have deposited
with the Government of the Kingdom of Denmark (the depository of the aforesaid
Convention) a declaration of acceptance of the abrogation of the European
Broadcasting Convention and the annexed Copenhagen Plan;
- 3) that the aforesaid Members shall take action to inform the Government
of the Kingdom of Denmark that they formally agree to the abrogation of the
European Broadcasting Convention and the Copenhagen Plan annexed thereto;
- 4) that the aforesaid action for advice on abrogation shall be taken
[not later than one year] before entry into force of the new Agreement
(Geneva, 1975);
- 5) that the Government of the Kingdom of Denmark should be asked to
inform the Governments who are parties to the European Broadcasting
Convention and the Secretary-General of the International Telecommunication
Union of the notifications received in accordance with 3) above.

*) Explanatory information about the abrogation of the European
Broadcasting Convention and annexed Copenhagen Plan is recorded
in Document No. 125 of this Conference.

A N N E X 3

RESOLUTION No. ...

concerning the accession to the Agreement of
countries not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be fully comprehensive unless it takes into account the requirements of all countries in Regions 1 and 3;
- b) that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, either to participate in its work or to inform it of their frequency requirements;
- c) that countries which are not at present Members of the Union should be encouraged to accede to the Agreement after they accede to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in getting their frequency requirements included in the Plan in a satisfactory way;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall inform it immediately of this Resolution and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;

2. that if the assistance of the I.F.R.B. is requested, it shall undertake any studies or examinations required and communicate to the Administration concerned the results of its studies or examinations;
3. that the Administration concerned shall apply either directly or through the I.F.R.B. the procedure provided for in Article / 3 / of the Agreement;
4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, particularly by agreeing to an increase in the usable field strength above the value given in Article / 3 /, paragraph / 3.2.5 / of the Agreement.

A N N E X 4

RECOMMENDATION No. ...

concerning the sharing of the LF band between the
broadcasting service and the other radiocommunication
services (Region 1)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3) (Geneva, 1975)

noting

- a) that the sharing, on a basis of equality, of the band 255-285 kHz between the broadcasting service in a part of Region 1 and the aeronautical radionavigation service results in practice in harmful interference to aeronautical radiobeacons;
- b) that the aeronautical radionavigation service is a safety service (No. 69 of the Radio Regulations) and its adequate protection against harmful interference is essential to the safeguarding of human life;

considering

that it would be desirable to avoid allocations which permit sharing between the broadcasting service and other services, such as the maritime mobile and aeronautical radionavigation services;

recommends

that the World Administrative Radio Conference, 1979, should examine this question, bearing in mind the interests of each of the services concerned.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 168-E
13 November 1975PLENARY MEETING

B.3

3rd SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE
TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for
first reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
	141(Rev.1)	<u>Resolution B</u> Relating to the Accession to the Agreement of Countries not represented at the Conference
C5	144	<u>Recommendation CC</u> Concerning the convening of a conference competent to revise the Regional Agreement concerning the use by the broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1
	136	<u>Annex / 2 /</u> : Technical Data

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 to 53



RESOLUTION B

Relating to the Accession to the Agreement of
Countries not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be truly comprehensive unless it takes into account the requirements of all countries in Regions 1 and 3;
- b) that some Members of the Union which were invited to the Conference have been unable, for various reasons, either to participate in its work or to inform it of their frequency requirements;
- c) that countries which are not at present Members of the Union should be encouraged to accede to the Agreement after acceding to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in obtaining satisfactory inclusion of their frequency requirements in the Plan;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall immediately bring this Resolution to its notice and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;

2. that if the assistance of the I.F.R.B. is requested, it shall undertake any necessary studies or examinations and communicate the results to the Administration concerned;
3. that the Administration concerned shall apply, either directly or through the I.F.R.B., the procedure laid down in Article / 3 / of the Agreement;
4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, for example, by agreeing to an increase in the usable field strength above the value given in Article / 3 /, / 3.2.5 / of the Agreement.

RECOMMENDATION CC

concerning the convening of a conference competent to revise the Regional Agreement concerning the use by the broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) the rapid development of broadcasting techniques;
- b) the future requirements of the developing countries, which may be substantial both in the LF and in the MF bands, if these countries are to be in a position to meet the needs of their national broadcasting services;
- c) that it has not been possible to accommodate in a satisfactory manner on a long term basis in the frequency bands allocated to LF/MF broadcasting the requirements that have been submitted;
- d) that consequently the Agreement has been prepared on the basis of requirements for the next 14 years and therefore it is absolutely essential for the Agreement to be revised as soon as is practicable after that period;

recommends to the Administrative Council

to arrange for the convening of a conference competent to revise the Agreement in / /, unless it be necessary to convene such a conference earlier according to the provisions of the Convention.

A N N E X [2]

to the

[REGIONAL AGREEMENT CONCERNING THE USE BY
THE BROADCASTING SERVICE OF FREQUENCIES
IN THE MEDIUM FREQUENCY BANDS IN REGIONS 1 AND 3
AND IN THE LOW FREQUENCY BANDS IN REGION 1]

TECHNICAL DATA USED IN THE PREPARATION OF THE PLAN
AND TO BE USED IN THE APPLICATION OF THE AGREEMENT

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TECHNICAL DATA USED IN THE PREPARATION OF THE
PLAN AND TO BE USED IN THE APPLICATION OF THE AGREEMENT

CHAPTER 1

DEFINITIONS

Channel (in AM broadcasting)

Part of the frequency spectrum, the width of which is equal to the necessary bandwidth of the AM broadcasting emission, and which is characterized by the nominal value of the carrier frequency.

Low-power channel (LPC)

Channel used by medium frequency broadcasting stations employing a maximum e.m.r.p. of 1 kW (c.m.f. of 300 V) / with no antenna loss /.

Audio-frequency signal-to-interference ratio

Ratio between the values of the voltage of the wanted signal and the voltage of the interference, measured under specified conditions, at the audio-frequency output of the receiver.

This ratio is generally expressed in dB, and corresponds closely to the difference in volume of sound (expressed in dB) between the wanted programme and the interference.

Audio-frequency protection ratio

Agreed minimum value of the audio-frequency signal-to-interference ratio considered necessary to achieve a subjectively defined reception quality.

This ratio may have different values according to the type of service desired.

Radio-frequency wanted-to-interfering signal ratio

Ratio between the values of the radio-frequency voltage of the wanted signal and the interfering signal, measured at the input of the receiver under specified conditions.

This ratio is generally expressed in dB.

Radio-frequency protection ratio

Value of the radio-frequency wanted-to-interfering signal ratio that enables, under specified conditions, the audio-frequency protection ratio to be obtained at the output of a receiver.

These specified conditions include such diverse parameters as spacing Δf of the wanted and interfering carrier, emission characteristics (type of modulation, modulation depth, etc.), receiver input and output levels as well as the receiver characteristics (selectivity and susceptibility to cross-modulation, etc.).

Usable field strength (E_u)

The minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference in a practical situation (or in one resulting from a frequency plan).

Nominal usable field strength (E_{nom})

The agreed minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference from other transmitters.

The value of the nominal usable field strength is taken as a reference for planning purposes.

Service area (of a broadcasting transmitter)

The area in which the field strength of a transmitter is equal to or greater than the usable field strength.

Cymomotive force (in a given direction) (c.m.f.)
(See C.C.I.R. Report 618 (1974))

The product formed by multiplying the electric field-strength at a given point in space, due to a transmitting station, by the distance of the point from the antenna. This distance must be sufficient for the reactive components of the field to be negligible; moreover the finite conductivity of the ground is supposed to have no effect on propagation.

The cymomotive force (c.m.f.) is a vector; when necessary it may be expressed in terms of components along axes perpendicular to the direction of propagation.

The c.m.f. is expressed in volts; it corresponds numerically to the field strength in mV/m at a distance of 1 km.

Effective monopole radiated power (e.m.r.p.)
(See C.C.I.R. Report 618 (1974))

The power supplied to an antenna multiplied by its gain in a given direction referred to that of a short vertical antenna in the horizontal direction.

Gain of an antenna (in a given direction) referred to a short vertical antenna

The radiation is expressed either in effective monopole radiated power (e.m.r.p.) or in cymomotive force (c.m.f.). To define the gain of an antenna in a given direction referred to a short vertical antenna either of the two following definitions should be adopted :

- the ratio between the c.m.f. of the actual antenna in a given direction and the c.m.f. in the horizontal plane of a short vertical antenna without losses on a perfectly conducting plane, the two antennae being supplied with the same power;

- the ratio of the power required at the input of a short vertical antenna without losses situated on perfectly conducting horizontal plane to produce the reference e.m.r.p. of 1 kW (c.m.f. of 300 V) in the horizontal direction, to the power supplied to the actual antenna to produce the same e.m.r.p. (c.m.f.) in the given direction.

The ratio, expressed in dB, is the same for the two definitions.

Synchronized network

A group of transmitters whose carrier frequencies are identical (or differ only slightly, usually by a fraction of a Hz), and which broadcast the same programme.

CHAPTER 2

GROUND-WAVE PROPAGATION

2.1 The value of the ground-wave field strength is given by the curves in Figures 1 to 9.

The following points are to be especially noted with regard to them :

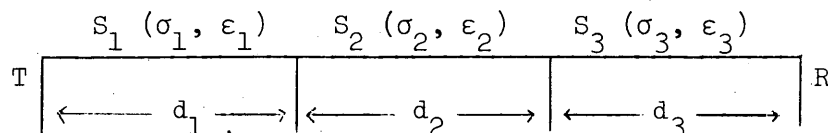
- 2.1.1 they refer to a smooth homogeneous earth;
- 2.1.2 no account is taken of tropospheric effects at these frequencies;
- 2.1.3 the curves refer to the following conditions :
 - they are calculated for the vertical component of electric field from the rigorous analysis of van der Pol and Bremmer;
 - the transmitter is an ideal Hertzian vertical electric dipole to which a vertical antenna shorter than one quarter wave-length is nearly equivalent;
 - the dipole moment is chosen so that the dipole would radiate 1 kW if the Earth were a perfectly conducting infinite plane under which conditions the radiation field at a distance of 1 km would be $3 \times 10^5 \mu\text{V/m}$;
 - the curves are drawn for distances measured around the curved surface of the Earth;
 - the inverse-distance curve A shown in the figures, to which the curves are asymptotic at short distances, passes through the field value of $3 \times 10^5 \mu\text{V/m}$ at a distance of 1 km;
- 2.1.4 the propagation loss defined in C.C.I.R. Recommendation 341 (1974), for ground waves may be determined from the values of the field strength in dB relative to $1 \mu\text{V/m}$ given in the attached curves by the use of equation (19) of C.C.I.R. Report 112 (1974);

- 2.1.5 the curves should, in general, be used to determine field strength, only when it is known that ionospheric reflections at the frequency under consideration will be negligible in amplitude - for example, propagation in daylight between 150 kHz and 2 MHz and for distances of less than about 2,000 km.

2.2 Mixed path

- 2.2.1 The curves in Figures 1 to 9 may be used for the determination of propagation over mixed paths (inhomogeneous smooth earth) as follows.

Such paths may be made up of sections S_1, S_2, S_3 , etc. of lengths d_1, d_2, d_3 , etc. having conductivity and dielectric constant $\sigma_1, \epsilon_1; \sigma_2, \epsilon_2; \sigma_3, \epsilon_3$ etc. shown below for three sections :



There are various semi-empirical methods of determining the propagation over such paths, of which that due to Millington (1949) is the most accurate and has been made to satisfy the reciprocity condition. The method assumes that the curves are available for the different types of terrain in the sections S_1, S_2, S_3 etc. assumed to be individually homogeneous, all drawn for the same source T defined, for instance, by a given inverse-distance curve. The values may then finally be scaled up for any other source.

For a given frequency, the curve appropriate to the section S_1 , is then chosen and the field $E_1(d_1)$ in dB(1 μ V/m) at the distance d_1 is then noted. The curve for the section S_2 is then used to find the fields $E_2(d_1)$ and $E_2(d_1 + d_2)$ and, similarly, with the curve for the section S_3 , the fields $E_3(d_1 + d_2)$ and $E_3(d_1 + d_2 + d_3)$ are found, and so on.

A received field strength E_R is then defined by

$$E_R = E_1(d_1) - E_2(d_1) + E_2(d_1 + d_2) - E_3(d_1 + d_2) + E_3(d_1 + d_2 + d_3)$$

The procedure is then reversed, and by calling R the transmitter and T the receiver, a field E_T is obtained, given by

$$E_T = E_3(d_3) - E_2(d_3) + E_2(d_3 + d_2) - E_1(d_3 + d_2) + E_1(d_3 + d_2 + d_1)$$

The required field is given by $\frac{1}{2} [\overline{E_R} + \overline{E_T}]$, the extension to more sections being obvious.

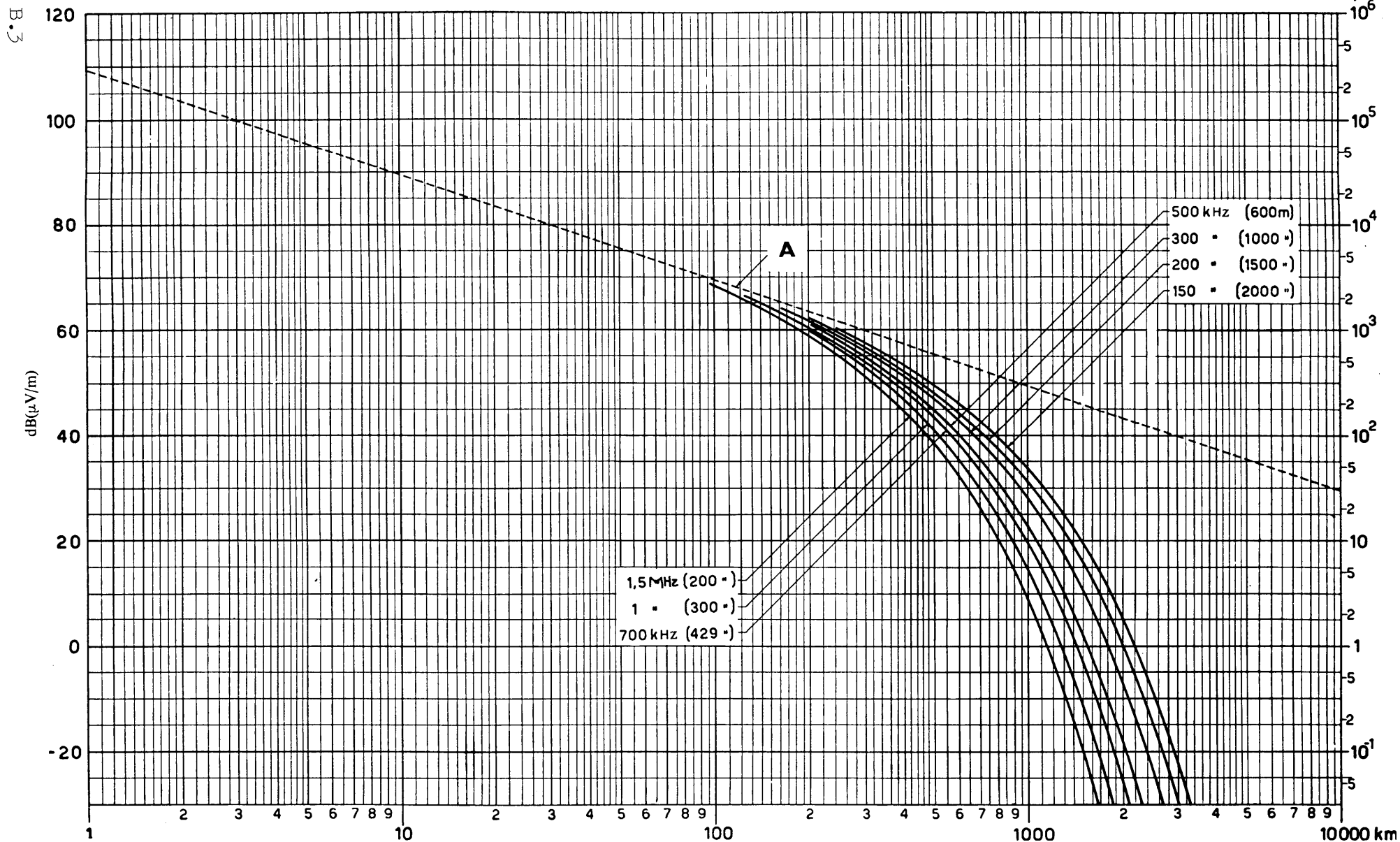


FIGURE 1

FIGURE 1

FIGURA 1

Ground-wave propagation curves; Sea, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

Courbes de propagation de l'onde de sol; mer, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

Curvas de propagación de la onda de superficie; Mar, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$

A: Inverse distance curve

A: Inverse de la distancia

A: inversa de la distancia

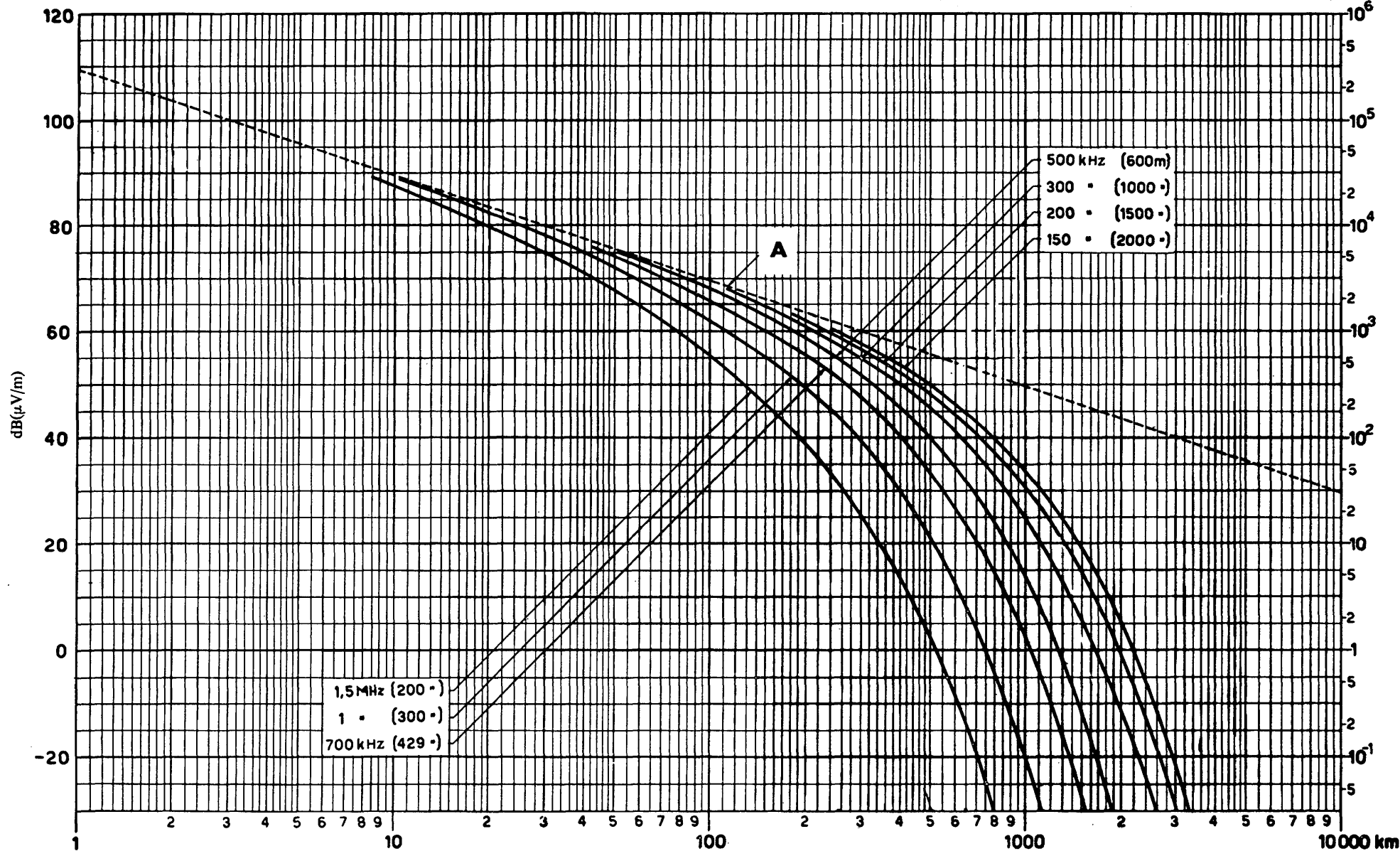


FIGURE 2

Ground-wave propagation curves ; Earth, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$. Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURE 2

A: Inverse de la distance

FIGURA 2

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

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B.3

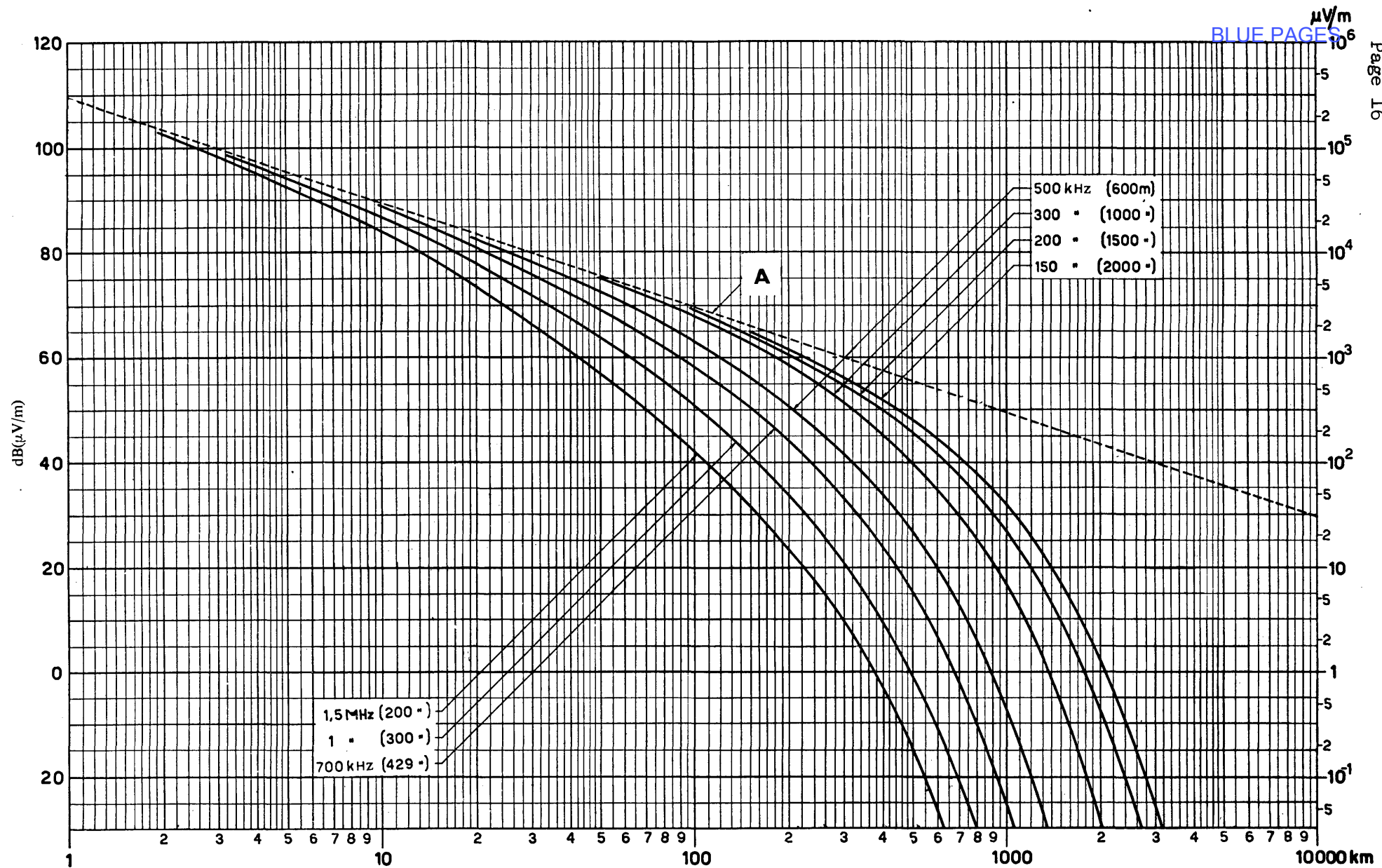


FIGURE 3

Ground-wave propagation curves; Earth, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$
A: Inverse distance curve

FIGURE 3

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$
A: Inverse de la distance

FIGURA 3

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-2}$ S/m, $\epsilon = 4$
A: inversa de la distancia

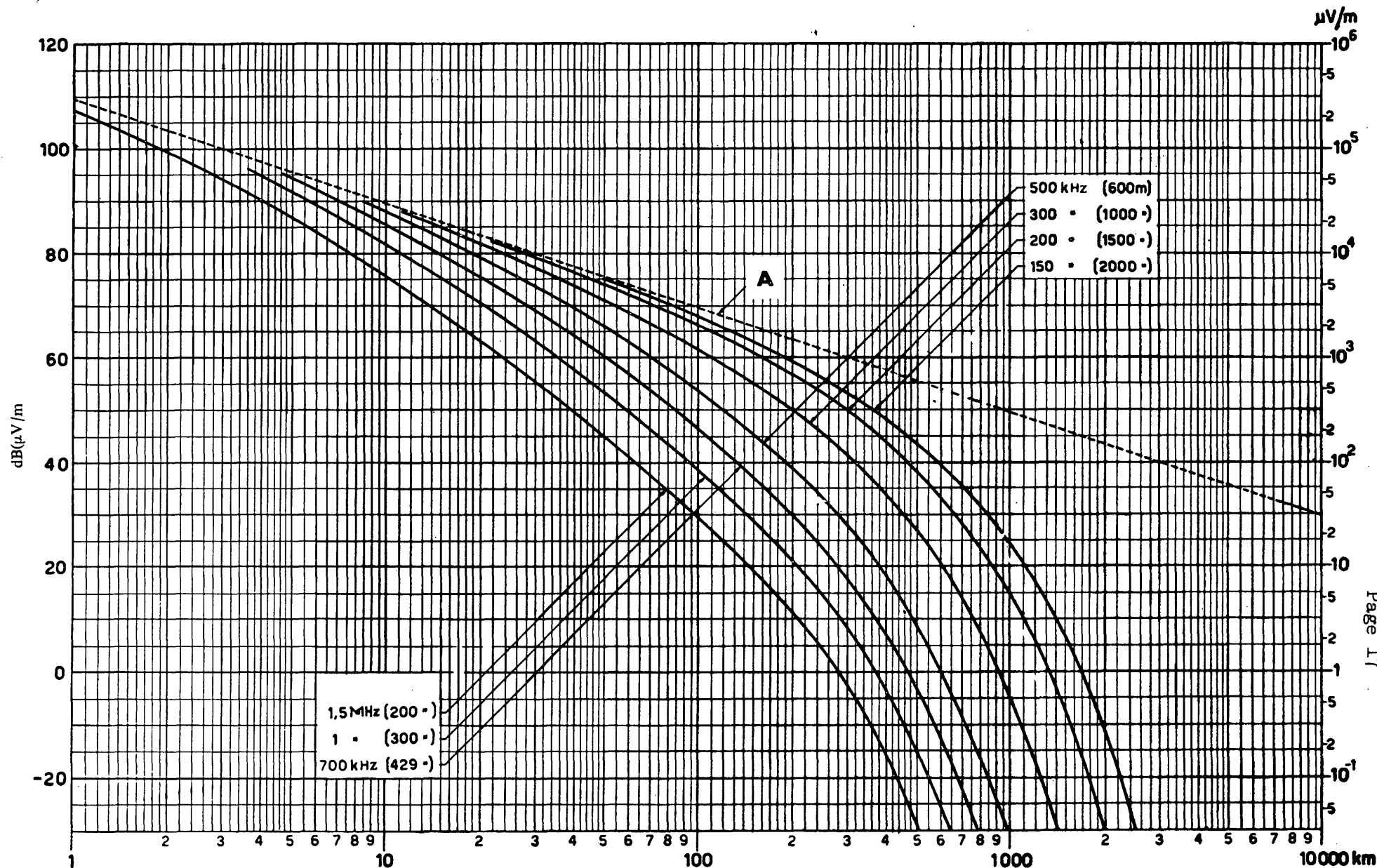


FIGURE 4

Ground-wave propagation curves; Earth, $\sigma = 3 \times 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURE 4

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

FIGURA 4

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

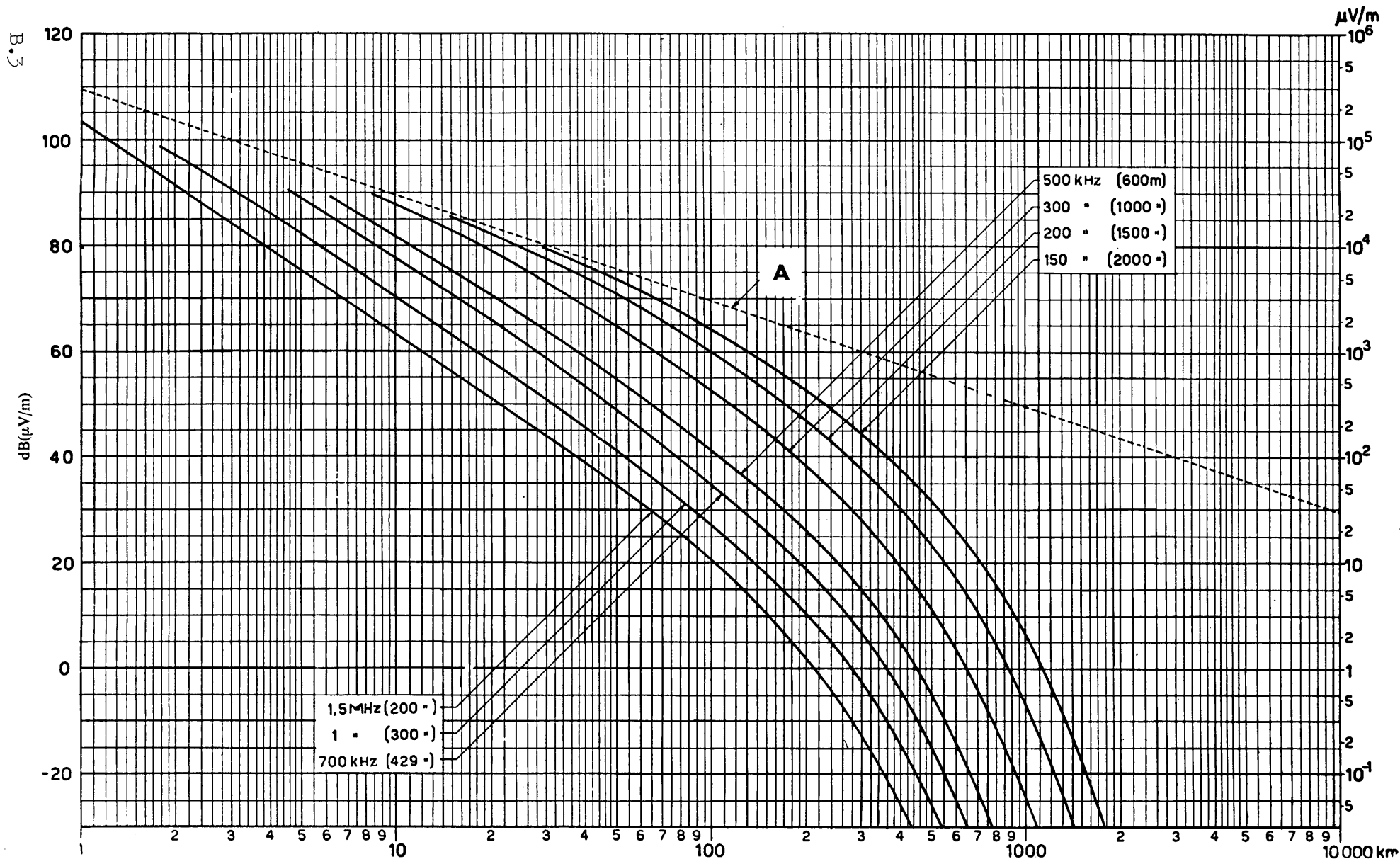


FIGURE 5

Ground-wave propagation curves; Earth, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURE 5

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

FIGURA 5

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

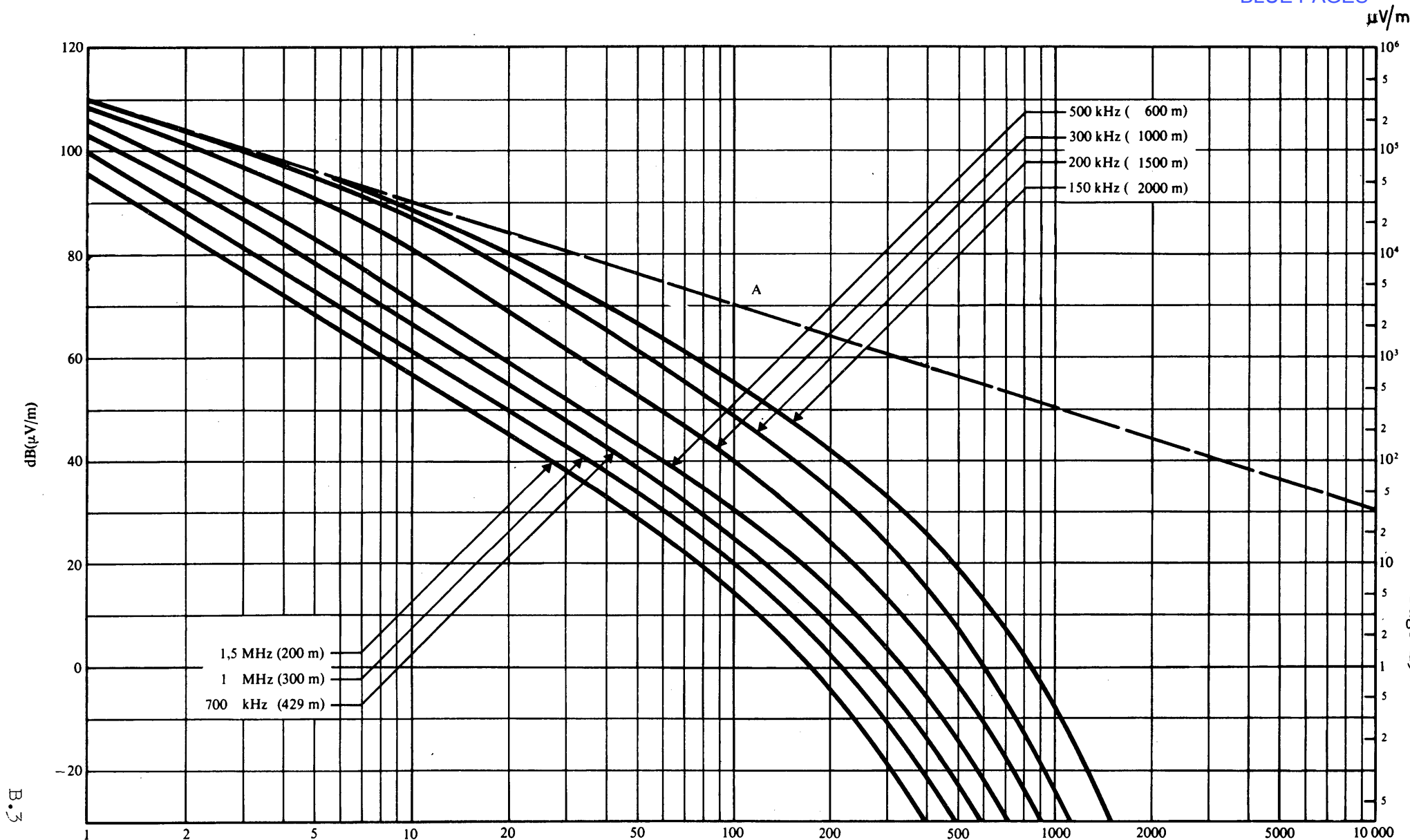


FIGURE 6

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: Inverse de la distance

FIGURA 6

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: inversa de la distancia

Figure 6

Ground-wave propagation curves: Earth

$\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: Inverse distance curve

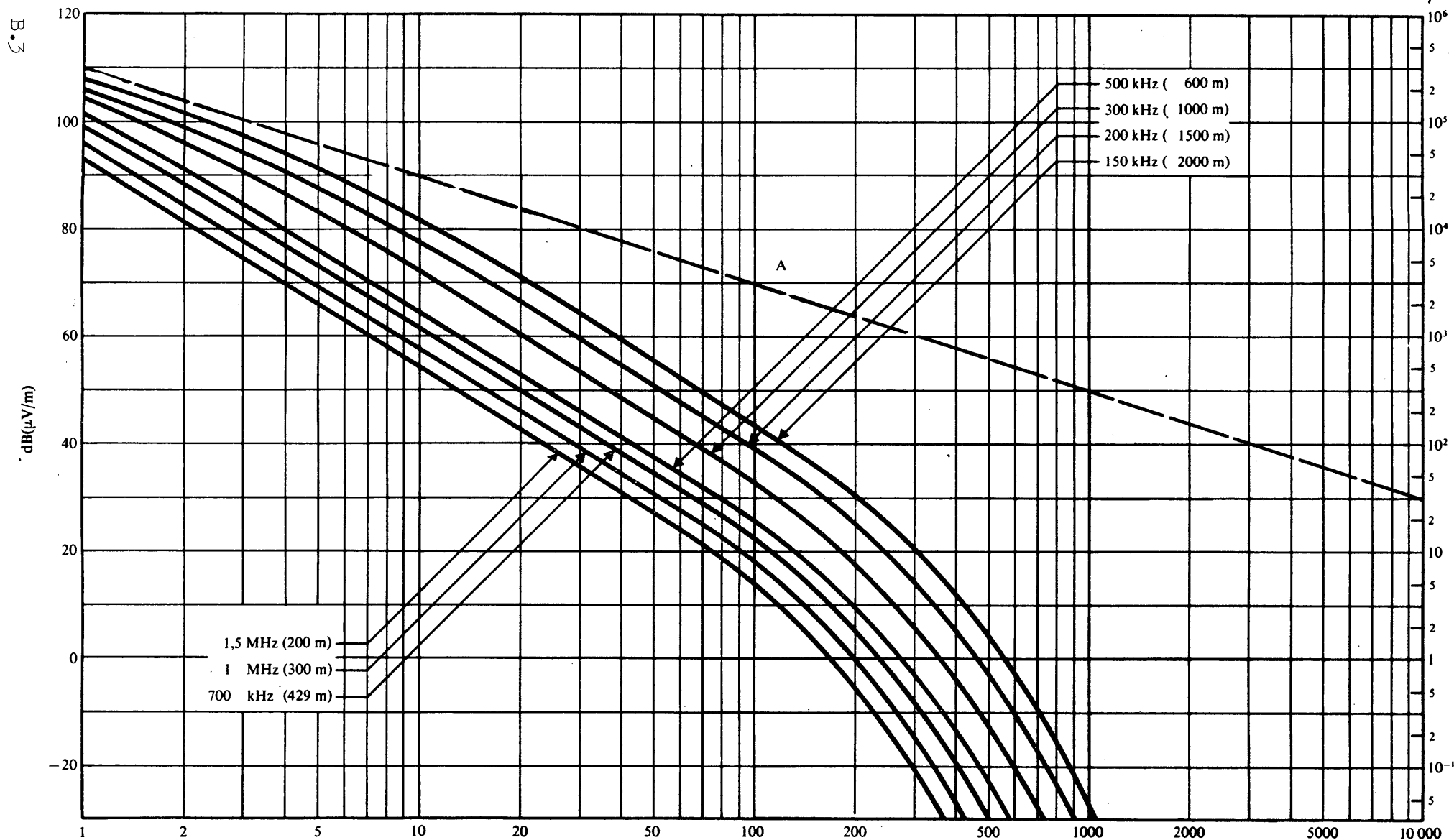


FIGURE 7

Ground-wave propagation curves; Earth

$$\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$$

A: Inverse distance curve

FIGURE 7

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$

A: Inverse de la distance

FIGURA 7

Curvas de propagación de la onda de superficie;
 $\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$ A: Inversa de la distancia

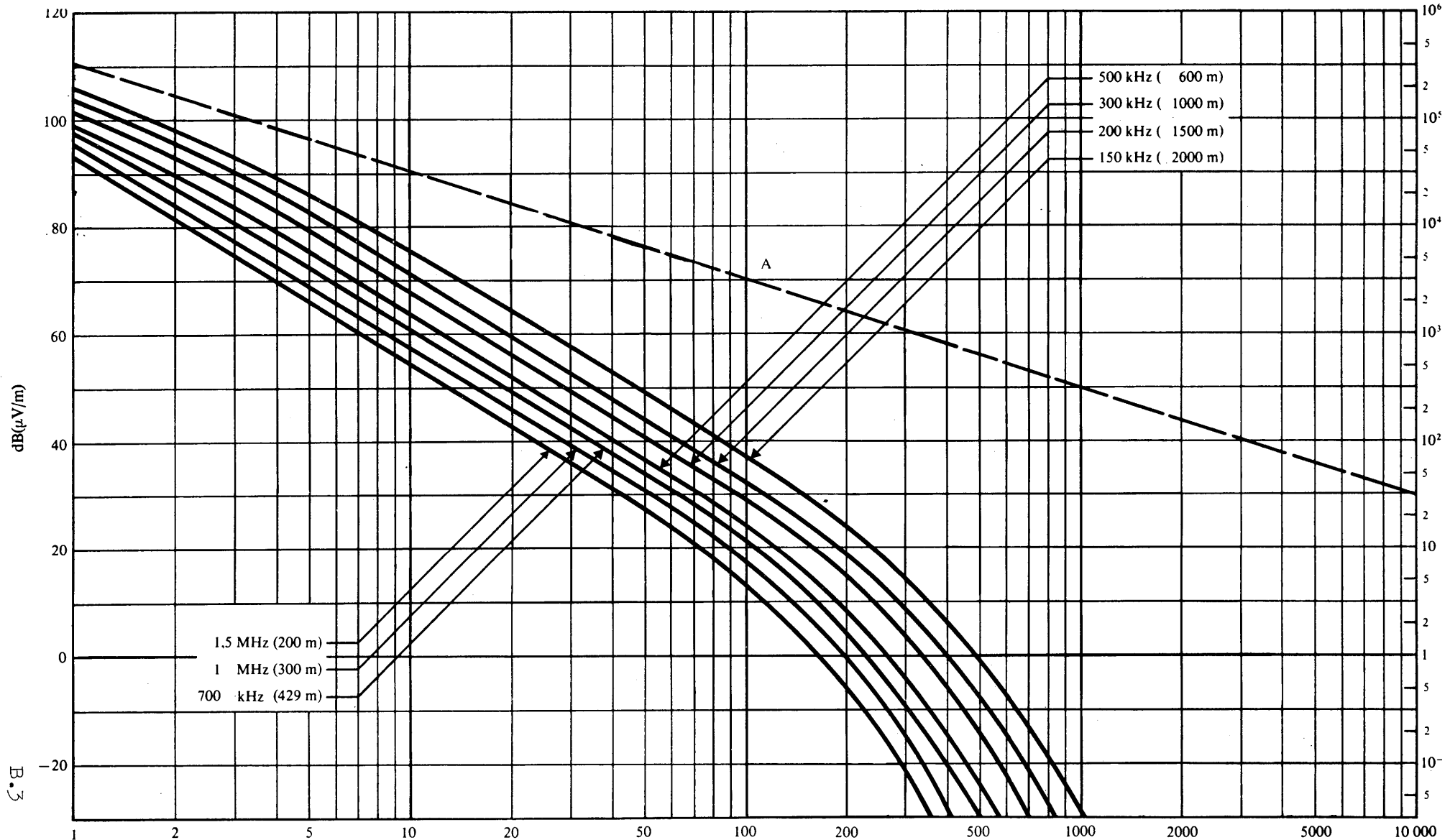


FIGURE 8

Ground-wave propagation curves; Earth

$$\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$$

A: Inverse distance curve

FIGURE 8

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$

A: Inverse de la distance

FIGURA 8

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$

A: inversa de la distancia

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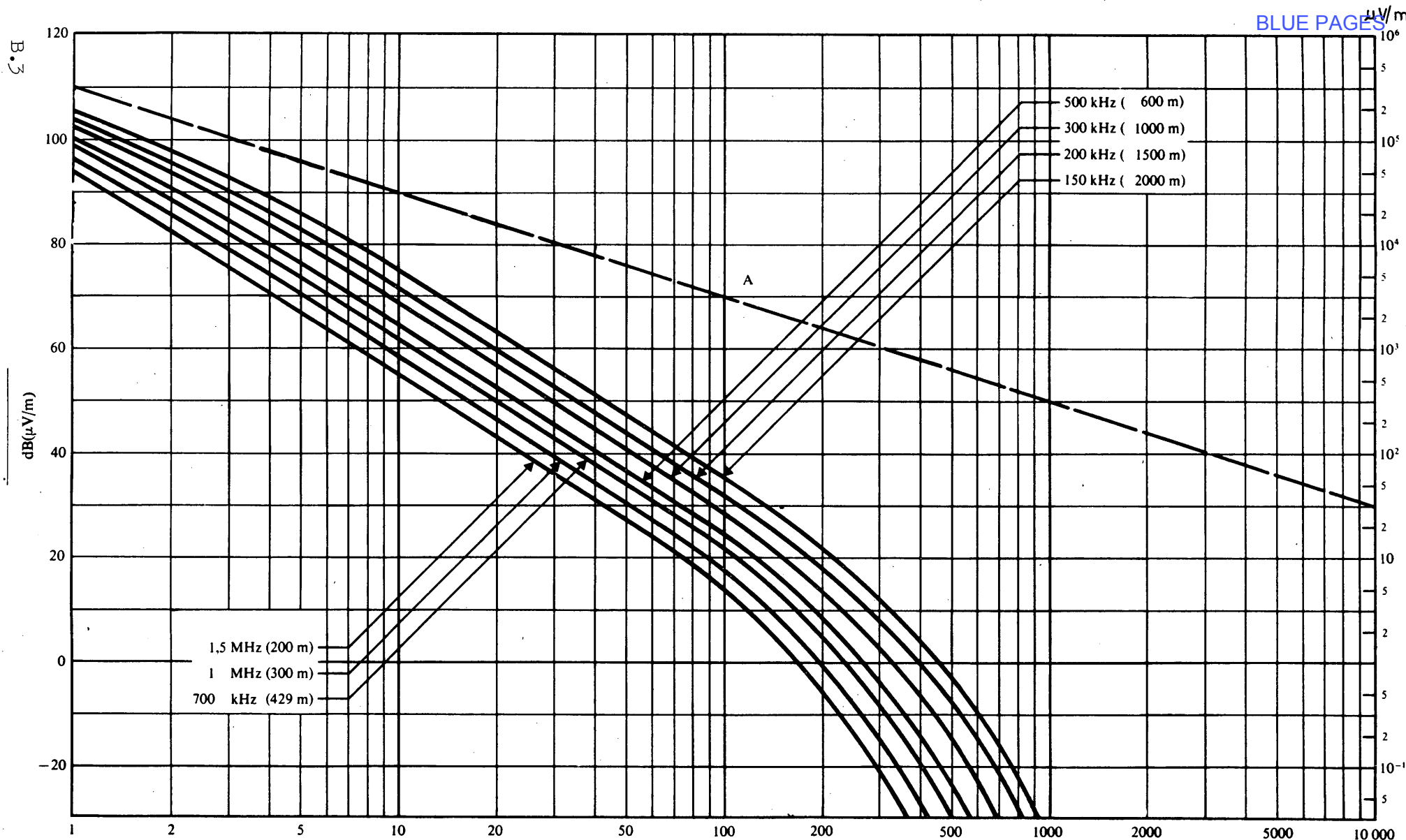


Figure 9

Ground-wave propagation curves; Earth

$$\sigma = 10^{-5} \text{ S/m}, \epsilon = 4$$

A = Inverse distance curve

FIGURE 9

Courbe de propagation de l'onde de sol; Terre, $\sigma = 10^{-5} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

FIGURA 9

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 10^{-5} \text{ S/m}$, $\epsilon = 4$

A inversa de la distancia

CHAPTER 3

SKY WAVE PROPAGATION

3.1 Introduction

Within Region 1 the sky wave propagation prediction method described in 3.3 should be used.

Within the Asian part of Region 3 situated North of the parallel 11°S , the sky wave propagation prediction method described in 3.4 should be used.

Within the part of Region 3 situated South of the parallel 11°S , the method described in 3.5 should be used.

For a path with terminals in different regions, the method used should be that which applies at the mid-point of the great-circle path.

Within the whole of Regions 1 and 3 the radiation in a given direction is expressed in dB with reference to a c.m.f. of 300 V or an e.m.r.p. of 1 kW. The powers are expressed in dB relative to 1 kW.

3.2 Symbols

- b Solar-activity factor given in 3.3.2.6;
- d Great circle ground distance between transmitter and receiver (km);
- F_o Annual median field strength at the reference time in dB relative to $1\mu\text{V/m}$;
- F_c Field strength (dB) deduced from the Cairo North/South curve (Figure / 22_ /);
- F_t Annual median field strength at time t (dB relative to $1\mu\text{V/m}$);
- f Frequency (kHz);
- f' A frequency defined in equation (6) (kHz);
- G Antenna gain (dB) referred to a short vertical antenna in the direction of propagation;

G_O	Sea gain for a path terminal on the coast (dB);	
G_S	Sea gain for a path terminal near the sea (dB);	
h	Transmitting antenna height;	
h_r	Height of reflecting layer (km);	
I	Magnetic dip angle (degrees);	
k	Basic loss factor due to absorption in the ionosphere;	
k_R	Loss factor incorporating effects of ionospheric absorption, focusing and terminal losses, and losses between hops on multi-hop paths;	
L_P	Excess polarization coupling loss (dB);	
L_t	Diurnal loss factor (dB);	
P	Radiated power (dB relative to 1 kW);	
p	Slant propagation distance (km);	
Q	A sea gain parameter given in 3.3.2.3;	
R	Twelve-month smoothed Zurich sunspot number (Wolf number);	
s	Distance of path terminal from sea, measured along great-circle path (km);	
t	Time relative to sunset or sunrise (hours);	
V	Transmitter electromotive force (dB relative to a reference electromotive force of 300 V);	
Θ	Direction of propagation relative to magnetic East-West (degrees);	
λ	Wavelength;	
Φ	A geomagnetic latitude parameter;	
Φ_T	Geomagnetic latitude of transmitter	} (degrees, positive in Northern hemisphere, negative in Southern hemisphere)
Φ_R	Geomagnetic latitude of receiver	

3.3 Sky wave field strength prediction method for the frequency range 150 to 1 605 kHz for Region 1

3.3.1 Introduction

This method of prediction gives the night-time sky wave field strength produced for a given power radiated from one or more vertical antennae, when measured by a loop antenna at ground level aligned in a vertical plane along the great circle path to the transmitter. It applies for paths of lengths up to 12,000 km.

3.3.2 Annual median night-time field strength

The predicted sky wave field strength is given by :

$$F_o = V + G_s - L_p + 105.3 - 20 \log_{10} p - 10^{-3} k_{Rp} \quad (1)$$

where F_o = annual median of half-hourly median field strengths (dB relative to 1 μ V/m) at the reference time defined in

3.3.2.1.

3.3.2.1 Reference time

The reference time is taken as six hours after the time at which the sun sets at a point S on the surface of the earth. For paths shorter than 2,000 km, S is the mid-point of the path. On longer paths, S is 750 km from the terminal where the sun sets last, measured along the great-circle path.

3.3.2.2 Cymomotive force

The cymomotive force V in the azimuth and the elevation of the direction of propagation is calculated by the formula :

$$V = P' + G \quad (2)$$

where P' , expressed in dB (kW), is the power supplied by the transmitter to the antenna transmission line, while neglecting various losses in the antenna and its transmission line,

and where G is the gain, in dB, of the antenna in the direction of propagation, referred to a short vertical antenna (see preceding chapter).

For a simple vertical antenna, without losses, this gain is given by Figure /10/.

3.3.2.3 Sea gain

G_S is the additional signal gain when one or both terminals is situated near the sea. G_S for a single terminal is given by :

$$G_S = G_O - 10^{-3} \frac{Q s f}{G_O} \quad (\text{dB}) \quad (3)$$

where G_O is the gain when the terminal is on the coast, f is the frequency in kHz and s is the distance in km of the terminal from the sea, measured along the great-circle path. $Q = 0.44$ in the LF band and 1.75 in the MF band. G_O is given in Figure /11/ as a function of d for the above-mentioned bands. In the MF band, $G_O = 10$ dB when $d > 6,500$ km. Equation (3) applies for values of s such that $G_S > 0$. For larger values of s , $G_S = 0$. If both terminals are near the sea, G_S is the sum of the values of G_S for the individual terminals.

3.3.2.4 Excess polarization coupling loss

L_p is the excess polarization coupling loss. In the LF band, $L_p = 0$. In the MF band, at low latitudes, for $|I| \leq 45^\circ$.

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2 \text{ (dB/terminal)} \quad (4)$$

(see Figure 18)

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p values added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures 19 and 20).

3.3.2.5 Slant propagation distance

For paths longer than 1,000 km, p is approximately equal to the ground distance d (km). For shorter paths,

$$p = (d^2 + 4h_r^2)^{\frac{1}{2}} \quad (5)$$

where $h_r = 100$ km if $f \leq f'$ and 220 km if $f > f'$, where f' (in kHz) is given by

$$f' = 350 + \sqrt{(2.8d)^3 + 300^3}^{\frac{1}{3}} \quad (6)$$

Equation (5) may be used for paths of any length with negligible error.

3.3.2.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by :

$$k_R = k + 10^{-2} b_R \quad (7)$$

In the LF band, $b = 0$. In the MF band, $b = 1$ for Europe and 0 elsewhere.

$$k = 1.9 f^{0.15} + 0.24 f^{0.4} (\tan^2 \phi - \tan^2 37^\circ) \quad (8)$$

For paths shorter than 3,000 km :

$$\Phi = (\Phi_T + \Phi_R) / 2 \quad (9)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure 121 at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole having the geographical coordinates, 78.5°N , 69°W . Φ_T and Φ_R are taken as positive in the northern hemisphere and negative in the southern hemisphere. Paths longer than 3,000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = (3\Phi_T + \Phi_R) / 4 \quad (10)$$

for the first half of the path and

$$\Phi = (\Phi_T + 3\Phi_R) / 4 \quad (11)$$

for the second half. The values of k calculated from equation (8) for the two half-paths are then averaged and used in equation (7).

If $|\Phi| > 60^\circ$, equation (8) is evaluated for $\Phi = 60^\circ$.

3.3.4 Nocturnal variation of annual median field strength

3.3.4.1 Nocturnal variation of annual median field strength is given by :

$$F_t = F_0 - I_t$$

Figure 122 shows the average of the annual median nocturnal variations, derived from Figure 8 of C.C.I.R. Report 264 (1974) and Figure 5 of C.C.I.R. Report 431 (1974) respectively; the time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the mid-path position for $d < 2,000$ km and at 750 km from the terminal where the sun sets last or rises first for longer paths.

3.3.4.2 The calculation of the interfering signal strength of a station is based on the method indicated in 3.3.4.1, for the lowest diurnal loss factor during the common operating schedule of the wanted and interfering transmitters. The results may be extrapolated where necessary.

3.3.4.3 For day-time operation administrations by mutual agreement may use Figure /13/ (for temperate zones) and Figure /14/ (for equatorial zones) as the basis of calculation; the sky wave field strength, calculated at the reference time at the interfering station, is then reduced by 20 dB, or by 40 dB in the case of the dotted curve of Figure /14/. Figures /13/ and /14/ refer to local mean time at the station site. This local mean time is equal to Greenwich Mean Time plus or minus the number of hours and minutes corresponding to the longitude of the station.

3.3.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 8 dB greater in the LF band and 10 dB greater in the MF band than the values of F_o and F_t given above.

3.4 Sky wave field strength prediction method for the frequency range 525 to 1 605 kHz for the Asian part of Region 3 North of 11°S

3.4.1 Propagation curve

In the Asian area of the Region 3 situated to the North of 11°S the "Cairo North-South" propagation curve referred to the annual midnight median value should be used for sky wave predictions. This curve appears in Figure /22/. This curve refers to an e.m.r.p. of 1 kW or a c.m.f. of 300 V. The field F_o , in dB, is given by

$$F_o = F_c - L_p + V \quad (12)$$

3.4.2 Excess polarization coupling loss (L_p)

L_p is the excess polarization coupling loss. In the MF band at low latitudes for $|I| \leq 45^\circ$

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2(\text{dB/terminal}) \quad (13)$$

(See Figure /18/)

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures /19/ and /20/).

3.4.3 Nocturnal variation of annual median field strength

3.4.3.1 The nocturnal variation of the annual median field strength is given by

$$F_t = F_o - L_t \quad (14)$$

In Figure /12/, time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the midpath position for $d < 2\,000$ km and at 750 km from the terminal where the sun sets last or rises first for longer paths.

3.4.3.2 The calculation of the interfering signal strength of a station is based on the method indicated in 3.4.3.1 for the lowest diurnal loss factor during the common operating schedule of the wanted and interfering transmitters. The results may be extrapolated where necessary.

3.4.3.3 For day-time operation administrations by mutual agreement may use Figure /13/ (for temperate zones) and Figure /14/ (for equatorial zones) as the basis of calculation; the sky wave field strength, calculated at the reference time at the interfering station, is then reduced by 20 dB, or by 40 dB in the case of the dotted curve of Figure /14/. Figures /13/ and /14/ refer to local mean time at the station site. This local mean time is equal to Greenwich Mean Time plus or minus the number of hours and minutes corresponding to the longitude of the station.

3.4.4 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 10 dB greater in the MF band than the values of F_o and F_t given above.

3.5 Sky wave field strength prediction method for the frequency range 525 to 1 605 kHz for the part of Region 3, South of parallel 11°S

3.5.1 Symbols

See 3.2.

3.5.2 Introduction

See 3.3.1 with regard to the MF band.

3.5.3 Annual median night-time field strength

The predicted sky wave field strength is given by

$$F_o = V + G_S - L_p + 108 - 20 \log_{10} p - 0.8 \times 10^{-3} k_{R,p} \quad (15)$$

where F_o = annual median of half-hourly median field strengths (dB relative to 1 μ V/m) at the reference time defined in 3.3.2.1.

3.5.3.1 Reference time

See 3.3.2.1.

3.5.3.2 Cymomotive force

See 3.3.2.2.

3.5.3.3 Sea gain

See 3.3.2.3 with regard to the MF band.

3.5.3.4 Excess polarization coupling loss

See 3.3.2.4 with regard to the MF band.

3.5.3.5 Slant propagation distance

See 3.3.2.5.

3.5.3.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by :

$$k_R = k + 10^{-2} bR \quad (16)$$

In the MF band, $b = 1$
c

$$k = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \phi - \tan^2 37^\circ) \quad (17)$$

For paths shorter than 3 000 km

$$\Phi = (\Phi_T + \Phi_R) / 2 \quad (18)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure [21]) at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole having the geographical coordinates, 78.5°N, 69°W. Φ_T and Φ_R are taken as negative in the southern hemisphere. Paths longer than 3 000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = (3\Phi_T + \Phi_R) / 4 \quad (19)$$

for the first half of the path and

$$\Phi = (\Phi_T + 3\Phi_R) / 4 \quad (20)$$

for the second half. The values of k calculated from equation (17) for the two half-paths are then averaged and used in equation (16).

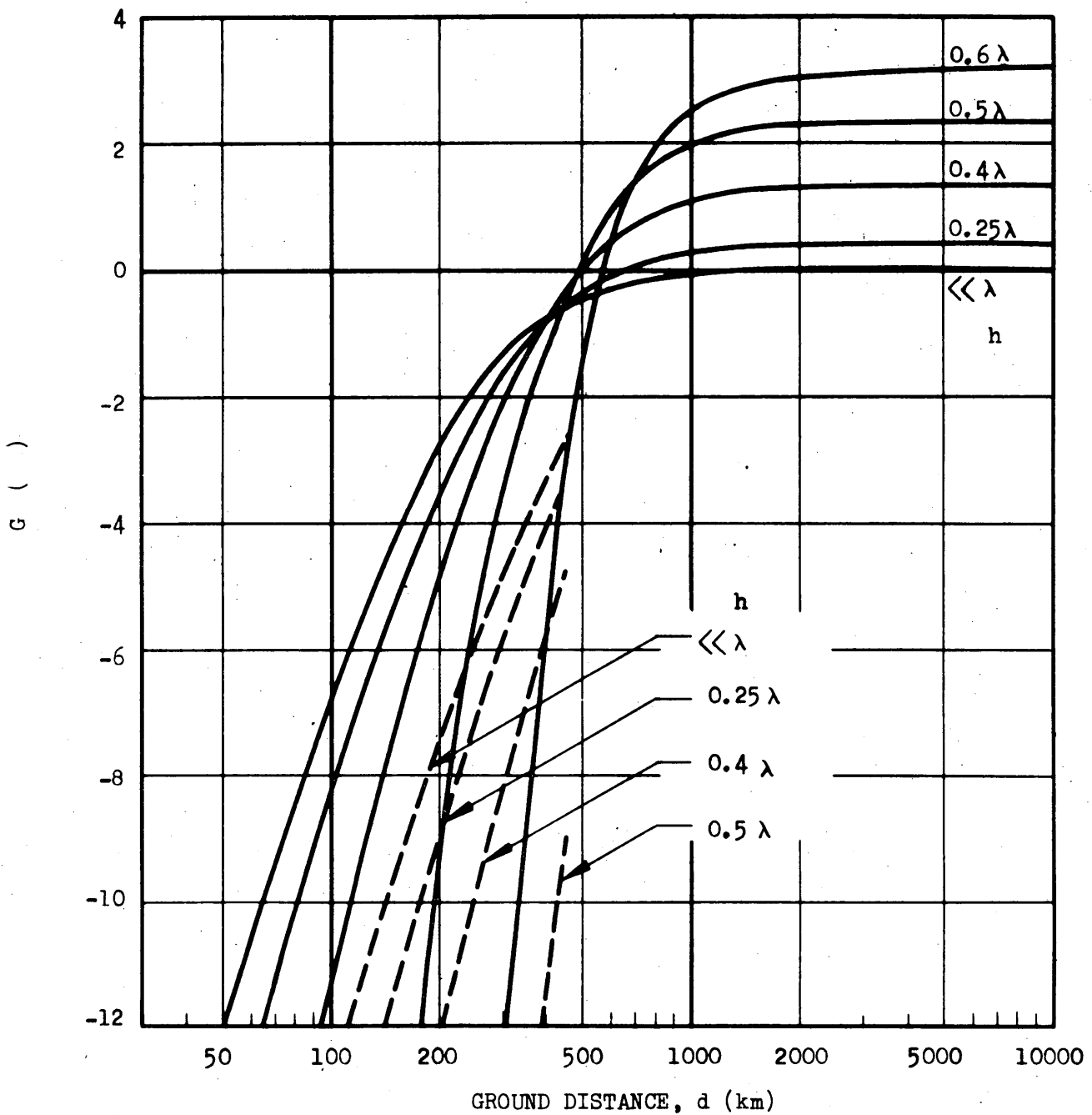
If $|\Phi| > 60^\circ$, equation (17) is evaluated for $\Phi = 60^\circ$.

3.5.4 Nocturnal variation of annual median field strength

See 3.3.4.

3.5.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 7 dB greater in the MF band than the values of F_o and F_t given in 3.3.4.



h : Antenna height

— E layer reflection ($h_r = 100$ km)

- - - F layer reflection ($h_r = 220$ km)

FIGURE [10]

Transmitting antenna gain for
a simple vertical antenna

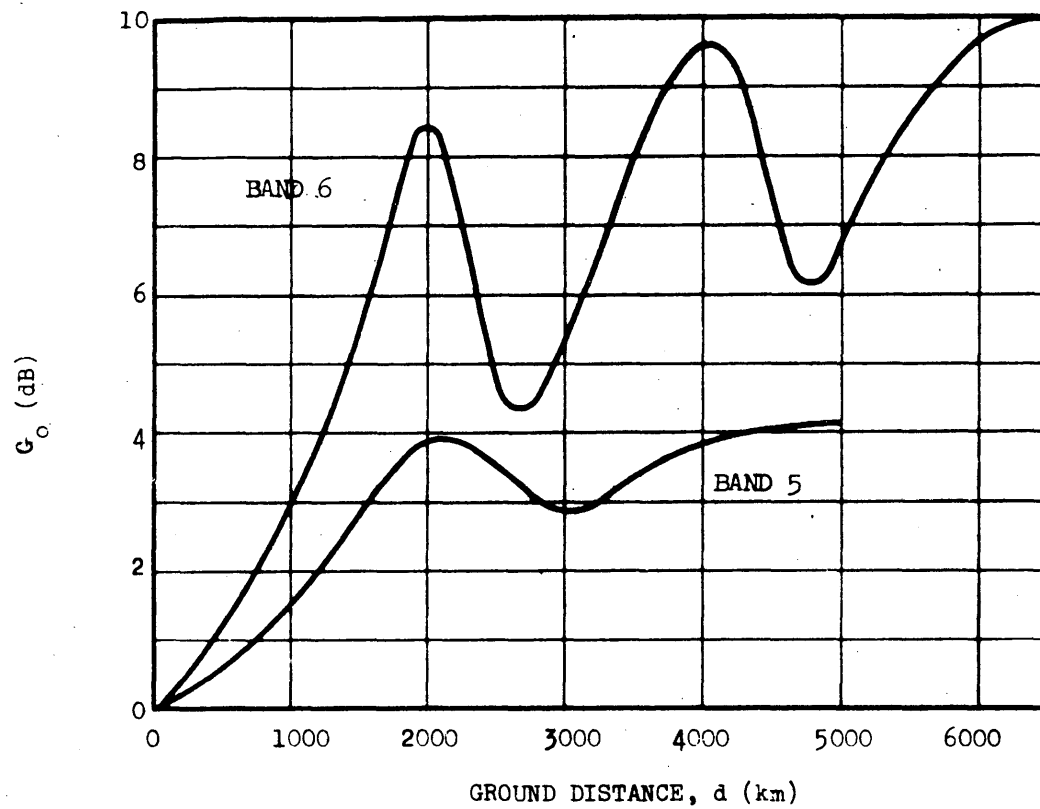


FIGURE 11

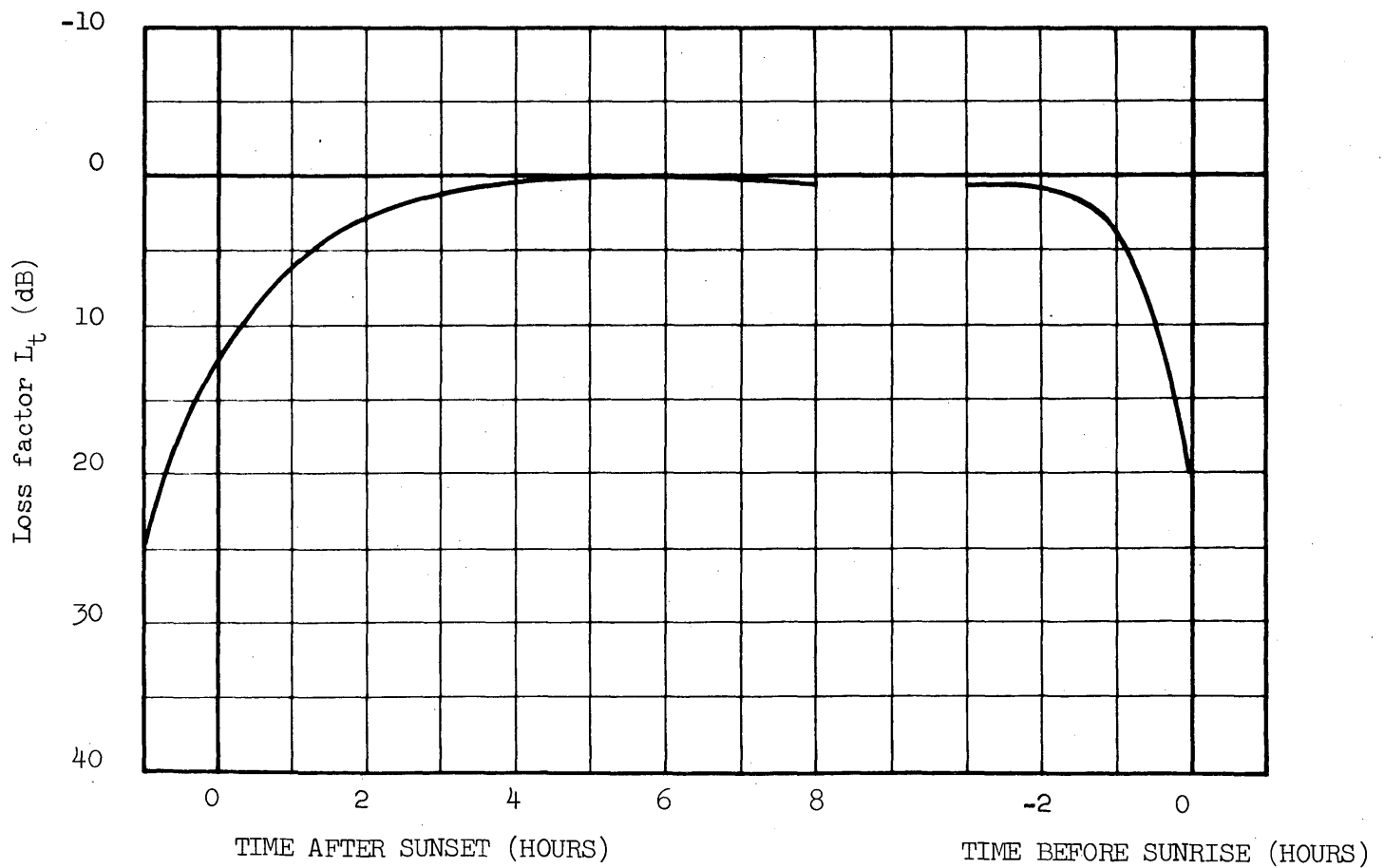
Sea gain (G_o) for a single terminal on the coast

FIGURE 12

Diurnal loss factor (L_t)

HEMISPHERE NORD

NORTHERN HEMISPHERE

HEMISFERIO NORTE

Jan. Fev. Mar. Avr. Mai Juin Juil. Août Sept. Oct. Nov. Dec.
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
En. Feb. Mar. Abr. May Jun. Jul. Ag. Sept. Oct. Nov. Dec.

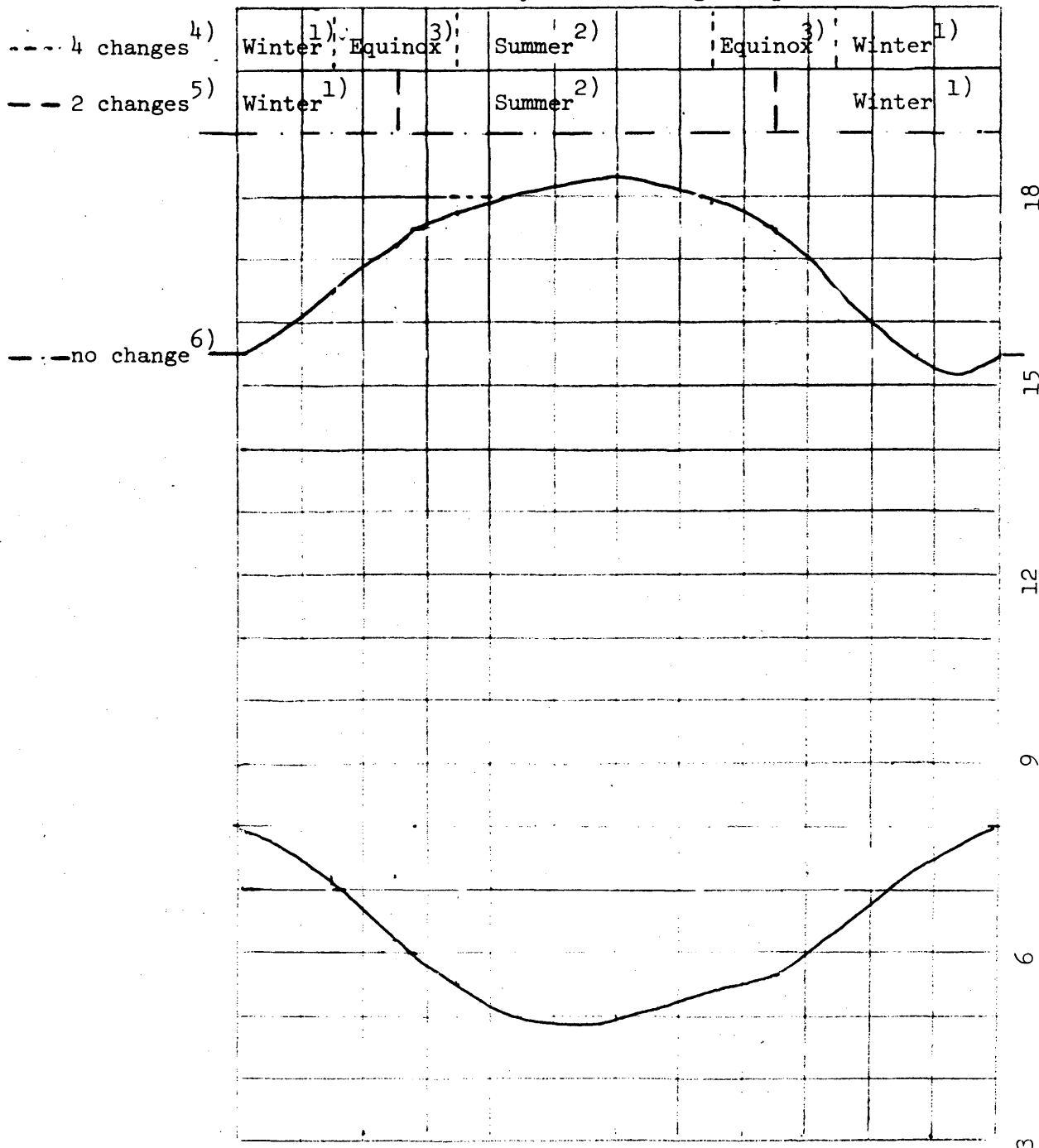


FIGURE 13 - FIGURA 13

Limites de fonctionnement de jour aux latitudes tempérées (30° - 60°)
Limits of daytime operation at temperate latitudes (30° - 60°)
Límites de las horas diurnas en latitudes templadas (30° - 60°)

Heure (temps moyen local)
Time of day : LMT
Hora : (TML)

Juil. Août Sept. Oct. Nov. Dec. Jan. Fev. Mar. Avr. Mai Juin
Jul. Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
Jul. Ag. Sept. Oct. Nov. Dic. En. Feb. Mar. Abr. May Junio

HEMISPHERE SUD

SOUTHERN HEMISPHERE

HEMISFERIO SUR

- 1) Hiver/Invierno
- 2) Eté/Verano
- 3) Equinoxe/Equinoccios
- 4) 4 changements/4 cambios
- 5) 2 changements/ 2 cambios
- 6) pas de changement/sin cambio

HEMISPHERE NORD
NORTHERN HEMISPHERE
HEMISFERIO NORTE

Jan.Fev. Mar. Avr. Mai JuinJuil.Août Sept.Oct.Nov. Dec.
Jan.Feb. Mar. Apr. May JuneJuly Aug. Sept.Oct.Nov. Dec.
En. Feb. Mar. Abr. Mayo Jun.Jul. Ag. Sept.Oct.Nov. Dic.

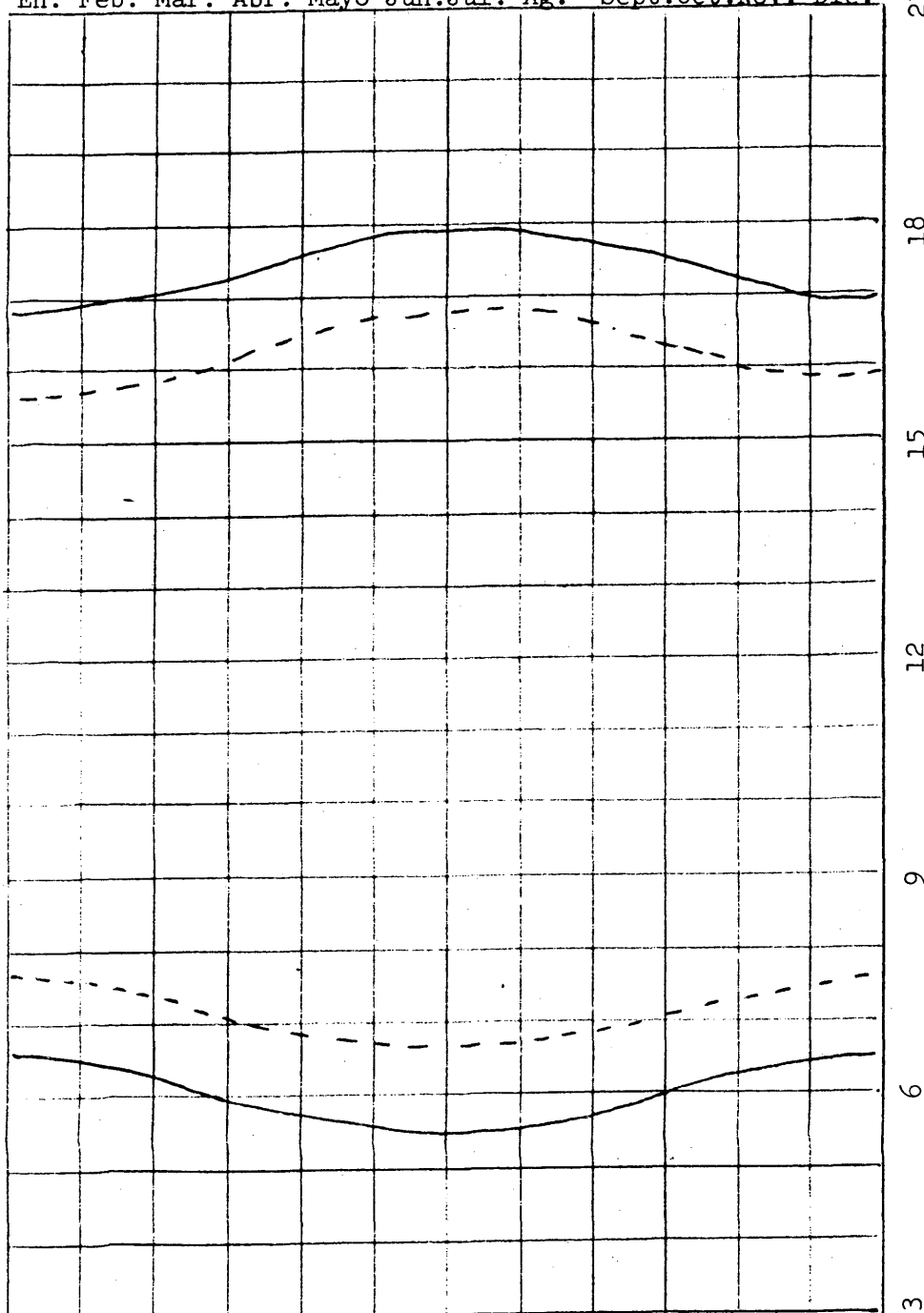


FIGURE 14 - FIGURA 14

Limites de fonctionnement de jour aux latitudes équatoriales (0° - 30°)
Limits of daytime operation at the equatorial latitudes (0° - 30°)
Límites de las horas diurnas en latitudes ecuatoriales (0° - 30°)

Heure (temps moyen local)
Time of day : LMT
Hora : (TML)

Juil.Août Sept.Oct.Nov. Déc. Jan. Fév.Mars.Avr. Mai Juin
July Aug. Sept.Oct.Nov. Dec. Jan.Feb. Mar.Apr. May June
Jul. Ag. Sept.Oct.Nov. Dec. En. Feb. Mar.Abr. Mayo Junio

HEMISPHERE SUD
SOUTHERN HEMISPHERE
HEMISFERIO SUR

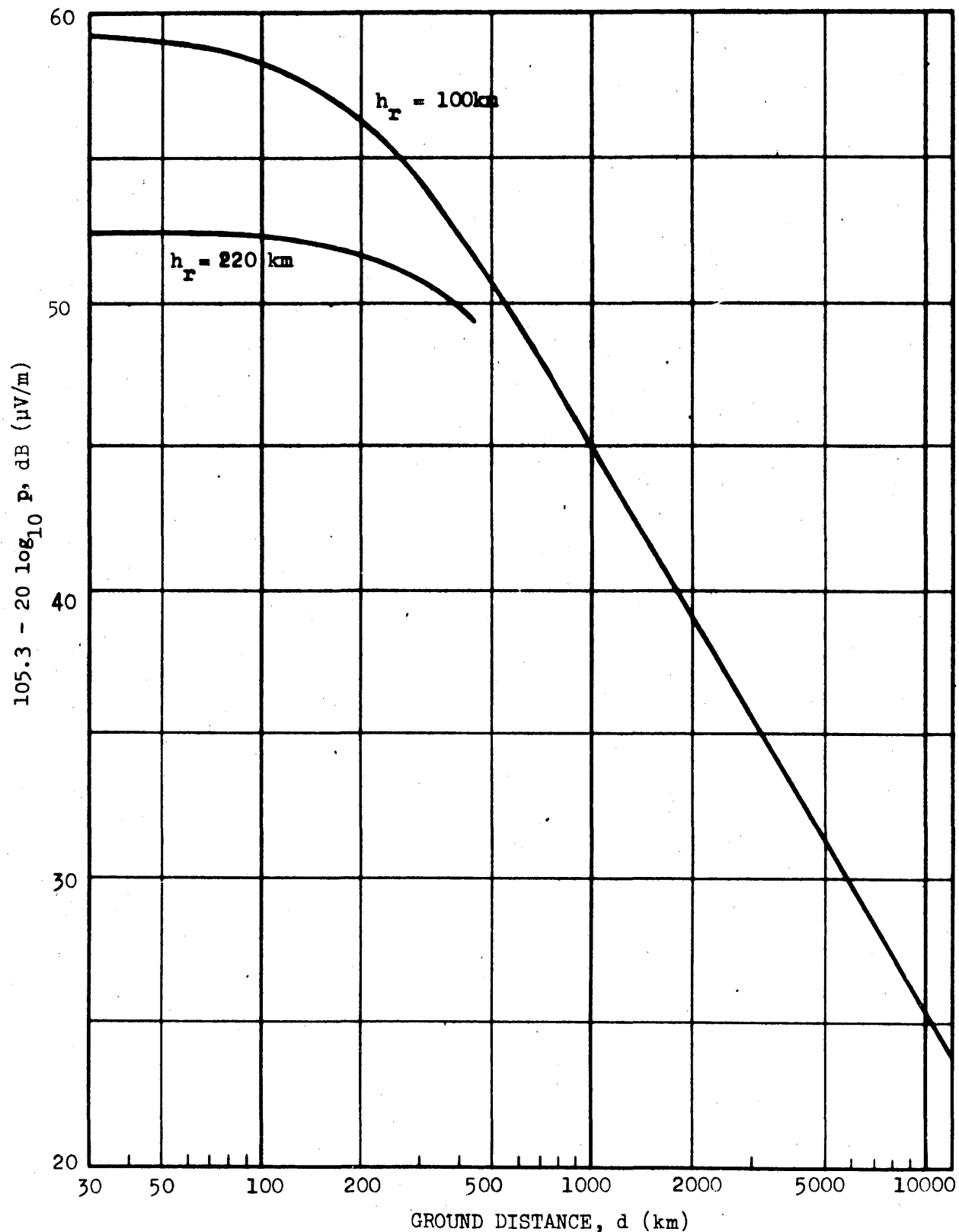


FIGURE [15]

Basic field strength

The curves show $105.3 - 20 \log_{10} p$ as a function of d
 where $p = (d^2 + 4h_r^2)^{1/2}$

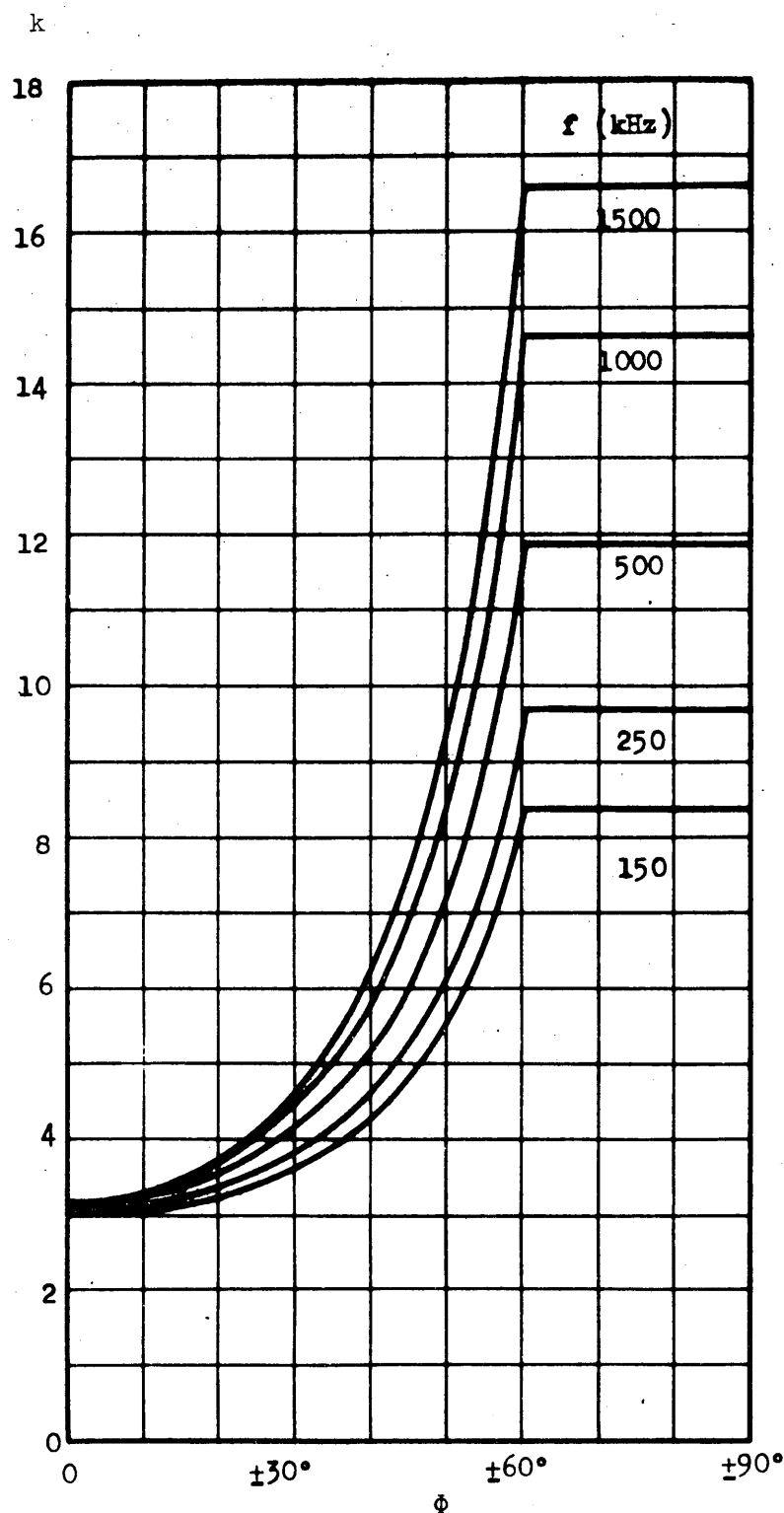


FIGURE 16

Basic loss factor due to ionospheric absorption

$$k = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \phi - \tan^2 37^\circ)$$

$$(0 \leq \phi \leq 60^\circ)$$

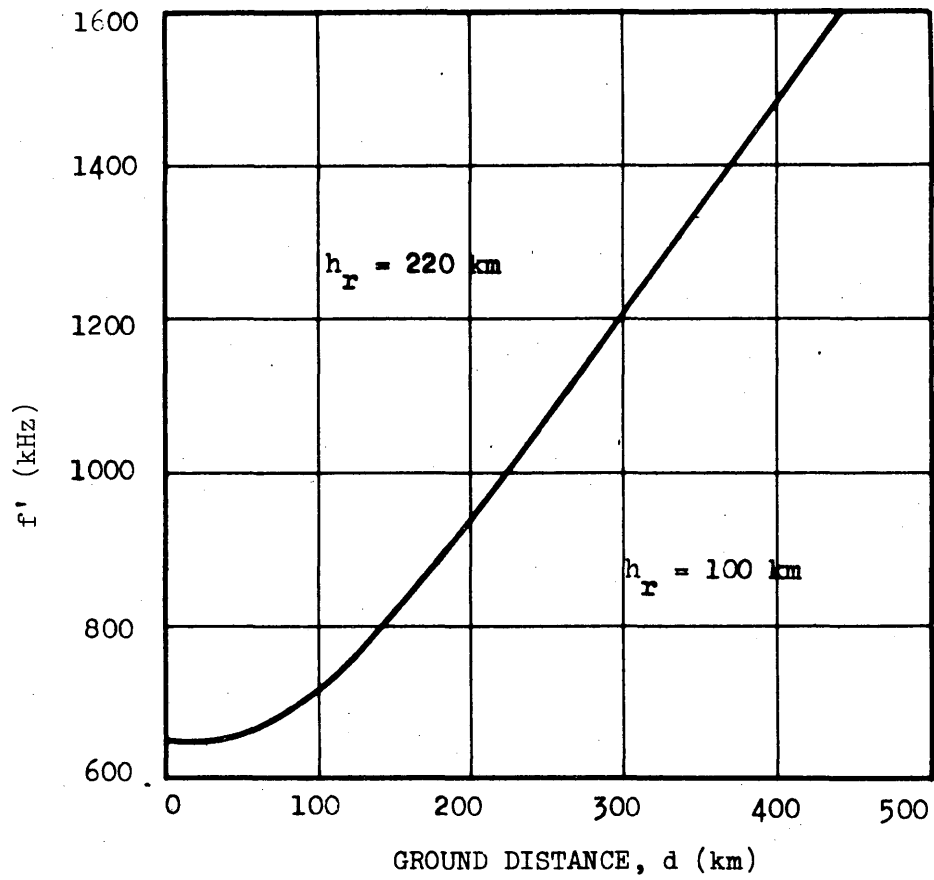


FIGURE 17

Frequency defined in equation (6)

$$f' = 350 + \sqrt[3]{(2.8 d)^3 + 300^3}$$

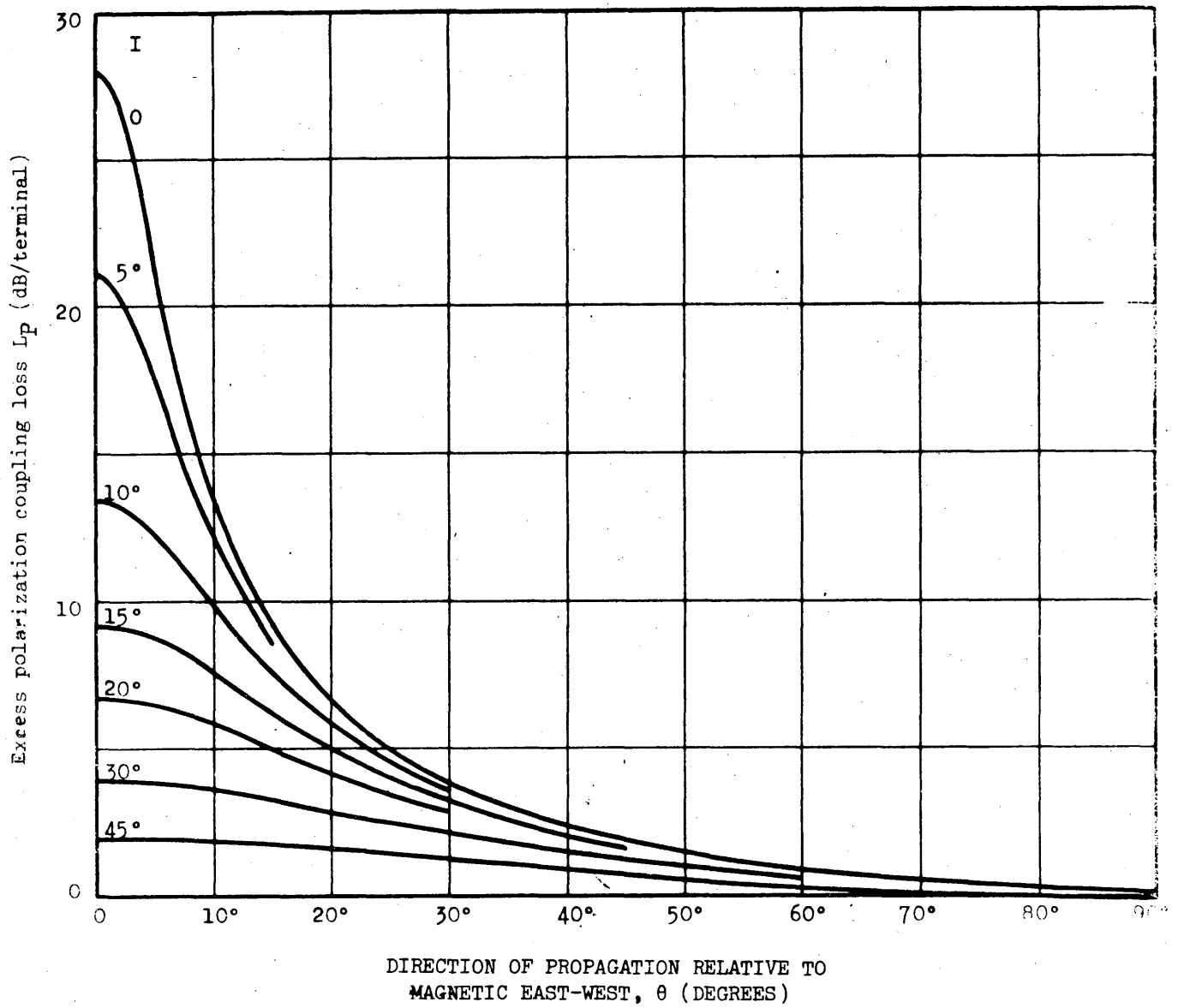
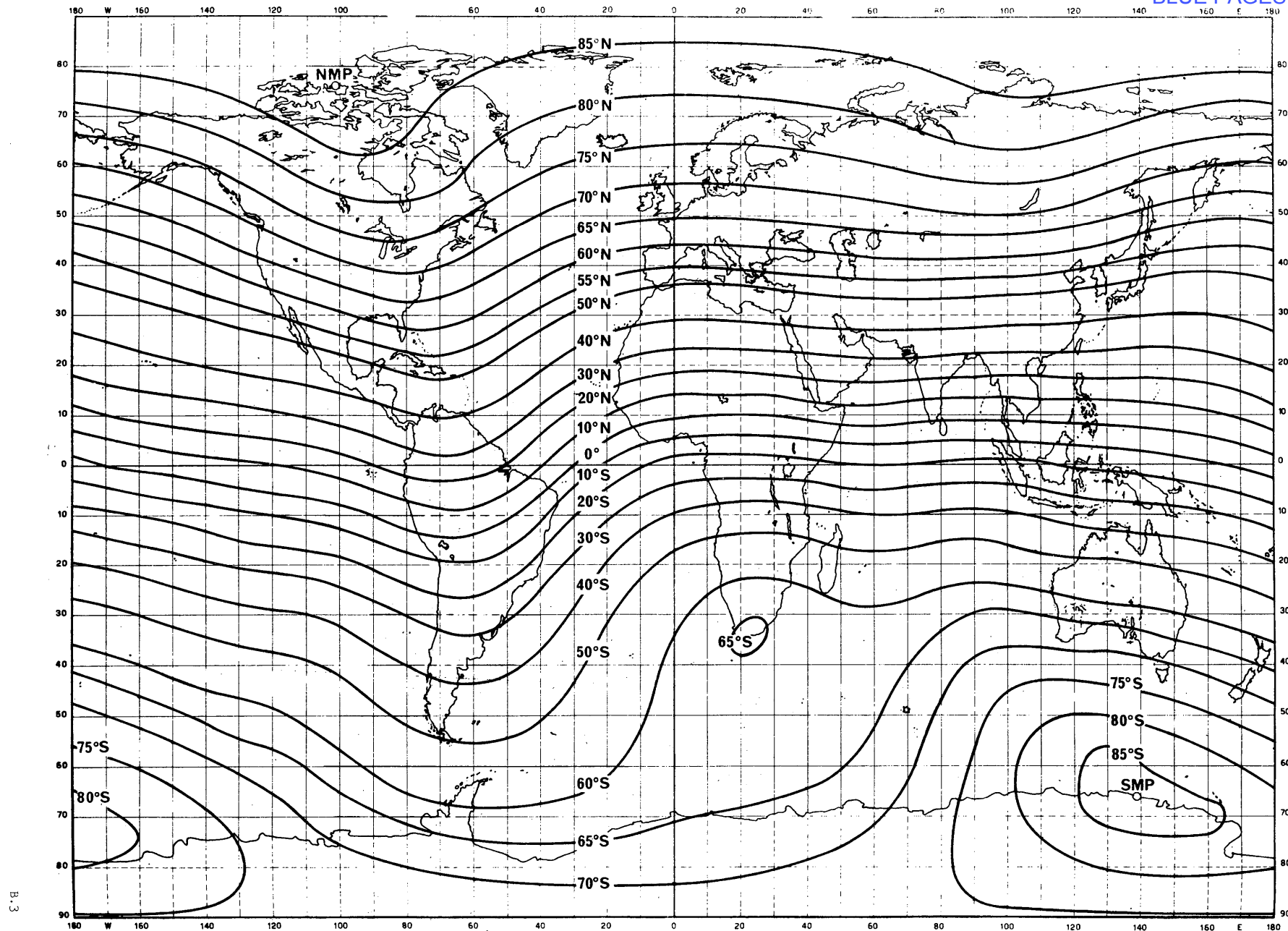


FIGURE [18]

Excess polarization coupling loss L_p



B.3

FIGURE 19 - FIGURA 19

Carte de l'inclinaison magnétique - Map of magnetic dip - Mapa de la inclinación magnética

BLUE PAGES

B.3

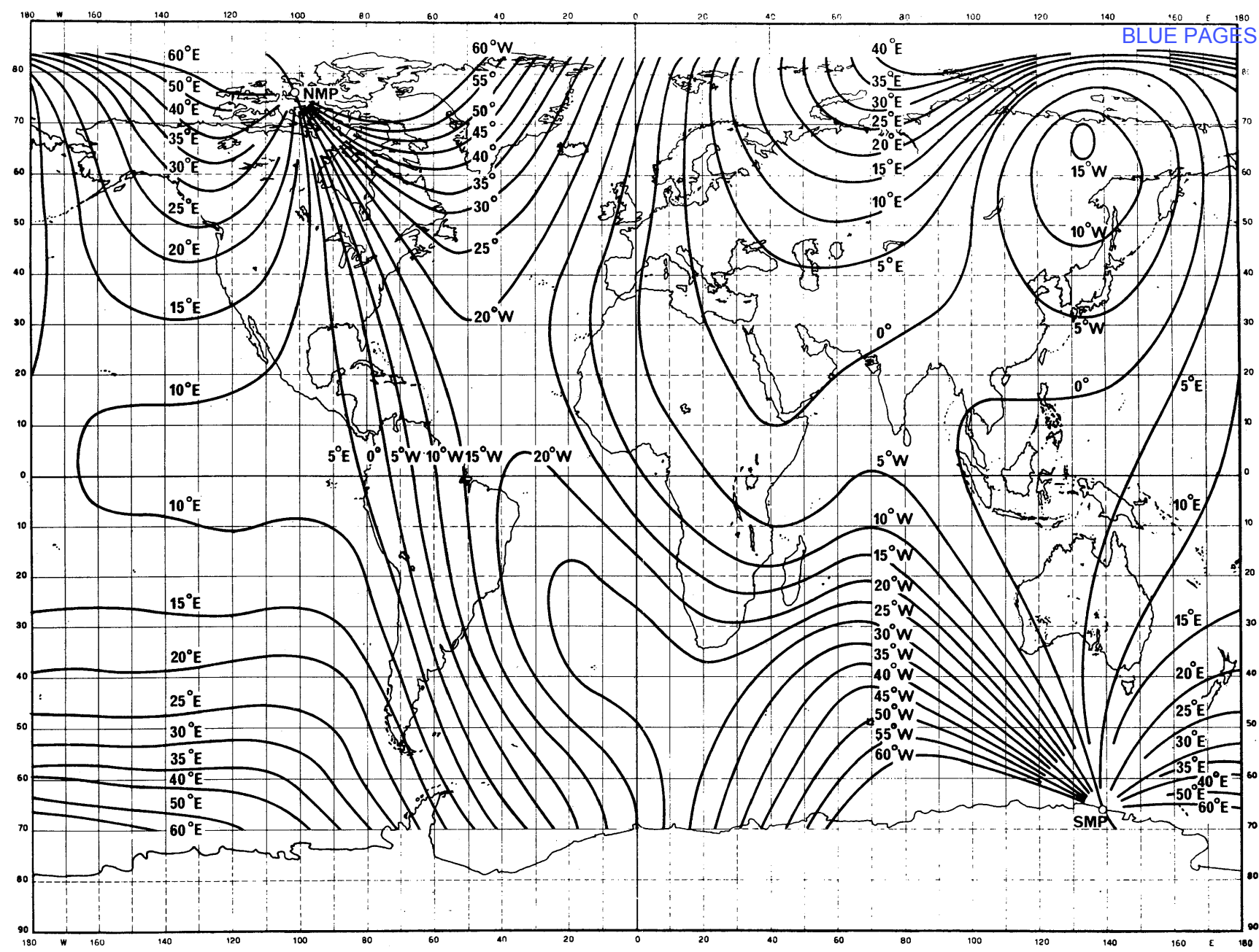


FIGURE 20 - FIGURA 20

Carte de déclinaison magnétique - Map of magnetic declination - Mapa de la declinación magnética

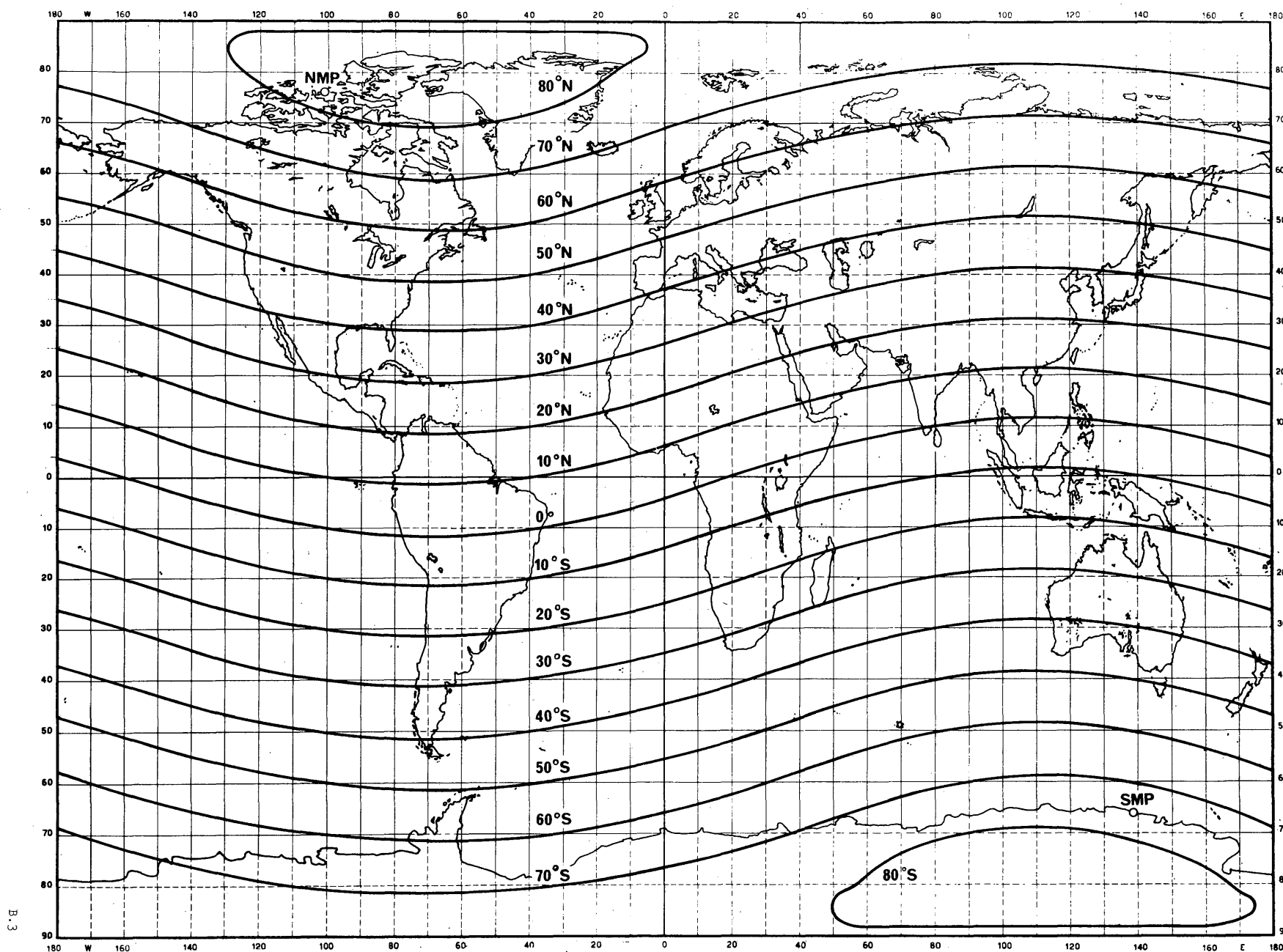


FIGURE [21] - FIGURA [21]

Carte des latitudes géomagnétiques - Geomagnetic latitude map - Mapa de latitudes geomagnéticas

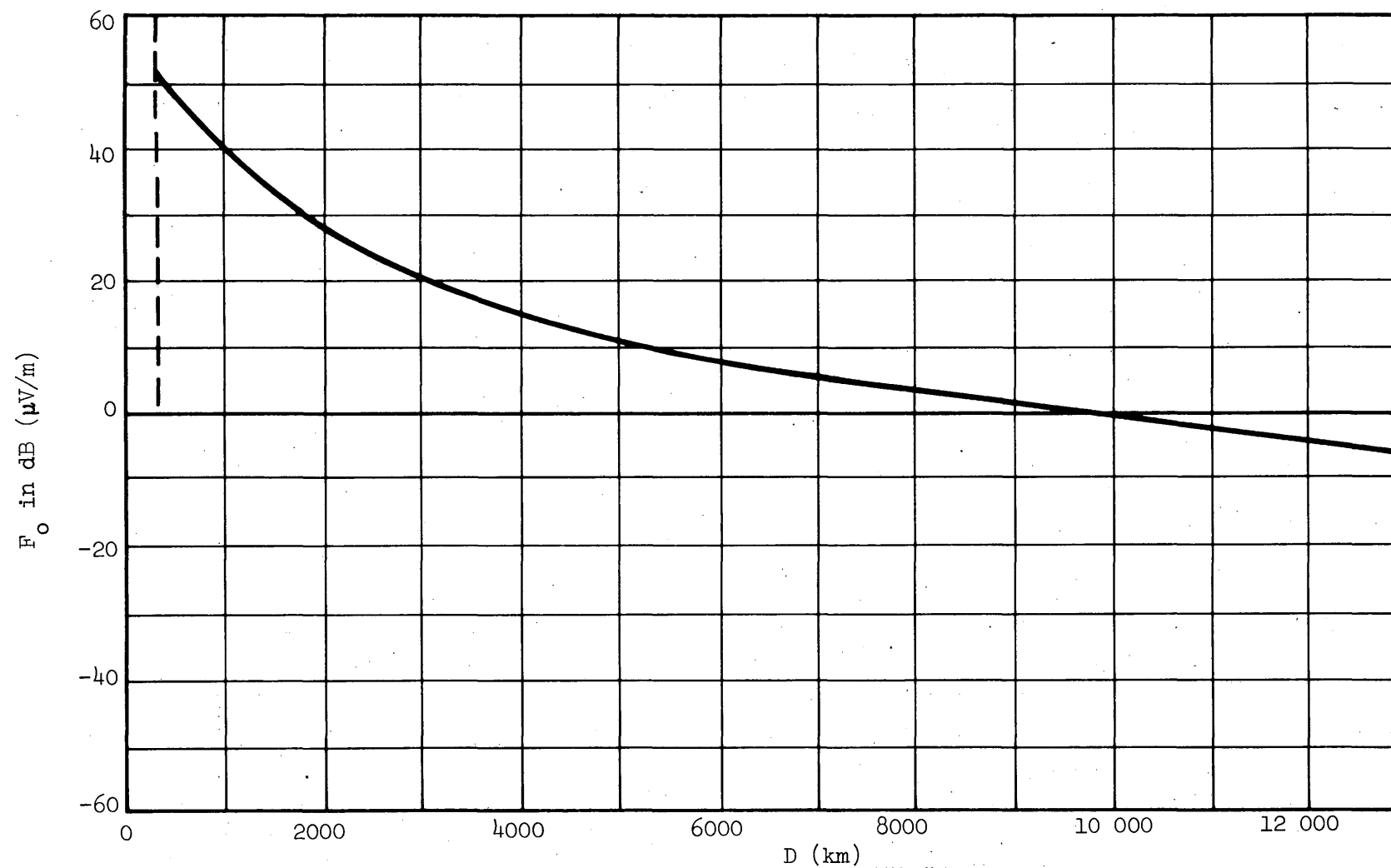


FIGURE [22]

Annual midnight median value of ionospheric field strength of Cairo North/South curve

CHAPTER 4

BROADCASTING STANDARDS

4.1 Class of emission

The Plan is established for a system with double sideband amplitude modulation with full carrier (A3).

4.2 Power

The power of a transmitter is the carrier power in the absence of modulation.

4.3 Radiated power

The radiated power is the product of the power and the gain of the antenna / assumed to be without losses /. It is expressed either by the electromotive force (e.m.f. in V or in dB referred to 300 V) or by the effective monopole radiated power (e.m.r.p. in kW or in dB relative to 1 kW).

4.4 Protection ratios

In applying the Agreement, the values of the co-channel and adjacent channel protection ratios given below, should be used unless otherwise agreed between the Administrations concerned.

In the case of fluctuating wanted or unwanted signals, the values of the protection ratio apply for at least 50% of the nights of the year at midnight.

4.4.1 Co-channel protection ratios

30 dB for a stable wanted signal interfered with by a stable or fluctuating signal,

27 dB for a fluctuating wanted signal interfered with by a stable or fluctuating signal,

8 dB for a wanted signal interfered with by a signal from a transmitter in the same synchronized network.

4.4.2 Adjacent channel protection ratio

4.4.2.1 For a stable wanted signal the adjacent channel protection ratio with a channel spacing of 9 kHz in different cases is given below :

Case A : 9 dB when a limited degree of modulation compression is applied at the transmitter input, such as in good quality transmissions, and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

Case B : 7 dB when a high degree of modulation compression (at least 10 dB greater than in the preceding case) is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

Case C : 5 dB when a limited degree of modulation compression is applied and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz;

Case D : 0 dB when a high degree of modulation compression is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz.

The above figures are valid when the same compression is applied to the wanted and unwanted emissions.

When two stations operating in adjacent channels use different bandwidths or different degrees of compression the higher of the two corresponding protection ratios shall be used, unless the two administrations concerned agree each to use the ratio corresponding to the interfering signal.

4.4.2.2 For a fluctuating wanted signal the adjacent channel protection ratio values mentioned in paragraph 4.4.2.1 shall be reduced by 3 dB.

4.5 Minimum value of field strength

4.5.1 The following minimum values of field strength necessary to overcome natural noise (at 1 MHz) in the three zones A, B and C have been adopted :

Zone A : + 60 dB/1 μ Vm

Zone B : + 70 dB/1 μ Vm

Zone C : + 63 dB/1 μ Vm

4.5.2 Zones A, B and C in Regions 1 and 3 shown in Figure /24/ are delimited as follows :

4.5.2.1 The dividing line between zones A and B begins at the point of intersection of parallel 20°N with the western border of Region 1 (No. 126 of the Radio Regulations*). Thence it follows the parallel 20°N up to the point of intersection with meridian 20°E ; thence by great circle arc to the intersection of meridian 44°E with the Equator; thence it follows the Equator up to the intersection with meridian 80°E ; thence by great circle arc to the point with coordinates 100°E , 20°N ; thence it follows the parallel 20°N up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations*). The territory of the Islamic Republic of Mauritania lies entirely in zone A.

4.5.2.2 The dividing line between zones B and C begins at the point of intersection of parallel 6°S with the western border of Region 1 (No. 126 of the Radio Regulations*); thence it follows the parallel 6°S up to the point of intersection with meridian 20°E ; thence by great circle arc to the point with coordinates 46°E , 26°S ; thence by great circle arc up to the point with coordinates 80°E , 20°S ; thence it follows the parallel 20°S up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations*).

*) or the corresponding number of the Radio Regulations in force.

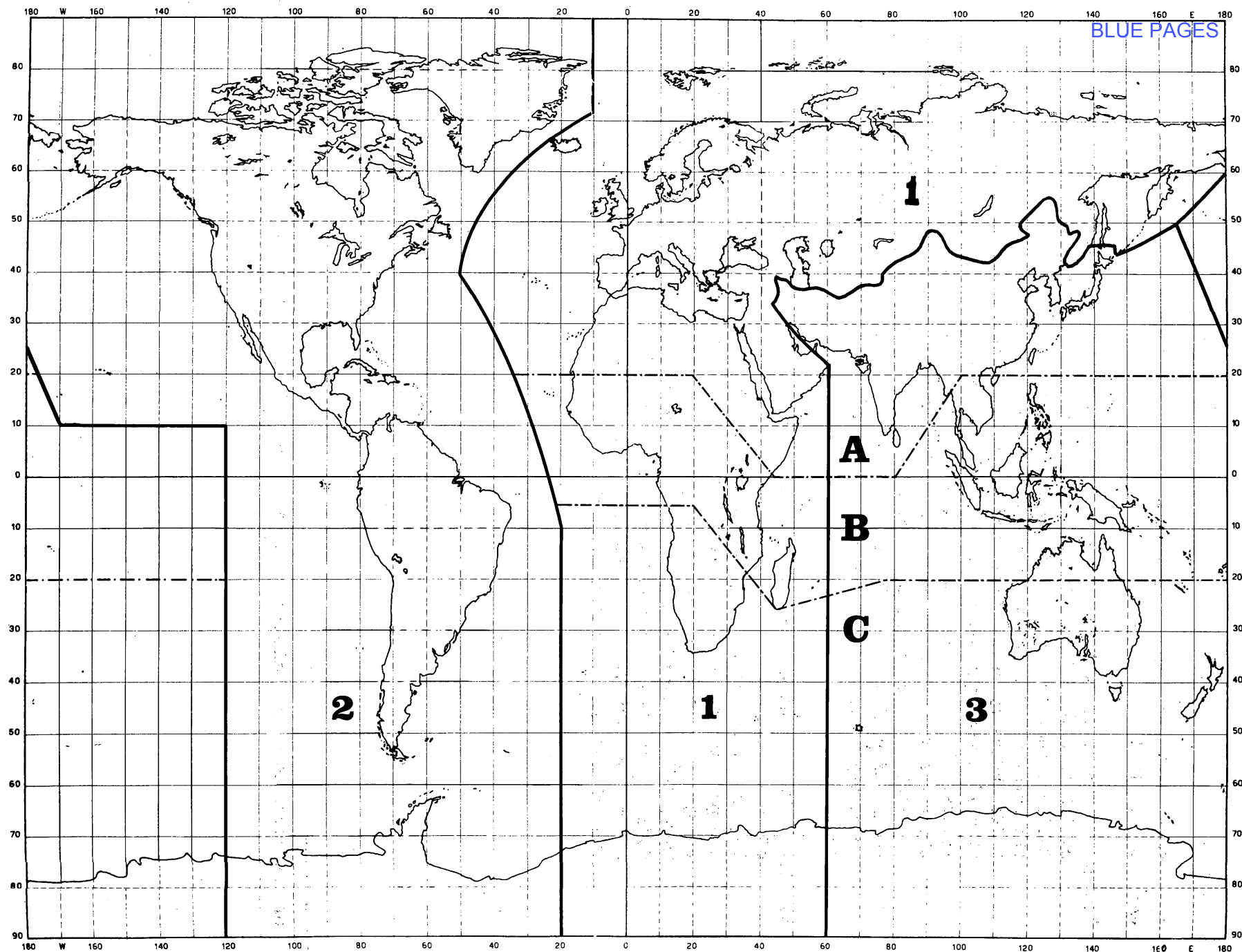


FIGURE [24] - FIGURA [24]

Ce diagramme indique les limites des zones A, B et C dans les Régions 1 et 3.
 This diagram shows the boundaries of Zones A, B and C in Regions 1 and 3.
 Este diagrama muestra las zonas A, B y C en las Regiones 1 y 3.

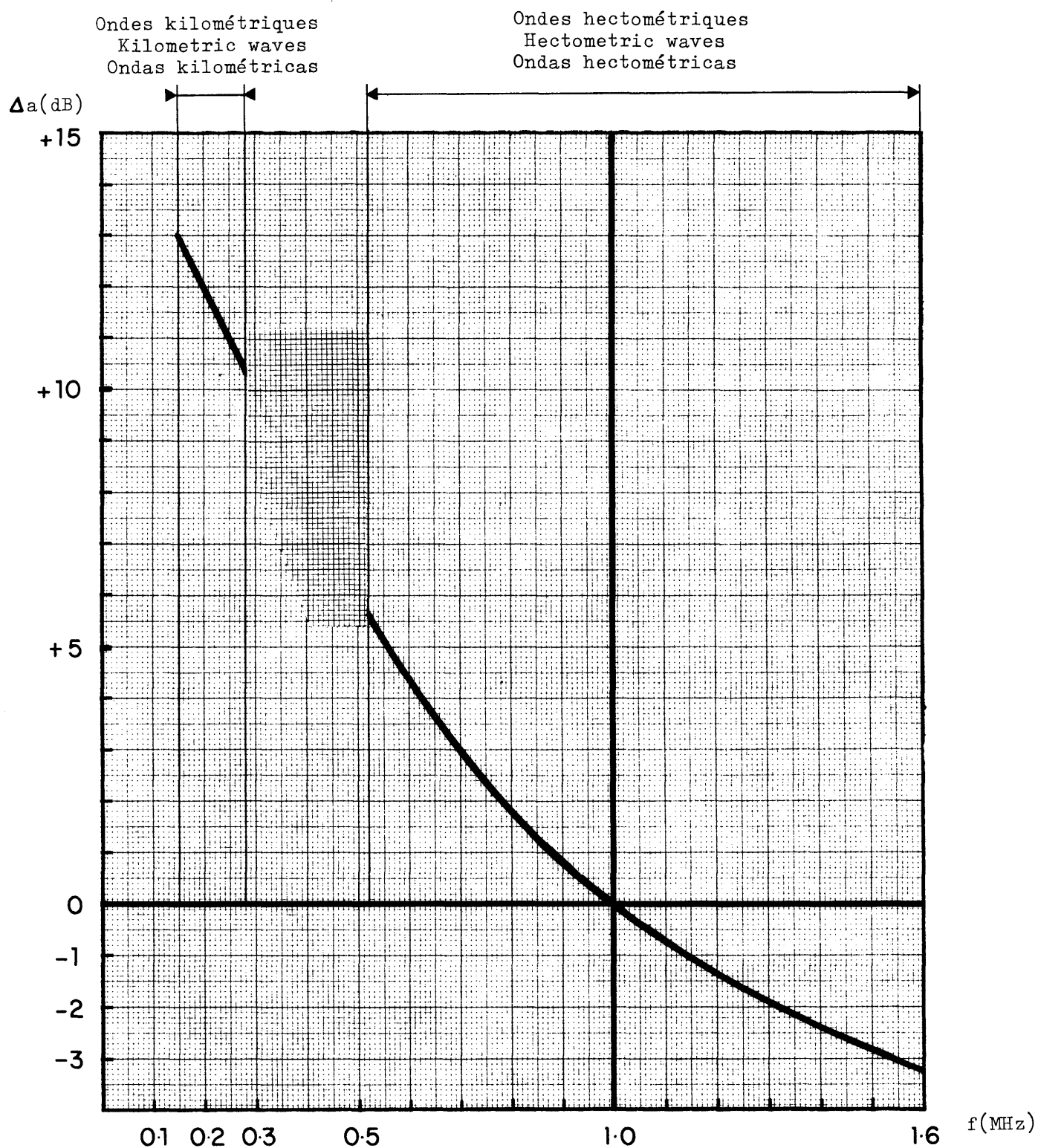


FIGURE [25] - FIGURA [25]

VALEUR MINIMALE DU CHAMP EN FONCTION DE LA FREQUENCEFREQUENCY DEPENDENCE OF MINIMUM VALUE OF FIELD-STRENGTHVALOR MÍNIMO DE LA INTENSIDAD DE CAMPO EN FUNCIÓN DE LA FRECUENCIA

4.6 Nominal usable field strength

The nominal usable field strength values are shown in the following table :

	ZONE A	ZONE B	ZONE C
A. <u>MF.</u>			
Daytime ground-wave service	63 dB	73 dB	66 dB
Night ground-wave service*)			
- rural areas**)	71 dB	81 dB	74 dB
- urban areas	77 dB	87 dB	80 dB
Low-power channels	88 dB	88 dB	88 dB
B. <u>LF.</u> ***)	77 dB	87 dB	80 dB

*) Where the transmitter power is sufficiently great for the ground wave service area to be limited by fading due to the sky wave of the same transmitter, a nominal usable field strength greater than the value given above may be chosen. It should not, however, be greater than the ground-wave field strength at the beginning of the fading zone. The fading zone may be defined by taking the protection ratio between the ground-wave and the sky wave to be equal to the internal protection ratio applicable to a synchronized network, i.e. 8 dB.

**) Some delegations consider a nominal usable field strength of 65 dB to be suitable for rural areas in their countries.

***) Certain delegations consider a value of E_{nom} of the order of 73 dB to be appropriate in non-tropical rural areas.

4.7 Usable field strength

In the presence of a group of transmitters the usable field strength is expressed by

$$E_u = \sqrt{\sum_i (a_i E_{ni})^2 + E_{min}^2}$$

where

E_{ni} is the field strength of the i -th unwanted transmitter (in $\mu\text{V/m}$)

E_{min} is the minimum usable field strength at the frequency in question (in $\mu\text{V/m}$) (see C.C.I.R. Recommendation 499, 1974)

a_i is the radio-frequency protection ratio associated with the i -th unwanted transmitter, expressed as a numerical ratio of field strengths.

In the absence of data on man-made noise, the minimum field strength, E_{min} , can be calculated by correcting the minimum value given in 4.5.1 from the curve in Figure [25], which shows the variation of that value with the frequency.

4.8 Low-power channels

4.8.1 The resultant field strength of a low-power transmitter network at the boundary of the territory of any other country should not exceed 0.5 mV/m, except by agreement between the Administrations concerned. Where countries are separated by stretches of sea, the 0.5 mV/m field strength shall, in principle, not be exceeded at the mid-point of the over-water path, unless the Administrations concerned conclude other arrangements.

4.8.2 The resultant field strength in mV/m is calculated according to the formula

$$\sqrt{E_1^2 + E_2^2 + E_3^2 + \dots}$$

where E_1, E_2, E_3, \dots are the values in mV/m of field strength due to each individual transmitter in a country operating in a given low-power channel. These values are determined with the aid of Figure [25] and only stations within 500 km of the border of a neighbouring country or at the mid-point of an over-water path will be included in the calculation.

4.8.3 In the application of Article /3/ (paragraphs ...) of the Agreement, the table reproduced below will be used :

c.m.f. (V)	e.m.r.p. (kW)	Coordination distance (km)
300	1.0	600
260	0.75	500
212	0.5	400
150	0.25	200, 300*)
95	0.1	70, 250*)
67	0.05	50, 200*)

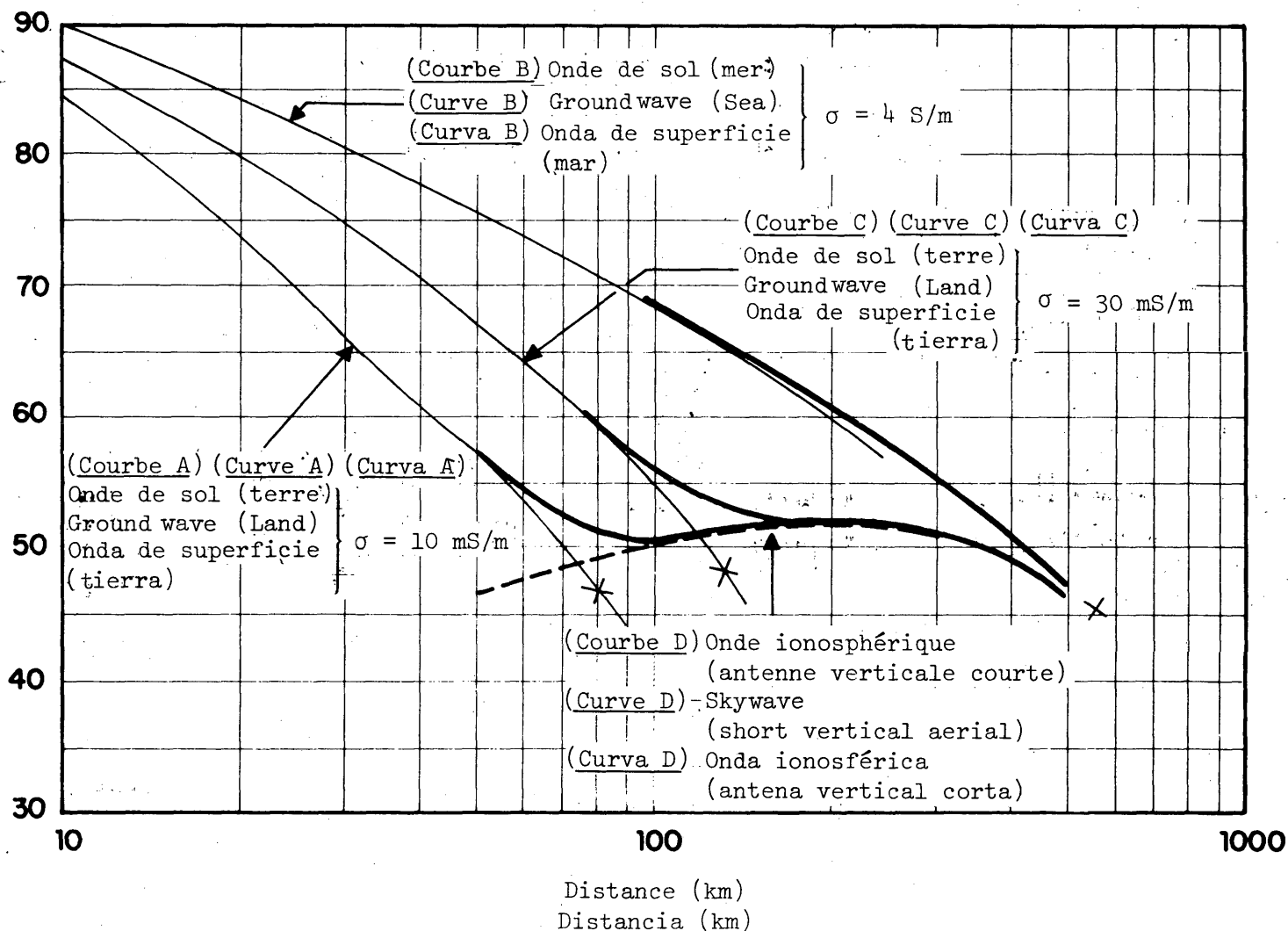
*) Values for a propagation path over sea.

FIGURE [25] - FIGURA [25]

Courbes pour la planification des canaux pour émetteurs de faible puissance ($f = 1,5 \text{ MHz}$)

Curves for planning low-power channels ($f = 1,5 \text{ MHz}$)

Curvas para la planificación de canales de baja potencia ($f = 1,5 \text{ MHz}$)



Champ en dB ($\mu\text{V/m}$) pour une p.a.r.v. de 1 kW ou une f.c.m. de 300 V, dans le plan horizontal

Field strength dB ($\mu\text{V/m}$) for an e.m.r.p. of 1 kW or an c.m.f. of 300 V, in the horizontal plane

Intensidad de campo en dB ($\mu\text{V/m}$) con relación a 1 kW de p.r.a.v. (f.c.m. = 300 V) en el plano horizontal

INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

Document No. 169-E
14 November 1975
Original : French

PLENARY MEETING

FIFTH REPORT OF COMMITTEE 5

(AGREEMENT)

Subjects considered : Recommendation AA relating to the Publication of a Handbook of Radiation Diagrams of Directional Antennae for the Use of the Broadcasting Service
Resolution relating to the part of the Agreement concerning the LF Plan
Title of the Agreement
Date of entry into force of the Agreement

Committee 5 unanimously adopted the Agreement annexed hereto, which replaces the text of Recommendation AA on page 7 of Document No. 156.

Committee 5 unanimously adopted the Resolution hereto.

After re-examination, Committee 5 also unanimously adopted the title of the Agreement shown on page 2 of Document No. 156.

Committee 5 unanimously decided to propose that the date of entry into force of the Agreement should be twenty-three November, one thousand nine hundred and seventy-eight, at 0001 GMT. (See Article F on page 5 of Document No. 156.)

A. PETTI
Chairman of Committee 5

Annexes : 2



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A N N E X 1

RECOMMENDATION AA

Relating to the Publication of a Handbook of Radiation Diagrams
of Directional Antennae for the Use of the Broadcasting Service

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the calculation criteria by the Conference, the essentials of which are contained in Annex ... to the Agreement, require a knowledge of the antenna gain in the direction of propagation;
- b) that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae;
- c) that a handbook of radiation diagrams of directional antennae that can be used in the LF/MF broadcasting service is at present in production by the C.C.I.R. Secretariat in accordance with C.C.I.R. Recommendation 414 and Resolution 59;
- d) that it would be useful for measured values of the radiation diagrams of antenna arrays to be available for comparison with the calculated radiation diagrams,

recommends

that administrations communicate to the Director of the C.C.I.R. all the results they may have of relevant measurements.

A N N E X 2

RESOLUTION

relating to the part of the Agreement concerning
the LF Plan

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

noting

- a) that the World Administrative Radio Conference to be held in 1979 may modify the conditions governing the use of the 150-285 kHz band in Region 1;
- b) that this frequency band is not allocated to broadcasting in part of Region 1;
- c) that no measures have been adopted to provide information on the possibilities of using the LF band in the African Broadcasting Area;
- d) that, apart from one or two cases, no country in the African Broadcasting Area has submitted any requirement in this band;

considering

that this should not be interpreted to mean that these countries are willing to forego the use of this band for broadcasting;

resolves

- 1) that, if one of the Contracting Members in the African Broadcasting Area proposes to bring a broadcasting station into service in the 150-285 kHz band in accordance with the Radio Regulations, the procedure laid down in Article 3.7 shall be applied;
 - 2) that administrations shall endeavour to find a solution meeting the needs thus expressed, particularly by accepting an increase of the usable field strength above the value laid down in Article 3.7, paragraph 3.2.5 of the Agreement.
-

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 170-E

14 November 1975

Original : English

COMMITTEE 3

SUMMARY RECORD

OF THE

FOURTH MEETING OF COMMITTEE 3

(BUDGET CONTROL)

Thursday, 6 November 1975, at 1505 hrs

Chairman : Mr. M.K. BASU (India)

Subjects discussed :

Document No.

- | | |
|--|-----|
| 1. Situation concerning expenditure for the Broadcasting Conference at 31 October 1975 | 122 |
| 2. Cost of printing the Final Acts of the Conference | 123 |
| 3. Next meeting of the Committee | - |



1. Situation concerning expenditure for the Broadcasting Conference at 31 October 1975 (Document No. 122)

The Chairman drew attention to the statement of expenditure for the Conference at 31 October 1975 (Document No. 122), noting that there were some changes as compared with the previous week's statement (Document No. 109).

In reply to a question by the delegate of the United Kingdom, he said that the minus sign preceding the figure "8 000" at the bottom of the "Difference" column should be replaced in the English version by a plus sign.

The Secretary of the Committee pointed out that Document No. 122 took account, in particular, of the new estimate for expenditure on overtime which, as he had observed at the Committee's previous meeting, had had to be increased from the amount of 150,000 Swiss francs originally approved by the Administrative Council to 225,000 Swiss francs. The difference of 75,000 Swiss francs would be covered, at least in part, by the savings achieved under items 14.101 (Salaries and related expenses) and 14.103 (Travel). The new estimate for total expenditure exceeded the approved budget by 8,000 Swiss francs, but that sum was negligible when expressed as a percentage of the total budget. Furthermore, too many of the figures given under the various headings were still estimates for it to be possible to draw any precise final conclusions.

The Chairman, referring to item 14.302 (Final Acts of the Conference), said that the initial estimate for the cost of printing the Final Acts was approximately 10,000 Swiss francs for Part 1 (the Agreement, the Final Protocol and the Resolutions and Recommendations) and between 50,000 and 55,000 Swiss francs for Part 2 (the Plan). To that total of approximately 65,000 Swiss francs, the cost of translation into Russian and Chinese was to be added.

The Secretary of the Committee said that the estimated cost of translation into Russian and Chinese was approximately 30,000 Swiss francs, bringing the total cost of producing the Final Acts to between 95,000 and 100,000 Swiss francs, or some 5,000 or 10,000 Swiss francs less than the initial estimate of 103,000 Swiss francs. There again, however, it was not possible at the present stage to give very precise indications.

Replying to a question by the delegate of the Ukrainian Soviet Socialist Republic, the Chairman said that no decision had yet been taken on the number of copies of the Final Acts to be printed. The figure of 65,000 Swiss francs he had mentioned was for approximately 800 copies, or one copy for each member of each delegation. He would bring up the question at the next meeting of the Steering Committee, which might wish to refer it to the Plenary Meeting for decision of the number of copies of the Final Acts to be printed.

2. Cost of printing the Final Acts of the Conference (Document No. 123)

The Chairman said that several aspects of the question had already been dealt with during the discussion on agenda item 1. Document No. 123 reproduced part of Administrative Council Resolution No. 83 (amended) and stated that the composition costs of the Final Acts would not have to be shared between the Conference budget and the publications budget because all the related work was to be done by the internal reproduction services of the Union.

3. Next meeting of the Committee

The Chairman announced that the fifth and last meeting would be held towards the end of the following week and that the Committee's report would be submitted to the Plenary Meeting towards the middle of the last week of the Conference.

The meeting rose at 1530 hours.

The Secretary :

R. PRELAZ

The Chairman :

M.K. BASU

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 171-E

14 November 1975

Original : French

BUDGET CONTROL

COMMITTEE

Report by the Secretary-General

SITUATION CONCERNING EXPENDITURE FOR THE BROADCASTING CONFERENCE AT 14 NOVEMBER 1975

In accordance with Chapter XI, Rule 5, of the International Telecommunication Convention, Torremolinos, 1973, a report on the expenditure incurred for the Broadcasting Conference up to 14 November 1975 is submitted to the Budget Control Committee for consideration.

M. MILI

Secretary-General

Annex : 1



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A N N E X

No.	Item	Approved budget	Expenditure at 14 November 1975			Total expenditure	Difference
			Actual	Committed	Estimated		
14.100	1. <u>Staff</u>						
14.101	Salaries and related expenses	2,083,000	988,000	893,000	185,000	2,066,000 1)	- 17,000
14.102	Reimbursement of salaries to the ordinary budget	120,000	-	120,000	-	120,000	-
14.103	Travel expenses	138,000	32,000	62,000	2,000	96,000	- 42,000
14.104	Insurance	43,000	9,000	-	37,000	46,000	+ 3,000
		2,384,000	1,029,000	1,075,000	224,000	2,328,000	- 56,000 *)
14.200	2. <u>Premises and equipment</u>						
14.201	Premises, furniture, machines	610,000	291,000	301,000	30,000	622,000	+ 12,000
14.202	Document production	163,000	167,000	11,000	9,000	187,000	+ 24,000
14.203	Office supplies and overheads	19,000	15,000	12,000	2,000	29,000	+ 10,000
14.204	Post, telegraph and telephone	24,000	27,000	4,000	4,000	35,000	+ 11,000
14.205	Technical material	1,000	25,000	28,000	28,000	81,000 2)	+ 80,000
14.206	Sundry and unforeseen	10,000	2,000	-	3,000	5,000	- 5,000
		827,000	527,000	356,000	76,000	959,000	+ 132,000 *)
14.300	3. <u>Other expenses</u>						
14.301	I.F.R.B. preparatory work	13,000	5,000	-	-	5,000	- 8,000
14.302	Final Acts of the Conference	103,000	-	-	70,000	70,000	- 33,000
14.303	Interest credited to the ordinary budget	90,000	-	-	49,000	49,000	- 41,000
		206,000	5,000	-	119,000	124,000	- 82,000 *)
	TOTAL	3,417,000	1,561,000	1,431,000	419,000	3,411,000	- 6,000
*) Expenditure in excess of the credit for Chapter II covered by transfer of credits from Chapter I (56,000 frs.) and Chapter III (76,000 frs.), in accordance with the provisions of Article 15 of the Financial Regulations of the Union. 1) Including 237,000 frs. for overtime. 2) Including expenditure for the use of computers.							

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 172-E

14 November 1975

Original : French

COMMITTEE 5

DRAFT RESOLUTION

relating to assignments in channels for
low-power transmitters (LPC)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that the Plan relating to LPC assignments has been drawn up in conformity with the criteria laid down in Annex ... to the Agreement;
- b) that the provisions of Article 3 (paragraph 3.3) of the Agreement apply to changes or additions concerning the assignments in LPC made after (date of entry into force);

considering

- a) that it has not been possible, during the Conference, to examine all requirements concerning the LPC;
- b) that the frequency assignments in channels for low-power transmitters might be coordinated among administrations before the entry into force of the Final Acts of the Conference;

resolves

- 1. that the frequency assignments in the channels for low-power transmitters shall form Appendix to the Plan;
- 2. that this Appendix shall contain :
 - the frequency assignments which do not require the agreement of any other administration;
 - the frequency assignments for which the agreement of any other administration concerned has been obtained - such assignments shall have a symbol indicating this situation;
 - the frequency assignments for which it has not been possible to examine or obtain the agreement of the other administrations concerned during the Conference - such assignments shall have a symbol indicating this situation;



3. that the provisions of paragraphs 4.8.1 and 4.8.2 of Annex [2] to the Agreement shall be used by administrations between the date of signature of the Final Acts of the present Conference and the date of to coordinate with each other the frequency assignments in channels for low-power transmitters;

instructs the I.F.R.B.

1. to prepare a Final Appendix to the Plan :
 - including in it the frequency assignments which it has thus been possible to coordinate;
 - deleting the frequency assignments which it has not been possible to coordinate;
2. to provide every assistance to administrations which request it in order to facilitate coordination;

instructs the Secretary-General

to publish by the Appendix thus prepared by the I.F.R.B.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 173-E

14 November 1975

Original : French
English

COMMITTEE 5

DRAFT

RESOLUTION No. 12

on the updating of the Master International Frequency Register on the
date of entry into force of the Agreement

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva 1975,

noting

a) that in accordance with Article 1 of the Agreement,
administrations shall notify to the I.F.R.B., in conformity with Article 9
of the Radio Regulations, frequency assignments which will be in use at
the date of entry into force of the Agreement;

b) that according to the provisions of Article 9 of the Radio
Regulations, as regards frequency assignments to be entered in the
Master International Frequency Register in conformity with the Agreement,
Contracting Members may possess certain rights attaching to the dates
entered in Column 2a or 2b in relation to assignments for broadcasting
stations recorded for non-Contracting Members or for stations of other
radiocommunications services;

considering

a) that, under the terms of the Agreement, Contracting Members
adopted for their broadcasting stations in Regions 1 and 3 the characteristics
specified in the Plan and that consequently such stations shall operate as
from the date of entry into force of the Agreement in accordance with the
characteristics specified in the Plan, except in those cases covered by
Resolution No. 1;



b) that the Conference has adopted uniform channel spacing necessitating modification of the carrier frequency of most of the stations in use and that this modification may affect, inter alia, stations of other radiocommunication services;

resolves

1. on 23 November 1978 at 0001 hours administrations shall change the carrier frequency as well as the other characteristics of their existing broadcasting stations in order to bring them into conformity with the Plan except in those cases covered by Resolution No. 7;
2. that administrations shall notify to the I.F.R.B. the frequency assignments which are to be put into service. This notification shall be made as soon as possible within the period specified in the Radio Regulations (that is, ninety days before the date of entry into force of the Agreement);
3. that in addition to the information specified in Appendix 1 of the Radio Regulations, administrations shall indicate the corresponding frequency assignments whose entries shall as a consequence be deleted from the Master International Frequency Register;
4. that in accordance with the provisions of Article 9 of the Radio Regulations the Board shall examine these notifications with regard to entries relating to broadcasting stations of non-Contracting Members and stations of other radiocommunication services;
5. that, according to its finding, the Board shall record these assignments in the Master Register with the appropriate date in Column 2a or 2b. However, when the date to be recorded in Column 2a or 2b is different from that already registered this latter date shall be transferred to Column 13c with an appropriate symbol. At the same time the Board shall enter another symbol in the Remarks Column to indicate that this frequency assignment is in conformity with the Plan and that it shall be considered as having the same status as any other assignments in conformity with the Plan irrespective of the date these later assignments may have in Column 2a or 2b;
6. that, three months after the date of entry into force of the Agreement, the Board shall send to each administration a list of its frequency assignments recorded in the Master Register for which the Board has received no notification and it shall urge such administrations to provide the necessary information for updating the Master Register;
7. that, if in spite of its reminder the Board receives no reply a symbol shall be inserted in the Remarks Column indicating that the assignment concerned is not in conformity with the Agreement and that as a consequence the Board shall no longer take it into account when any other assignment in conformity with the Agreement is involved;

invites the International Frequency Registration Board

to assist administrations in implementing the provisions of this Resolution.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 174-E

14 November 1975

Original : French

COMMITTEE 5

People's Republic of Bulgaria

ADDITIONAL PARAGRAPH FOR DOCUMENT No. 142(Rev.2)

Following the discussion of Document No. 142(Rev.2) in Committee 5, our delegation suggests the addition, to the operative part, of an additional paragraph 4, worded as follows:

4. to ask the Members of the Union parties to the Agreement to bring the present Resolution to the attention of the competent radionavigation organizations in their respective countries and to request them to refrain, so far as possible, from either putting new radionavigation facilities into operation or resiting existing facilities, if this is likely to cause interference to the broadcasting services in Regions 1 and 3, until the World Administrative Radio Conference in 1979 adopts decisions on the use of common frequency bands.

Signed : J. JANEV
Deputy Head of the delegation
of the People's Republic
of Bulgaria



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION) GENEVA, 1975

Document No. 175-E
14 November 1975
Original : French

PLENARY MEETING

FINAL PROTOCOL

For the Islamic Republic of Mauritania

Among the frequency requirements dealt with by the Conference, the delegation of the Islamic Republic of Mauritania has noted two assignments for El Aiun and two for Villa Cisneros submitted by the delegation of Spain.

The delegation of the Islamic Republic of Mauritania notes that these requirements do not meet, either quantitatively or qualitatively, the broadcasting coverage needs of this part of its territory. Having regard to the principle adopted by the Conference that all countries, large and small, have equal rights, it therefore considers that these requirements may be supplemented by the Islamic Republic of Mauritania at a later stage in conformity with the provisions laid down for dealing with the frequency requirements of non-Member countries not represented at this Conference.

The delegation of the Islamic Republic of Mauritania, aware of the purely geographical nature of frequency assignments, declares that its participation in the preparation of the present Plan for Regions 1 and 3 and its acceptance of the frequency assignments for the stations of El Aiun and Villa Cisneros in no way signify a renunciation of the claims formulated by the Government of the Islamic Republic of Mauritania to the parts of its territory in which these stations are situated.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 176-E

14 November 1975

PLENARY MEETING

B.4

4th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE
TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for first reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C5	167	Art. L : Abrogation of the European Broadcasting Convention, Copenhagen, 1948
		<u>Additional Protocol</u> Relating to the Abrogation of the European Broadcasting Convention, Copenhagen, 1948
		<u>Recommendation DD</u> Relating to the Sharing of the LF Band between the Broadcasting Service and other Radiocommunication Services (Region 1)

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 to 4



ARTICLE L

Abrogation of the European Broadcasting Convention

Copenhagen, 1948, and annexed Copenhagen Plan

The Additional Protocol to the Final Acts of the Conference provides for the abrogation of the European Broadcasting Convention, 1948, and the annexed Copenhagen Plan.

ADDITIONAL PROTOCOL

Relating to the Abrogation of the European Broadcasting Convention,
Copenhagen, 1948, and the annexed Copenhagen Plan

The Delegates of the following Members of the International
Telecommunication Union :

.....
parties to the European Broadcasting Convention (Copenhagen, 1948) and
meeting in Geneva for the Regional Administrative LF/MF Broadcasting
Conference (Regions 1 and 3), Geneva 1975, convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

1. that the Regional Agreement and Plan for LF/MF broadcasting
stations in Regions 1 and 3, Geneva 1975, shall replace the European
Broadcasting Convention and annexed Copenhagen Plan which shall be abrogated*)
save that the rights and obligations in respect of the coast stations listed
in Chapter II of the Copenhagen Plan shall continue until modified by the
agreement of the parties concerned or by a competent conference;
2. that the abrogation of the European Broadcasting Convention and
Copenhagen Plan in accordance with 1) above shall take effect on the coming
into force of the / title / provided that each of the contracting
Governments to the European Broadcasting Convention shall have deposited
with the Government of the Kingdom of Denmark (the depository of the aforesaid
Convention) a declaration of acceptance of the abrogation of the European
Broadcasting Convention and the annexed Copenhagen Plan;
3. that the aforesaid Members shall take action to inform the
Government of the Kingdom of Denmark that they formally agree to the
abrogation of the European Broadcasting Convention and the Copenhagen Plan
annexed thereto;
4. that the aforesaid notification procedure shall be taken
/ not later than one year / before entry into force of the / title /;
5. that the Government of the Kingdom of Denmark should be asked to
inform the Governments who are parties to the European Broadcasting
Convention and the Secretary-General of the International Telecommunication
Union of the notifications received in accordance with 3) above.

*) Explanatory information about the abrogation of the European
Broadcasting Convention and annexed Copenhagen Plan is recorded
in Document No. 125 of this Conference.

RECOMMENDATION DD

Relating to the Sharing of the LF Band between the
Broadcasting Service and the other Radiocommunication
Services (Region 1)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that the sharing, on a basis of equality, of the band 255-285 kHz between the broadcasting service in a part of Region 1 and the aeronautical radionavigation service in practice results in harmful interference to aeronautical radiobeacons;
- b) that the aeronautical radionavigation service is a safety service (No. 69 of the Radio Regulations) and its adequate protection against harmful interference is essential to the safeguarding of human life;

considering

that it would be desirable to avoid allocations which permit sharing between the broadcasting service and other services, such as the maritime mobile and aeronautical radionavigation services;

recommends

that the World Administrative Radio Conference, 1979, examine this question with due regard to the interests of each of the services concerned.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 177-E
16 November 1975PLENARY MEETING

B.5

5th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE
TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C5	-	§§ 4.3 (Radiated power) and 4.9 (Transmitter siting tolerances) of the Technical Data
	137	Art. 4 Art. 5
		Procedure for modifications to the Plan Notification of frequency assignments
	156	Rec. AA
		Relating to the Publication of a Handbook of Radiation Diagrams of Directional Antennae that can be used in the Broadcasting Service
	158(R.1)	Res. C
		Relating to the Low Frequencies
	142(R.2)	Res. D
		Relating to the Use of LF Bands shared between the Broadcasting Service and the other Radiocommunication Services
	166	Res. E
		Relating to the Use of Bandwidth Saving Modulation Systems
	160	Art. 12, Add. Prot.II
		Abrogation of the Regional Agreement for the African Broadcasting Area, Geneva, 1966 and the Plan annexed thereto
	165	Res. B
		Relating to the Accession to the Agreement of Countries which are neither represented at the Conference nor have sent their Frequency Requirements
	173	Res. F
		Relating to the Updating of the Master International Frequency Register on the Date of Entry into Force of the Agreement



/ ANNEX 2 : TECHNICAL DATA // CHAPTER 4 : BROADCASTING STANDARDS /4.3 Radiated power

The radiated power is the product of the power and the gain of the antenna / assumed to be without losses /. It is expressed either by the electromotive force (c.m.f. in V or in dB referred to 300 V) or by the effective monopole radiated power (e.m.r.p. in kW or in dB relative to 1 kW).

.....

4.9 Transmitter siting tolerances

The tolerances for the siting of transmitters are as follows :

4.9.1 Where both the interfering and the affected transmitters (on the same or adjacent channel) are situated in the part of Region 3 which is North of 11°S or where only one of them is located in this part of Region 3 but the mid-point between the two transmitters is also located in this Region, the tolerance is given in column Δd_t of Table 1 relating to the MF band.

4.9.2 For other transmitters, the tolerances are as follows :

4.9.2.1 When a transmitter is situated inland, the tolerable resiting distance is given in columns Δd_t of Table 1 or Table 2, as the case may be, provided that the new site is at a distance of not less than 100 km from the coast (MF band) or 200 km (LF band).

4.9.2.2 When the distance of the transmitter from the coast is, or becomes, less than 100 km for MF or 200 km for LF and if the transmitter is moved towards a station on the same or the adjacent channel in the direction of the sea, it is further required that the distance between the transmitter and the coast shall not be reduced by more than is shown in Δd_m of Tables 1 and 2.

TABLE 1MF band

Distance between transmitters (km)		Δd_t (km)	Δd_m (km)
same channel	adjacent channel		
> 1,000	> 700	20	2
500 - 1,000	200 - 700	10	2
< 500	< 200	5	2

TABLE 2LF band

Distance between transmitters (km)		Δd_t (km)	Δd_m (km)
same channel	adjacent channel		
> 1,000	> 400	20	5
≤ 1,000	≤ 400	10	5

ARTICLE 4PROCEDURE FOR MODIFICATIONS TO THE PLAN

1. When a Contracting Member proposes to make a modification to the Plan, i.e. either :

- to change the characteristics of a frequency assignment to a broadcasting station shown in the Plan, whether or not the station has been brought into use, or
- to bring into use an assignment to a broadcasting station not appearing in the Plan, or
- to change the characteristics of a frequency assignment to a broadcasting station for which the procedure in this Article has been successfully applied, whether or not the station has been brought into use, or
- to cancel a frequency assignment to a broadcasting station,

the following procedure shall be applied before any notification is made under the provisions of Article 9*) of the Radio Regulations (see Article 5).

2. In the remainder of the present Article, the term "assignment in accordance with the Agreement" means any frequency assignment appearing in the Plan or for which the procedure of this Article has been successfully applied.

3. Proposed changes in the characteristics of an assignment or the bringing into use of a new assignment

- 3.1 Any administration proposing a change in the characteristics of an existing assignment or the bringing into use of a new assignment shall seek the agreement of all the administrations having an assignment in accordance with the Agreement, in the same channel or an adjacent channel, which is considered to be affected (see 3.2.5 and 3.3.1).

*) or the corresponding article of the Radio Regulations currently in force.

3.2 Channels other than low-power channels

- 3.2.1 An administration proposing to change the characteristics of an existing assignment or to bring a new assignment into use shall so inform the I.F.R.B. and furnish the characteristics of the modification or addition in the form adopted in the Plan and its annexes.
- 3.2.1.1 Where the proposed modification is within the limits defined in 3.2.9, the information shall contain a reference to that paragraph.
- 3.2.1.2 In all other cases, in order to arrive at the agreement referred to in 3.1, the administration shall notify to the I.F.R.B. the names of the administrations whose agreement it considers should be sought and of those with which agreement has been reached.
- 3.2.2 The I.F.R.B. shall determine on the basis of Annex [2] to the Agreement the administrations having frequency assignments in accordance with the Agreement which are considered to be affected within the meaning of 3.2.5. The results of these calculations shall be sent immediately by the I.F.R.B. to the administration proposing the modification to the Plan. The I.F.R.B. shall include the names of these administrations in the information received and shall publish the complete information in a special section of its weekly circular.
- 3.2.3 The I.F.R.B. shall send a telegram to the administrations listed in the special section of the weekly circular drawing their attention to the information it contains and shall also send to them the results of its calculations.
- 3.2.4 Any administration which considers that it should have been included in the list of administrations whose frequency assignments are considered to be affected, may, giving its reasons for so doing, request the I.F.R.B. to include its name. A copy of the request shall be sent to the administration proposing the modifications to the Plan.
- 3.2.5 Any assignment may be considered affected when its usable field strength is increased by a value equal to or greater than 0.5 dB as a consequence of the proposed modification to the Plan. The usable field strength is calculated at any point on the boundary of the service area resulting from the first recording of the assignment in the Plan. When the original assignment in the Plan has been modified in accordance with the Agreement, the calculation shall take account of this modification. The increase in the usable field strength is calculated in accordance with Annex [2] to the Agreement.

3.2.6 An administration seeking agreement under 3.1 for daytime operation of a station may, by agreement with the affected administrations, use the simplified method of calculation defined in 3.3.4.3 or 3.4.3.3, as appropriate, of Annex 2 to the Agreement.

3.2.7 Any administration may ask the administration proposing the modification for the additional information it considers necessary to calculate the increase of the usable field strength. Similarly, the administration proposing the modification may ask any administration whose agreement it seeks for the additional information it considers necessary. The administrations shall inform the I.F.R.B. of such requests.

3.2.8 Comments from administrations on information published pursuant to 3.2.2 should be sent either directly to the administration proposing the modification or through the I.F.R.B. In any event the I.F.R.B. shall be informed that comments have been made.

3.2.9 The agreement mentioned in 3.1 is not required if the proposed modification either :

- entails no increase in effective monopole radiated power in any direction, or
- relates to a change in the site of the station, within the tolerances specified in 4.9 of Annex 2 to the Agreement.

In this case, the Administration intending to modify the Plan may put its project into effect, subject to the application of the provisions of Article 9*) of the Radio Regulations.

3.2.10 Any administration which has not notified its comments either to the administration concerned or to the I.F.R.B. within a period of sixteen weeks following the date of the weekly circular referred to in 3.2.2 shall be understood to have agreed to the proposed change. This time limit may be extended by eight weeks in the case of an administration which has requested additional information pursuant to paragraph 3.2.7.

*) or the corresponding article of the Radio Regulations currently in force.

- 3.2.11 If in seeking agreement an administration makes changes in its initial proposal, it shall again apply the provisions of 3.2.1 and the consequent procedure.
- 3.2.12 If no comments have been received on expiry of the periods specified in 3.2.10, or if agreement has been reached with the administrations which have made comments, the administration proposing the modification may proceed with its project and shall inform the I.F.R.B. indicating the final characteristics of the assignment together with the names of the administrations with which agreement has been reached.
- 3.2.13 When the proposed modification to the Plan involves a developing country, administrations shall seek a solution conducive to economical development of the broadcasting system, giving due consideration to the principles enunciated to this effect in the Preamble to this Agreement.
- 3.2.14 The I.F.R.B. shall publish in a special section of its weekly circular the information received under 3.2.12, together with the names of any administrations with which the provisions of this article have been successfully applied. With respect to Contracting Members, the assignment concerned shall enjoy the same status as those appearing in the Plan.

3.3 Low-power channels

- 3.3.1 Any administration proposing a change in the characteristics of a frequency assignment in a low-power channel or the bringing into use of a new station in such a channel shall seek the agreement of any other administration when the distance between the proposed station and the nearest point on the boundary of the territory of that other administration is less than the corresponding values given in 4.8.4 of Annex / 2 /.
- 3.3.2 After having obtained the agreement of the administrations concerned, the administration proposing the modification shall inform the I.F.R.B. indicating the characteristics of the station together with the names of the administrations with which agreement has been reached.
- 3.3.3 The I.F.R.B. shall publish this information in a special section of its weekly circular. With respect to Contracting Members the assignment concerned shall enjoy the same status as those appearing in the Plan.
- 3.3.4 The administration may then proceed with its project.

3.4 Additional provisions for channels in shared bands

The provisions of this Article apply also to frequency assignments to broadcasting stations in frequency bands shared with other radiocommunication services. However, the special sections of the I.F.R.B. weekly circular mentioned in 3.2.2 and 3.2.3 which concern the proposed modifications shall be considered by these other services to be for information only (see also Resolution D).

3.5 Provisions common to all channels

3.5.1 If no agreement is reached between the administrations concerned, the I.F.R.B. shall make any study that may be requested by these administrations; the Board shall inform them of the result of the study and shall make such recommendations it may be able to offer for the solution of the problem.

3.5.2 Any administration may at any stage in the procedure described, or before applying it, request the assistance of the I.F.R.B., particularly in seeking the agreement of another administration.

3.5.3 If, after application of the procedure described in this Article, the administrations concerned have been unable to reach agreement, they may resort to the procedure described in Article 50 of the Convention. Administrations may also agree to apply the Optional Additional Protocol.

3.5.4 In any case, the relevant provisions of the Article 9*) of the Radio Regulations shall be applied when assignments are notified. When, no agreement having been reached, the I.F.R.B., following the notification of an assignment, records it in the Master International Frequency Register, the entry shall be accompanied by a symbol indicating that the entry has been made subject to the reservation that no harmful interference will be caused to frequency assignments in conformity with the Agreement.

3.5.5 The I.F.R.B. shall maintain an up-to-date master copy of the Plan and its annex relating to low-power channels taking account of the application of the procedure specified in this Article; to this end the I.F.R.B. shall prepare a document listing the amendments to be made to the Plan and its annex as a result of modifications made in accordance with the procedure of this Article and of the addition of new assignments in conformity with the Agreement.

*) or the corresponding article of the Radio Regulations currently in force.

3.5.6 The Secretary-General shall be informed by the I.F.R.B. of these changes made in the Plan and shall publish an up-to-date version of the Plan in an appropriate form as and when the circumstances justify and in any case every three years.

4. Cancellation of assignments

When an assignment in accordance with the Agreement is released, whether or not as a result of a modification (for instance a change of frequency), the administration concerned shall immediately so inform the I.F.R.B. The I.F.R.B. shall publish this information in a special section of its weekly circular.

ARTICLE 5

NOTIFICATION OF FREQUENCY ASSIGNMENTS

1. Whenever an administration intends to put into use an assignment in conformity with the Agreement it shall notify this assignment to the I.F.R.B. in accordance with the provisions of Article 9*) of the Radio Regulations. Any such assignment recorded in the Master Register as a result of the application of the provisions of Article 9*) of the Radio Regulations, shall, in addition to a date in Column 2a or Column 2b, bear a special symbol in the Remarks column.
2. In relations between Contracting Members, all frequency assignments brought into use in conformity with the Agreement and recorded in the Master Register, shall be considered to have the same status, irrespective of the dates entered in Column 2a or Column 2b for such assignments.

*) or the corresponding article of the Radio Regulations currently in force.

RECOMMENDATION AA

Relating to the Publication of a Handbook of
Radiation Diagrams of Directional Antennae
that can be used in the Broadcasting Service

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the calculation criteria adopted by the Conference, the essentials of which are contained in Annex 2 to the Agreement, require a knowledge of the antenna gain in the direction of propagation;
- b) that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae,
- c) that a handbook of radiation diagrams of directional antennae that can be used in the LF/MF broadcasting service is being prepared by the C.C.I.R. Secretariat in accordance with C.C.I.R. Recommendation 414 and Resolution 59;
- d) that it would be useful for measured values of antenna radiation diagrams to be available for comparison with the calculated radiation diagrams,

recommends

that administrations communicate to the Director of the C.C.I.R.
all the results they may have of relevant measurements.

RESOLUTION C

Relating to the Low Frequencies

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

noting

- a) that the World Administrative Radio Conference to be held in 1979 may modify the conditions governing the use of the 150-285 kHz band in Region 1;
- b) that in certain parts of Region 1 this frequency band is not allocated to broadcasting;
- c) that, owing to the lack of experimental data, the possibilities of using the LF band in the African Broadcasting Area are not yet known;
- d) that, apart from one or two requirements, no country in the African Broadcasting Area has expressed any needs in this band;

considering

that this should not be interpreted as meaning that these countries are willing to forego the use of this band for broadcasting;

resolves

- 1. that, if one of the Contracting Members in the African Broadcasting Area proposes to bring a broadcasting station into service in the 150-285 kHz band in conformity with the Radio Regulations, the procedure laid down in Article 4 shall be applied;
- 2. that administrations shall endeavour to find a solution to meet these needs, for example, by accepting an increase of the usable field strength above the value laid down in Article 4, 3.2.5, of the Agreement.

RESOLUTION D

Relating to the Use of LF Bands shared between
the Broadcasting Service and the other
Radiocommunication Services

The Regional Administrative LF/MF Broadcasting Conference, (Regions 1 and 3), Geneva, 1975,

noting

that the use of the LF bands by broadcasting stations could adversely affect the stations of other radiocommunication services to which these bands are allocated in Regions 1 and 3, and particularly stations in the aeronautical radionavigation service and the maritime mobile service involving the safety of human life;

considering

- a) the terms of Chapter 8 of the Report of the First Session;
- b) that the Plan includes a number of new broadcasting transmitters in these bands and increases in the power of transmitters already in use, thereby considerably increasing the probability of harmful interference to the safety services;

taking into account

the provisions of Nos. 116 and 117 of the Radio Regulations;

resolves

1. that from the date of signature of the Final Acts of this Conference, new LF broadcasting transmitters shall not be brought into use nor changes be made to the characteristics of existing LF assignments until after the World Administrative Radio Conference to be held in 1979 has decided about the allocation of LF bands between the radiocommunication services concerned;
2. that if, nevertheless, such changes or additions would not increase the probability of harmful interference to the assignments of the other radiocommunication services, they may be brought into use;

3. that if such changes or additions would increase the probability of harmful interference to the assignments of the other radiocommunication services, they may be brought into use only with the agreement of the administrations whose frequency assignments to such stations, in conformity with the Table of Frequency Allocations, have been recorded in the Master Register;

4. that Contracting Members be asked to bring this Resolution to the attention of the competent organizations in their countries responsible for other radiocommunication services and to recommend them to refrain, so far as possible, from bringing into use new stations likely to cause harmful interference to broadcasting stations operating in conformity with the Table of Frequency Allocations, pending the decisions the World Administrative Radio Conference, 1979, may make concerning the use of these shared frequency bands;

requests the Secretary-General

to bring this Resolution and Recommendation DD to the notice of all administrations.

RESOLUTION E

Relating to the Use of Bandwidth Saving Modulation Systems

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the application of bandwidth saving modulation systems will lead to more efficient use of the LF and MF bands;
- b) that the transition to such systems would pose difficulties with regard to transmitters and receivers, and frequency planning;

invites the C.C.I.R.

to expedite its studies of bandwidth saving modulation methods with particular reference to the technical and operational aspects of single-sideband and independent sideband modulation, taking into account the problems of compatibility with existing receivers;

resolves

- 1. that broadcasting stations might provisionally use bandwidth saving modulation methods on condition that interference in the same or adjacent channels concerned does not exceed the interference resulting from the application of double sideband modulation with full carrier (A3);
- 2. that any administration which envisages using these methods of emission shall seek the agreement of all affected administrations by following the procedure specified in Article 4 of the Agreement.

ARTICLE / 12 /

Abrogation of the Regional Agreement for the
African Broadcasting Area, Geneva, 1966
and the Plan annexed thereto

Additional Protocol II to the Final Acts of the Conference provides for the abrogation of the Regional Agreement for the African Broadcasting Area, Geneva, 1966, and the Plan annexed thereto.

ADDITIONAL PROTOCOL II

Abrogating the Regional Agreement concerning the Use
by the Broadcasting Service of Frequencies in the
Medium Frequency Band in the African Broadcasting Area,
Geneva, 1966, and the Plan annexed thereto

The Delegates of the following countries Members of the
International Telecommunication Union :

.....
parties to the Regional Agreement concerning the use by the broadcasting service
of frequencies in the medium frequency band in the African Broadcasting Area,
Geneva, 1966, and meeting in Geneva for the Regional Administrative LF/MF
Broadcasting Conference (Regions 1 and 3), convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

that the Regional Agreement concerning the use by the broadcasting
service of frequencies in the medium frequency band in the African Broadcasting
Area, Geneva, 1966, and the Plan annexed thereto shall be abrogated and
replaced by the Regional Agreement concerning the use by the broadcasting
service of frequencies in the medium frequency bands in Regions 1 and 3 and
in the low frequency bands in Region 1 on the date of entry into force of
this Agreement.

RESOLUTION B

Relating to the Accession to the Agreement of Countries
which are neither represented at the Conference
nor have sent their Frequency Requirements

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be truly comprehensive unless it takes into account the requirements of all countries in Regions 1 and 3;
- b) that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, to participate in its work and to inform it of their frequency requirements;
- c) that countries which are not at present Members of the Union should be encouraged to accede to the Agreement after acceding to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in obtaining satisfactory inclusion of their frequency requirements in the Plan;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall immediately bring this Resolution to its notice and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;

2. that if the assistance of the I.F.R.B. is requested, it shall undertake any necessary studies or examinations and communicate the results to the Administration concerned;

3. that the Administration concerned shall apply, either directly or through the I.F.R.B., the procedure laid down in Article / 4 / of the Agreement;

4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, for example, by agreeing to an increase in the usable field strength above the value given in Article / 4 /, / 3.2.5 / of the Agreement.

RESOLUTION F

Relating to the Updating of the Master International Frequency Register
on the Date of Entry into Force of the Agreement

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that in accordance with Article 15 of the Agreement, administrations shall notify to the I.F.R.B., in conformity with Article 9 of the Radio Regulations, frequency assignments which will be in use at the date of entry into force of the Agreement;
- b) that according to the provisions of Article 9 of the Radio Regulations, Contracting Members may possess, for their frequency assignments, certain rights attaching to the dates entered in Column 2a or 2b of the Master International Frequency Register opposite the assignments concerned with respect to other frequency assignments :
- to the broadcasting stations of non-Contracting Members, or
 - stations of other radiocommunication services;

considering

- a) that, under the terms of the Agreement, Contracting Members have adopted for their broadcasting stations in Regions 1 and 3 the characteristics specified in the Plan and that consequently such stations will operate from the date of entry into force of the Agreement in conformity with the characteristics specified in the Plan, except in those cases covered by Resolution D;
- b) that the Conference has adopted uniform channel spacing necessitating modification of the carrier frequency of most of the stations in use and that this modification may affect, in particular, stations of other radiocommunication services;

resolves

1. that, on 23 November 1978 at 0001 hours [-(GMT)-], administrations shall change the carrier frequency and the other characteristics of their existing broadcasting stations in order to bring them into conformity with the Plan, except in those cases covered by Resolution D;
2. that administrations shall notify to the I.F.R.B. the frequency assignments which are so modified. This notification shall be made as soon as possible within the period specified in the Radio Regulations (that is, ninety days before the date of entry into force of the Agreement);
3. that in addition to the information specified in Appendix 1 to the Radio Regulations, administrations shall indicate the frequency assignments whose entries are as a consequence to be deleted from the Master Register;
4. that in accordance with the provisions of Article 9 of the Radio Regulations the I.F.R.B. shall examine these notifications with respect to existing entries in the Master Register and which relate to broadcasting stations of non-Contracting Members and stations of other radiocommunication services;
5. that, according to its finding, the I.F.R.B. shall record these assignments in the Master Register with the appropriate date in Column 2a or 2b. However, when the date to be recorded in Column 2a or 2b is different from that already registered this latter date shall be transferred to Column 13c with an appropriate symbol. At the same time the I.F.R.B. shall enter another symbol in the Remarks Column to indicate that this frequency assignment is in conformity with the Plan and that as a result it shall be considered as having the same status as any other assignments in conformity with the Plan irrespective of the date these later assignments may have in Column 2a or 2b;
6. that, three months after the date of entry into force of the Agreement, the I.F.R.B. shall send to each administration a list of its frequency assignments recorded in the Master Register for which the I.F.R.B. has received no notification and it shall urge such administrations to provide the necessary information for updating the Master Register;
7. that, if in spite of its reminder the I.F.R.B. receives no reply a symbol shall be inserted in the Remarks Column indicating that the assignment concerned is not in conformity with the Agreement.

invites the I.F.R.B.

to assist administrations in implementing the provisions of this Resolution.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 178-E

15 November 1975

Original : French

PLENARY MEETING

SIXTH REPORT OF COMMITTEE 5

(AGREEMENT)

- Subjects discussed :
- Article [3] - Procedure for modifications to the Plan
 - Article [4] - Notification of frequency assignments
 - Technical data used in the preparation of the Plan and to be used in the application of the Agreement
 - Resolution relating to the use of LF bands shared between the Broadcasting Service and other Radiocommunication Services
 - Resolution relating to the use of bandwidth saving modulation systems
 - Article of the Agreement and Additional Protocol concerning the abrogation of the Regional Agreement for the African Broadcasting Area (Geneva, 1966)

Committee 5 unanimously adopted the texts referred to above, which were transmitted direct to the Editorial Committee.

A. PETTI
Chairman of Committee 5



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 179-E(Rev.2)

18 November 1975

Original : English

PLENARY MEETING

Austria

ADDITIONAL PROTOCOL III

Relating to the use of the frequency 522 kHz for broadcasting service in Austria

The Delegates of the following Members of the International
Telecommunication Union :

.....

meeting in Geneva for the Regional Administrative LF/MF Broadcasting
Conference (Regions 1 and 3), Geneva, 1975, convened in accordance with
the provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

take note

1. that by Radio Regulation No. 185, Austria is entitled to keep
the broadcasting station Innsbruck in the band 515-525 kHz providing it
will not cause harmful interference to the maritime mobile service;
2. that for many years in Austria a synchronized group consisting of
three transmitters of 10 kW carrier power each and four transmitters of very
low power have been recorded in the Master Register with the declared
acceptance of the express condition that harmful interference shall not be
caused to services carried on by stations operating in accordance with the
provisions of the Convention and of the Regulations (Radio Regulation No. 115)
and have been operated on the frequency 520 kHz with a bandwidth greater
than 9 kHz without giving rise to any complaint;



3. that Austria proposes to change the carrier frequency of the assignment, in this band to the nearest multiple of 9 kHz (522 kHz) to be compatible with the channeling Plan adopted by the present Conference; to reduce the radiation bandwidth to 9 kHz and to increase the power of the station at Innsbruck from 10 to 30 kW. It is proposed that such changes will come into force on 23 November 1978 at 0001 hours with a bandwidth greater than 9 kHz.
4. that for the proposed stations on frequency 522 kHz coordination in relation to other stations of the broadcasting service only has been carried out successfully by applying all technical criteria adopted by the present Conference (with the exception of the carrier frequency). The resulting characteristics of the proposed stations on frequency 522 kHz are shown in the Annex hereafter.
5. that the provisions of the present Additional Protocol do not in any way influence the status of the station concerned with respect to the maritime mobile service as governed by Radio Regulation Nos. 185 and 115.

Annex : 1

A N N E X E - A N N E X - A N E X O

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)		Antenne Antenna Antena		Conductivité du sol (mS/m)	Horaire de fonctionnement (TMS)
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Rayonnement maximal AUTORISE AUTHORIZED Maximum radiation	Type	Hauteur	Ground Conductivity (mS/m)	Hours of operation (GMT)
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Radiación máxima autorizada (dB)	Tip	Altura (m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMS)
1	2	3	4	5	6	7	8	9	10	11
522 -	MUEHLBACH HKG	AUT	13E07 47N22	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	MURAU	AUT	14E11 47N07	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	NEUKIRCHEN GRV	AUT	12E17 47N15	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	INNSBRUCK ALDR	AUT	11E27 47N15	D9	30	15	A	151	0,3 (6)	0000- 2400
522 -	LIENZ OSTTIROL	AUT	12E47 46N49	D9	10	10	A	104	0,1 (7)	0000- 2400
522 -	LIEZEN	AUT	14E14 47N34	D9	10	10	A	150	0,3 (6)	0000- 2400

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 179-E(Rev.1)

17 November 1975

Original : English

PLENARY MEETING

Austria

ADDITIONAL PROTOCOL III

Relating to the use of the frequency 522 kHz for broadcasting service in Austria

The Delegates of the following Members of the International Telecommunication Union :

.....

meeting in Geneva for the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975, convened in accordance with the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973),

take note

1. that by Radio Regulation No. 185, Austria is entitled to keep the broadcasting station Innsbruck in the band 515-525 kHz providing it will not cause harmful interference to the maritime mobile service;
2. that for many years a synchronized group consisting of three transmitters of 10 kW carrier power each and four transmitters of very low power have been recorded in the Master Register with the declared acceptance of the express condition that harmful interference shall not be caused to services carried on by stations operating in accordance with the provisions of the Convention and of the Regulations (Radio Regulation No. 115) and have been operated without giving rise to any complaint;



3. that the carrier frequency of the assignments in this band has been adjusted to be compatible with channelling adopted by the present Conference and the radiated bandwidth has been reduced to 9 kHz;

4. that for the stations on frequency 522 kHz coordination in relation to other stations of the broadcasting service only has been carried out successfully by applying all technical criteria adopted by the present Conference (with the exception of the carrier frequency). The resulting characteristics of the stations on frequency 522 kHz are shown in the Annex hereafter.

5. that the provisions of the present Additional Protocol do not in any way influence the status of the stations concerned with respect to the maritime mobile service as governed by Radio Regulation No. 185.

Annex : 1

ANNEXE - ANNEX - ANEXO

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)		Antenne Antenna Antena		Conductivité du sol (mS/m)	Horaire de fonctionnement (TMC)
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Rayonnement maximal AUTORISE Maximum radiation	Type Type	Hauteur Height	Ground Conductivity (mS/m)	Hours of operation (GMT)
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Radiación máxima autorizada (dB)	Tipo	Altura (m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMC)
1	2	3	4	5	6	7	8	9	10	11
522 -	MUEHLBACH HKG	AUT	13E07 47N22	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	MURAU	AUT	14E11 47N07	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	NEUKIRCHEN GRV	AUT	12E17 47N15	D9	0,1	-10	A	15	0,3 (6)	0000- 2400
522 -	INNSBRUCK ALDR	AUT	11E27 47N15	D9	30	15	A	151	0,3 (6)	0000- 2400
522 -	LIENZ OSTTIROL	AUT	12E47 46N49	D9	10	10	A	104	0,1 (7)	0000- 2400
522 -	LIEZEN	AUT	14E14 47N34	D9	10	10	A	150	0,3 (6)	0000- 2400

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 179-E

15 November 1975

Original : English

PLENARY MEETING

Austria

/- ADDITIONAL PROTOCOL III -/

Use of the frequency 522 kHz

By Radio Regulation No. 185, Austria has the authority to use the frequency band 515 - 525 kHz for broadcasting subject to certain conditions with respect to the maritime mobile service. The carrier frequency of the stations in service has been adjusted to be compatible with channelling adopted by the present Conference and the radiated bandwidth has been reduced to 9 kHz. The characteristics of the stations concerned which result from the coordination successfully carried out at the present Conference, are shown in the Annex hereafter.

Annex : 1



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A N N E X E - A N N E X - A N E X O

PLAN D'ASSIGNATIONS DE FREQUENCE AUX STATIONS DE RADIODIFFUSION DANS LES BANDES DES ONDES HECTOMETRIQUES (A L'EXCEPTION DES STATIONS UTILISANT LES CANAUX
POUR EMETTEURS DE FAIBLE PUISSANCE) DANS LES REGIONES 1 ET 3 ET DANS LES BANDES DES ONDES KILOMETRIQUES DANS LA REGION 1

PLAN FOR THE ASSIGNMENT OF FREQUENCIES TO BROADCASTING STATIONS IN THE MEDIUM FREQUENCY BANDS (OTHER THAN TO STATIONS USING LOW-POWER CHANNELS)

IN REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

PLAN DE ASIGNACIÓN DE FRECUENCIAS A LAS ESTACIONES DE RADIODIFUSIÓN EN LAS BANDAS DE ONDAS HECTOMÉTRICAS (EXCEPTO LAS ESTACIONES QUE UTILIZAN LOS CANALES DE
BAJA POTENCIA) EN LAS REGIONES 1 Y 3 Y EN LAS BANDAS DE ONDAS KILOMÉTRICAS EN LA REGIÓN 1

Fréquence assignée (kHz) (Número del canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	Rayonnement autorisé Authorized radiation Radiación autorizada		Limitations de rayonnement Restrictions on radiation Limitaciones de radiación (Pour antennes directives seulement) (For directional antennas only) (Sólo para antenas directivas)		Antenne Antenna Antena		Conductivité du sol (mS/m)	Horaire de fonctionnement (TMG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Rayonnement maximal Maximum radiation	Azimet de rayonnement maximal Azimuth of maximum radiation	Azimuths définissant le secteur à rayonnement limité Azimuths defining the sector of limited radiation	Rayonnement maximal dans le secteur Maximum radiation in the sector	Type Tipo	Hauteur Height Altura	Ground Conductivity (mS/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Radiación máxima (dB)	Acimut de radiación máxima	Acimuts que definen el sector con radiación limitada	Radiación máxima en el sector (dB)		(m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
522 -	MUEHLBACH HKG	AUT	13E07 47N22	9D	0,1	-10				A	15	0,3 (6)	0000- 2400	
522 -	MURAU	AUT	14E11 47N07	9D	0,1	-10				A	15	0,3 (6)	0000- 2400	
522 -	NEUKIRCHEN GRV	AUT	12E17 47N15	9D	0,1	-10				A	15	0,3 (6)	0000- 2400	
522 -	INNSBRUCK ALDR	AUT	11E27 47N15	9D	30	15				A	151	0,3 (6)	0000- 2400	
522 -	LIENZ OSTTIROL	AUT	12E47 46N49	9D	10	10				A	104	0,1 (7)	0000- 2400	
522 -	LIEZEN	AUT	14E14 47N34	9D	10	10				A	150	0,3 (6)	0000- 2400	

INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

PINK PAGES

Document No. 180-E
15 November 1975

PLENARY MEETING

R.1

1st SERIES OF TEXTS SUBMITTED BY THE
EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for second reading :

Annex 2 : Technical Data (except § 4.3 and § 4.9)

Miss M. HUET
Chairman of the
Editorial Committee

Annexes : pages 3-57



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A N N E X 2

to the

REGIONAL AGREEMENT CONCERNING THE USE BY
THE BROADCASTING SERVICE OF FREQUENCIES
IN THE MEDIUM FREQUENCY BANDS IN REGIONS 1 AND 3
AND IN THE LOW FREQUENCY BANDS IN REGION 1

TECHNICAL DATA USED IN THE PREPARATION OF THE PLAN
AND TO BE USED IN THE APPLICATION OF THE AGREEMENT

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CHAPTER 2 : GROUND WAVE PROPAGATION

CHAPTER 3 : SKY WAVE PROPAGATION

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3.3 Method of sky wave field strength prediction for the frequency range 150 kHz to 1 605 kHz in Region 1

3.4 Method of sky wave field strength prediction for the frequency range 525 kHz to 1 605 kHz for the Asian part of Region 3, North of 11° S

3.5 Method of sky wave field strength prediction for the frequency range 525 kHz to 1 605 kHz for the part of Region 3, South of 11° S

CHAPTER 4 : BROADCASTING STANDARDS

4.1 Class of emission

4.2 Power

4.3 Radiated power

4.4 Protection ratios

4.5 Minimum value of field strength

4.6 Nominal usable field strength

4.7 Usable field strength

4.8 Low-power channels

4.9 Transmitter siting tolerances

TECHNICAL DATA USED IN THE PREPARATION OF THE PLAN
AND TO BE USED IN THE APPLICATION OF THE AGREEMENT

CHAPTER 1

DEFINITIONS

Channel (in AM broadcasting)

Part of the frequency spectrum, the width of which is equal to the necessary bandwidth of the AM broadcasting emission, and which is characterized by the nominal value of the carrier frequency.

Low-power channel (LPC)

Channel used by medium frequency broadcasting stations employing a maximum e.m.r.p. of 1 kW (c.m.f. of 300 V).

Audio-frequency signal-to-interference ratio

Ratio between the values of the voltage of the wanted signal and the voltage of the interference, measured under specified conditions, at the audio-frequency output of the receiver.

This ratio is generally expressed in dB and corresponds closely to the difference in volume of sound (expressed in dB) between the wanted programme and the interference.

Audio-frequency protection ratio

Agreed minimum value of the audio-frequency signal-to-interference ratio considered necessary to achieve a subjectively defined reception quality.

This ratio may have different values according to the type of service desired.

Radio-frequency wanted-to-interfering signal ratio

Ratio between the values of the radio-frequency voltage of the wanted signal and the interfering signal, measured at the input of the receiver under specified conditions.

This ratio is generally expressed in dB.

Radio-frequency protection ratio

Value of the radio-frequency wanted-to-interfering signal ratio that enables, under specified conditions, the audio-frequency protection ratio to be obtained at the output of a receiver.

These specified conditions include such diverse parameters as spacing of the wanted and interfering carrier, emission characteristics (type of modulation, modulation depth, etc.), receiver input and output levels as well as the receiver characteristics (selectivity and susceptibility to cross-modulation, etc.).

Usable field strength (E_u)

The minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference in a practical situation (or in one resulting from a frequency plan).

Nominal usable field strength (E_{nom})

The agreed minimum value of the field strength necessary to permit satisfactory reception, under specified conditions, in the presence of natural noise, man-made noise and interference from other transmitters.

The value of the nominal usable field strength is taken as a reference for planning purposes.

Service area (of a broadcasting transmitter)

The area in which the field strength of a transmitter is equal to or greater than the usable field strength.

Cymomotive force (c.m.f.) (in a given direction)
(See C.C.I.R. Report 618, 1974)

The product formed by multiplying the electric field strength at a given point in space, due to a transmitting station, by the distance of the point from the antenna. This distance must be sufficient for the reactive components of the field to be negligible; moreover the finite conductivity of the ground is supposed to have no effect on propagation.

The c.m.f. is a vector; when necessary it may be expressed in terms of components along axes perpendicular to the direction of propagation.

The c.m.f. is expressed in volts; it corresponds numerically to the field strength in mV/m at a distance of 1 km.

Effective monopole radiated power (e.m.r.p.)
(See C.C.I.R. Report 618, 1974)

The power supplied to an antenna multiplied by its gain in a given direction referred to that of a short vertical antenna in the horizontal direction.

Gain of an antenna (in a given direction) referred to a short vertical antenna

The radiation is expressed either as effective monopole radiated power e.m.r.p. or as cymomotive force c.m.f. To define the gain of an antenna in a given direction referred to a short vertical antenna either of the two following definitions should be adopted :

- the ratio between the c.m.f. of the actual antenna in a given direction and the c.m.f. in the horizontal plane of a short vertical antenna without losses on a perfectly conducting plane, the two antennae being supplied with the same power;

- the ratio of the power required at the input of a short vertical antenna without losses situated on perfectly conducting horizontal plane to produce the reference e.m.r.p. of 1 kW (c.m.f. of 300 V) in the horizontal direction, to the power supplied to the actual antenna to produce the same e.m.r.p. (c.m.f.) in the given direction.

The ratio, expressed in dB, is the same for the two definitions.

Synchronized network

A group of transmitters whose carrier frequencies are identical (or differ only slightly, usually by a fraction of a Hz), and which broadcast the same programme.

CHAPTER 2GROUND-WAVE PROPAGATION

2.1 The value of the ground-wave field strength is given by the curves in Figures 1 to 9 taken from C.C.I.R. Recommendation 368-2.

The following points are to be especially noted with regard to them :

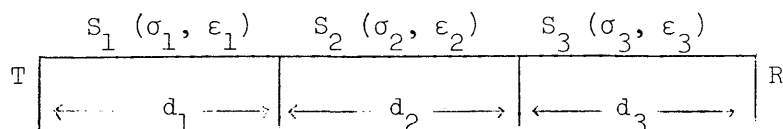
- 2.1.1 they refer to a smooth homogeneous earth;
- 2.1.2 no account is taken of tropospheric effects at these frequencies;
- 2.1.3 the curves refer to the following conditions :
 - they are calculated for the vertical component of electric field from the rigorous analysis of van der Pol and Bremmer;
 - the transmitter is an ideal Hertzian vertical electric dipole to which a vertical antenna shorter than one quarter wave-length is nearly equivalent;
 - the dipole moment is chosen so that the dipole would radiate 1 kW if the Earth were a perfectly conducting infinite plane under which conditions the radiation field at a distance of 1 km would be $3 \times 10^5 \mu\text{V/m}$;
 - the curves are drawn for distances measured around the curved surface of the Earth;
 - the inverse-distance curve A shown in the figures, to which the curves are asymptotic at short distances, passes through the field value of $3 \times 10^5 \mu\text{V/m}$ at a distance of 1 km;
- 2.1.4 the propagation loss defined in C.C.I.R. Recommendation 341 (1974) for ground waves may be determined from the values of the field strength in dB relative to $1 \mu\text{V/m}$, given in the attached curves, by the use of equation (19) of C.C.I.R. Report 112 (1974);

- 2.1.5 the curves should, in general, be used to determine field strength, only when it is known that ionospheric reflections at the frequency under consideration will be negligible in amplitude - for example, propagation in daylight between 150 kHz and 2 MHz and for distances of less than about 2,000 km.

2.2 Mixed path

- 2.2.1 The curves in Figures 1 to 9 may be used for the determination of propagation over mixed paths (inhomogeneous smooth earth) as follows.

Such paths may be made up of sections S_1, S_2, S_3 , etc. of lengths d_1, d_2, d_3 , etc. having conductivity and dielectric constant $\sigma_1, \epsilon_1; \sigma_2, \epsilon_2; \sigma_3, \epsilon_3$ etc. shown below for three sections :



There are various semi-empirical methods of determining the propagation over such paths, of which that due to Millington (1949) is the most accurate and has been made to satisfy the reciprocity condition. The method assumes that curves are available for the different types of terrain in the sections S_1, S_2, S_3 etc. assumed to be individually homogeneous, all drawn for the same source T defined, for instance, by a given inverse-distance curve. The values may then finally be scaled up for any other source.

For a given frequency, the curve appropriate to the section S_1 , is chosen and the field $E_1(d_1)$ in dB(1μV/m) at the distance d_1 is then noted. The curve for the section S_2 is then used to find the fields $E_2(d_1)$ and $E_2(d_1 + d_2)$ and, similarly, with the curve for the section S_3 , the fields $E_3(d_1 + d_2)$ and $E_3(d_1 + d_2 + d_3)$ are found, and so on.

A received field strength E_R is then defined by

$$E_R = E_1(d_1) - E_2(d_1) + E_2(d_1 + d_2) - E_3(d_1 + d_2) + E_3(d_1 + d_2 + d_3)$$

The procedure is then reversed, and by calling R the transmitter and T the receiver, a field E_T is obtained, given by

$$E_T = E_3(d_3) - E_2(d_3) + E_2(d_3 + d_2) - E_1(d_3 + d_2) + E_1(d_3 + d_2 + d_1)$$

The required field is given by $\frac{1}{2}(E_R + E_T)$, the extension to more sections being obvious.

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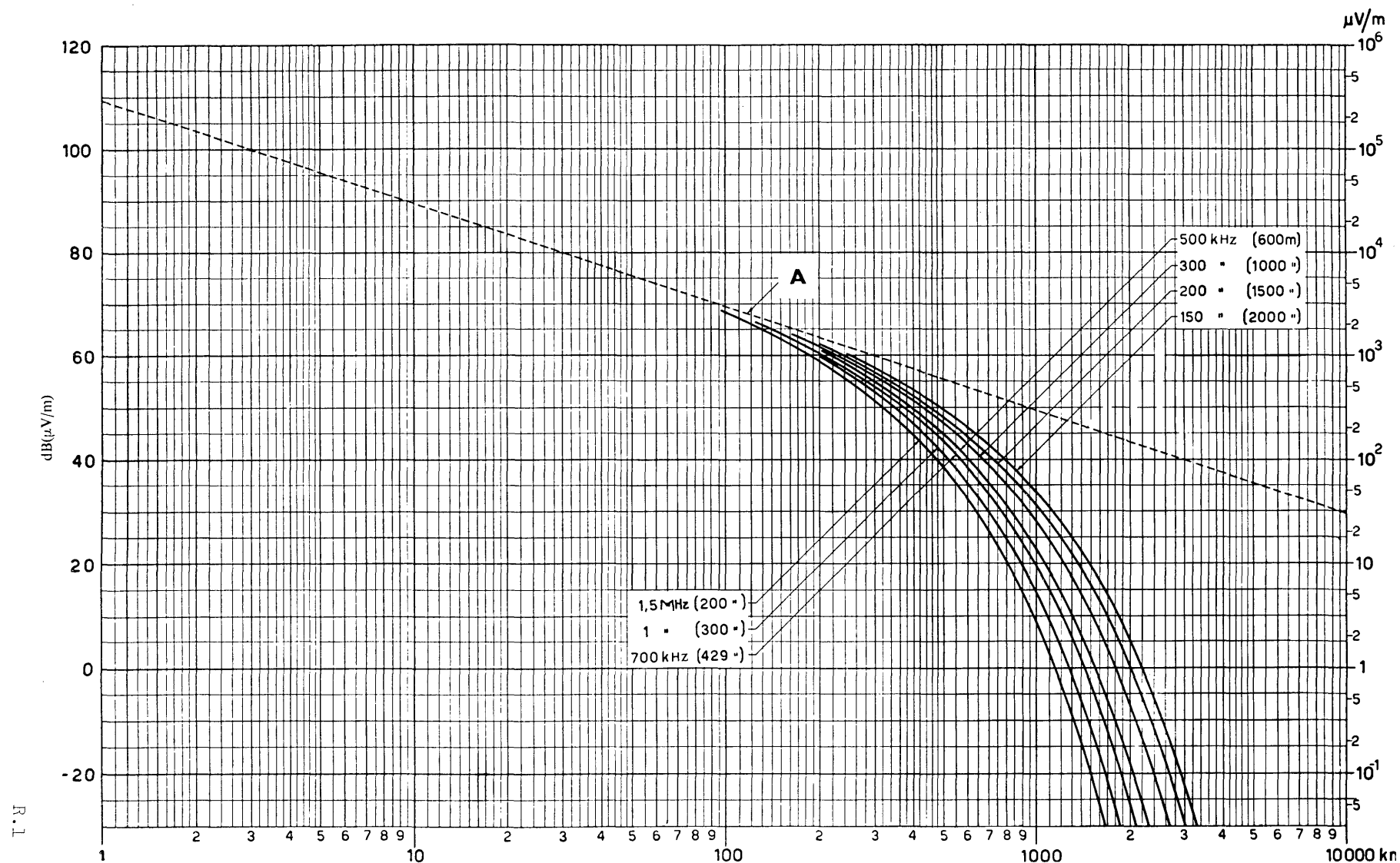


FIGURE 1

Ground-wave propagation curves; Sea, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$
A: Inverse distance curve

FIGURE 1

Courbes de propagation de l'onde de sol; mer, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$
A: Inverse de la distance

FIGURA 1

Curvas de propagación de la onda de superficie; Mar, $\sigma = 4 \text{ S/m}$, $\epsilon = 80$
A: inversa de la distancia

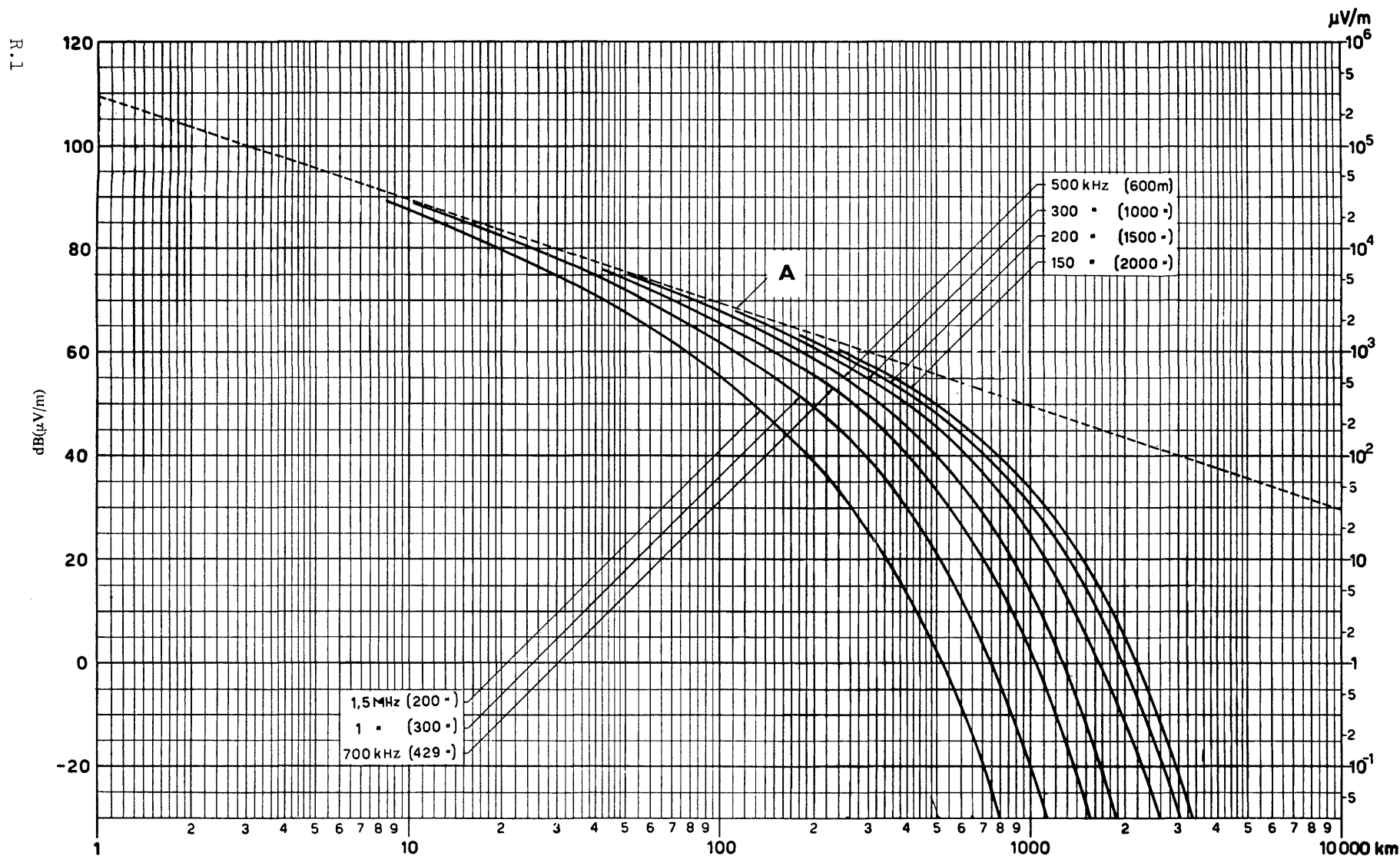


FIGURE 2

FIGURE 2

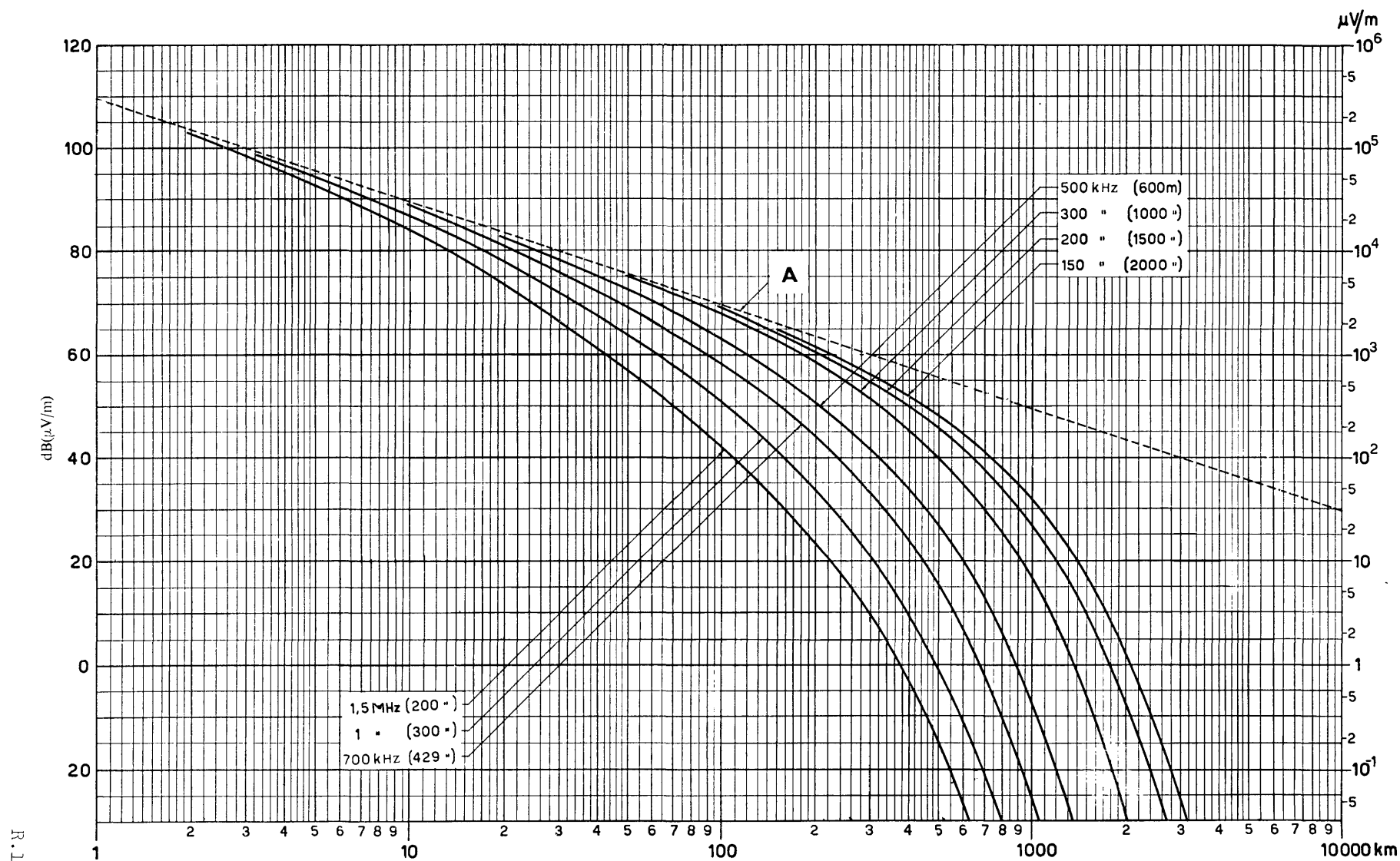
Ground-wave propagation curves ; Earth, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$. Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$
A: Inverse distance curve

A: Inverse de la distance

FIGURA 2

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia



R.1

FIGURE 3

Ground-wave propagation curves; Earth, $\sigma = 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURE 3

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

FIGURA 3

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-2} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

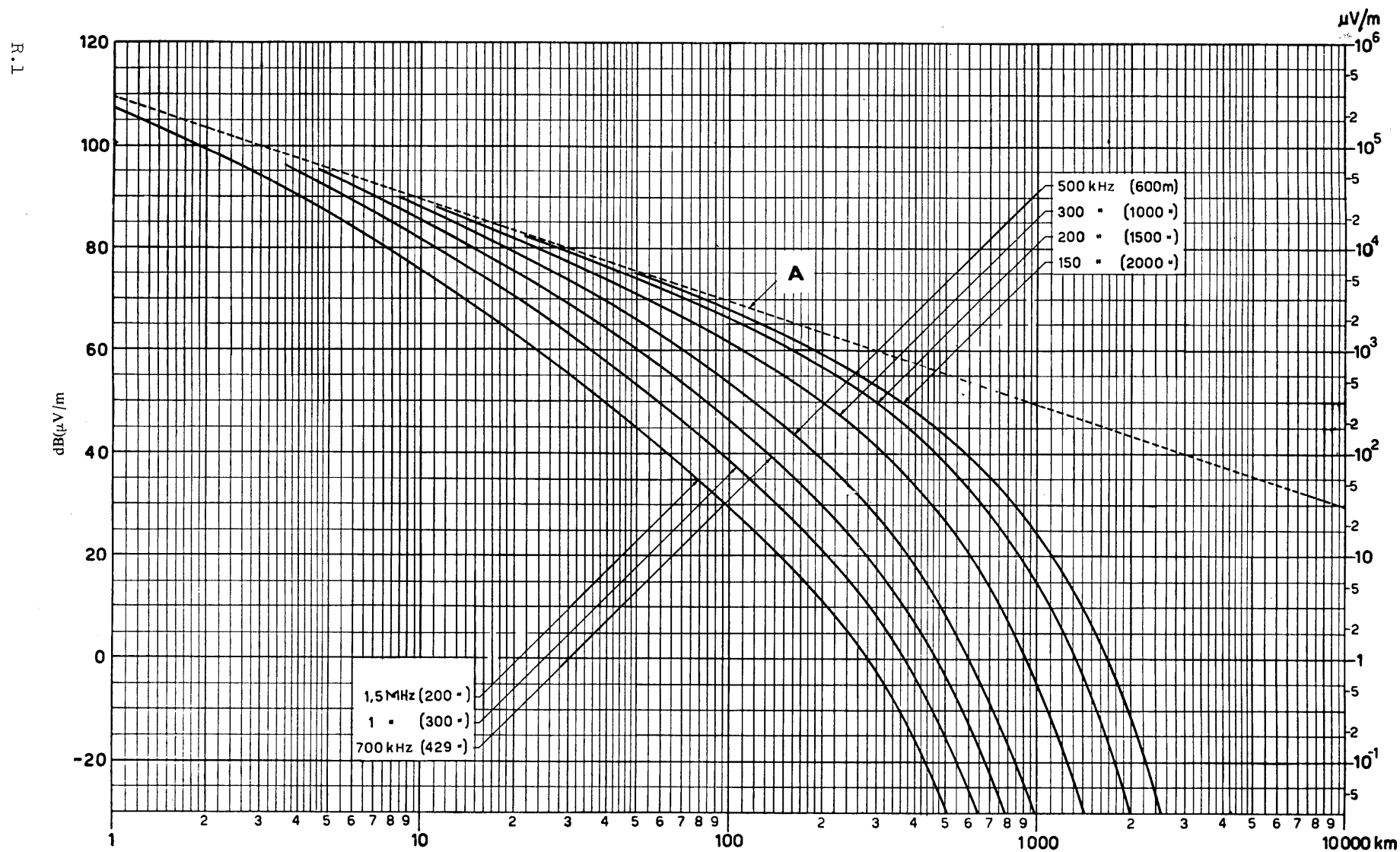


FIGURE 4

Ground-wave propagation curves; Earth, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$

A: Inverse distance curve

FIGURE 4

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$

A: Inverse de la distance

FIGURA 4

Curvas de propagaci3n de la onda de superficie; Tierra, $\sigma = 3 \times 10^{-3}$ S/m, $\epsilon = 4$

A: inversa de la distancia

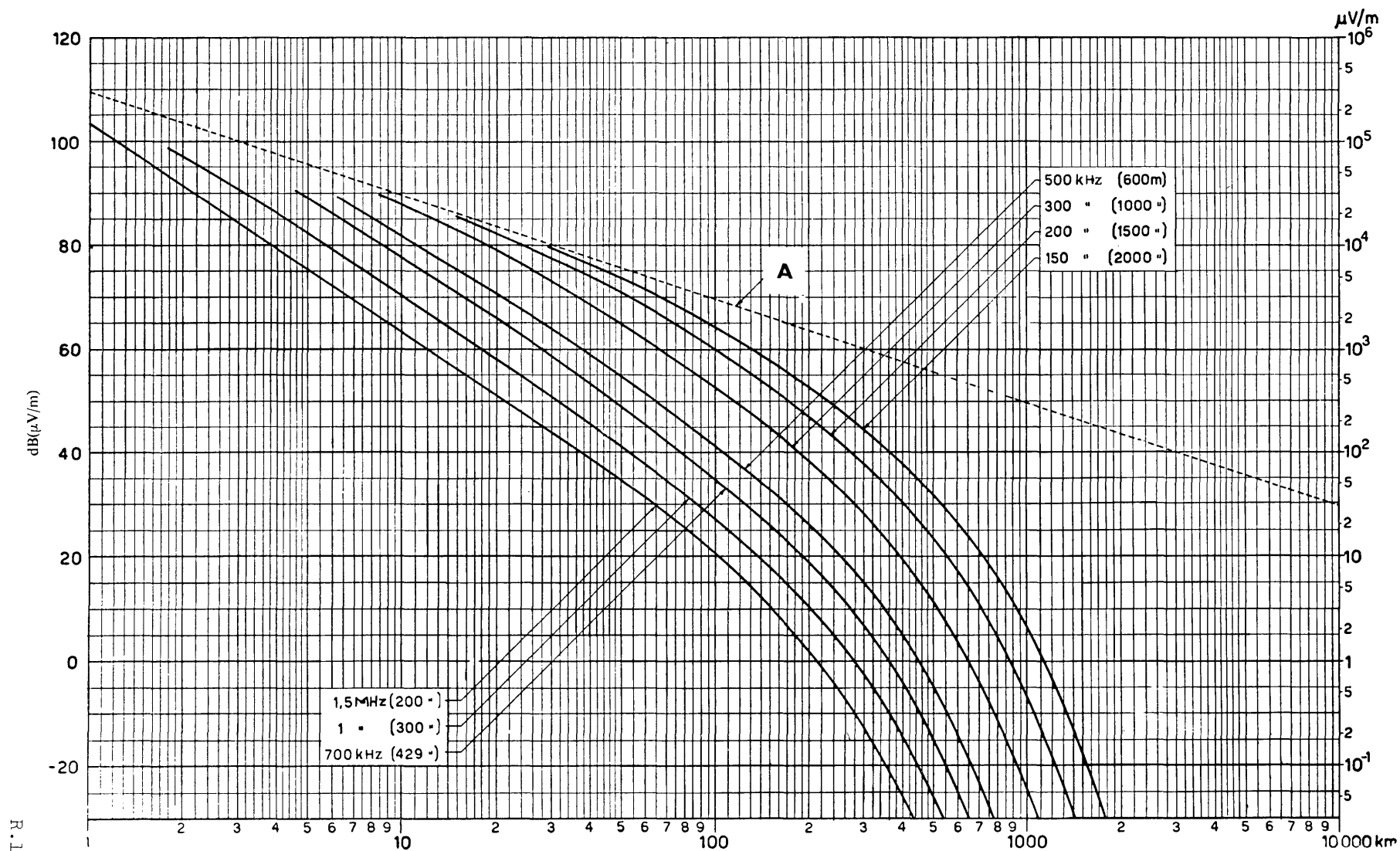


FIGURE 5

Ground-wave propagation curves; Earth, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse distance curve

FIGURE 5

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: Inverse de la distance

FIGURA 5

Curvas de propagación de la onda de superficie; Tierra, $\sigma = 10^{-3} \text{ S/m}$, $\epsilon = 4$

A: inversa de la distancia

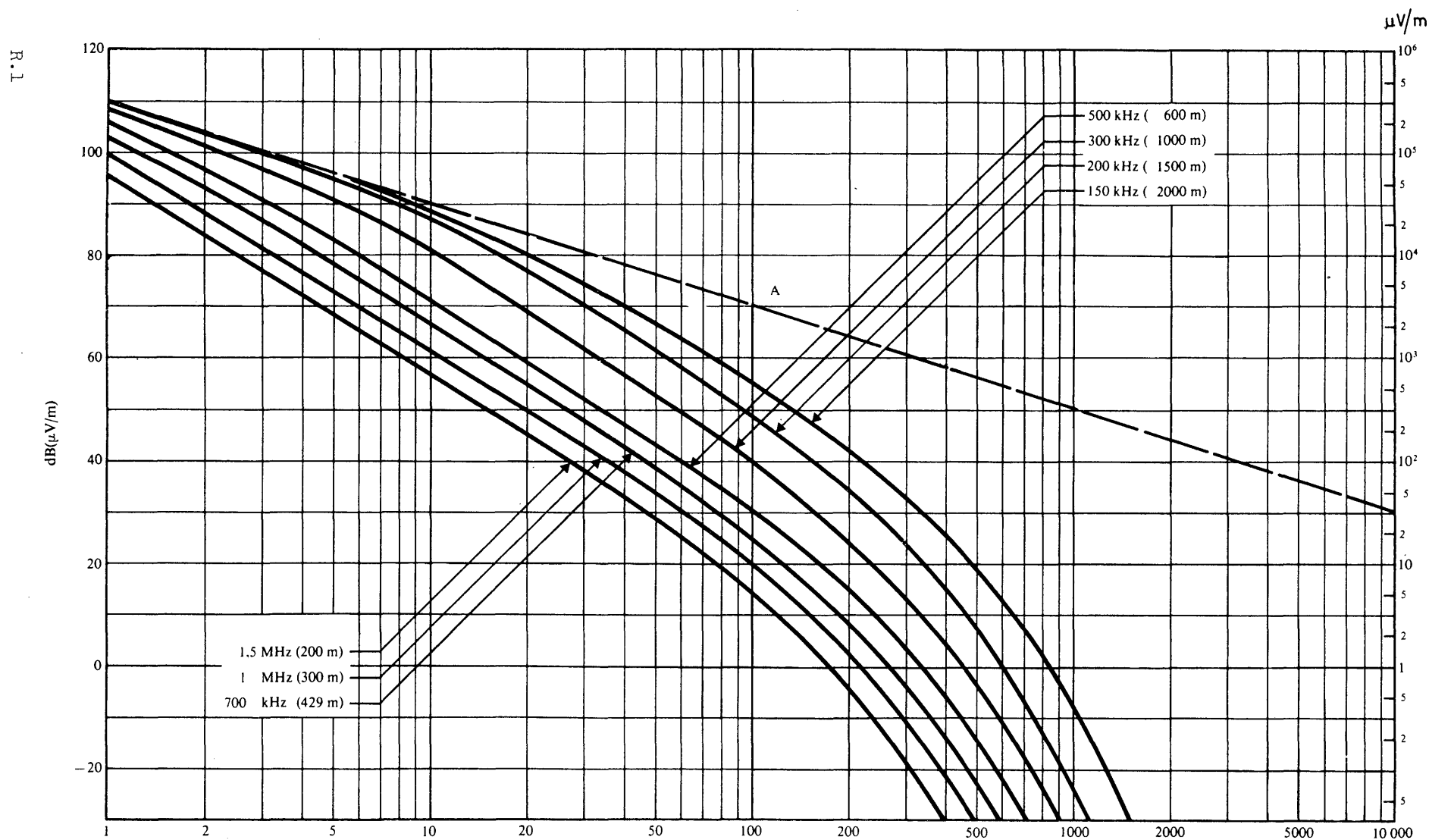


FIGURE 6

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: Inverse de la distance

FIGURA 6

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: inversa de la distancia

Figure 6

Ground-wave propagation curves: Earth

$\sigma = 3 \times 10^{-4}$ S/m, $\epsilon = 4$

A: Inverse distance curve

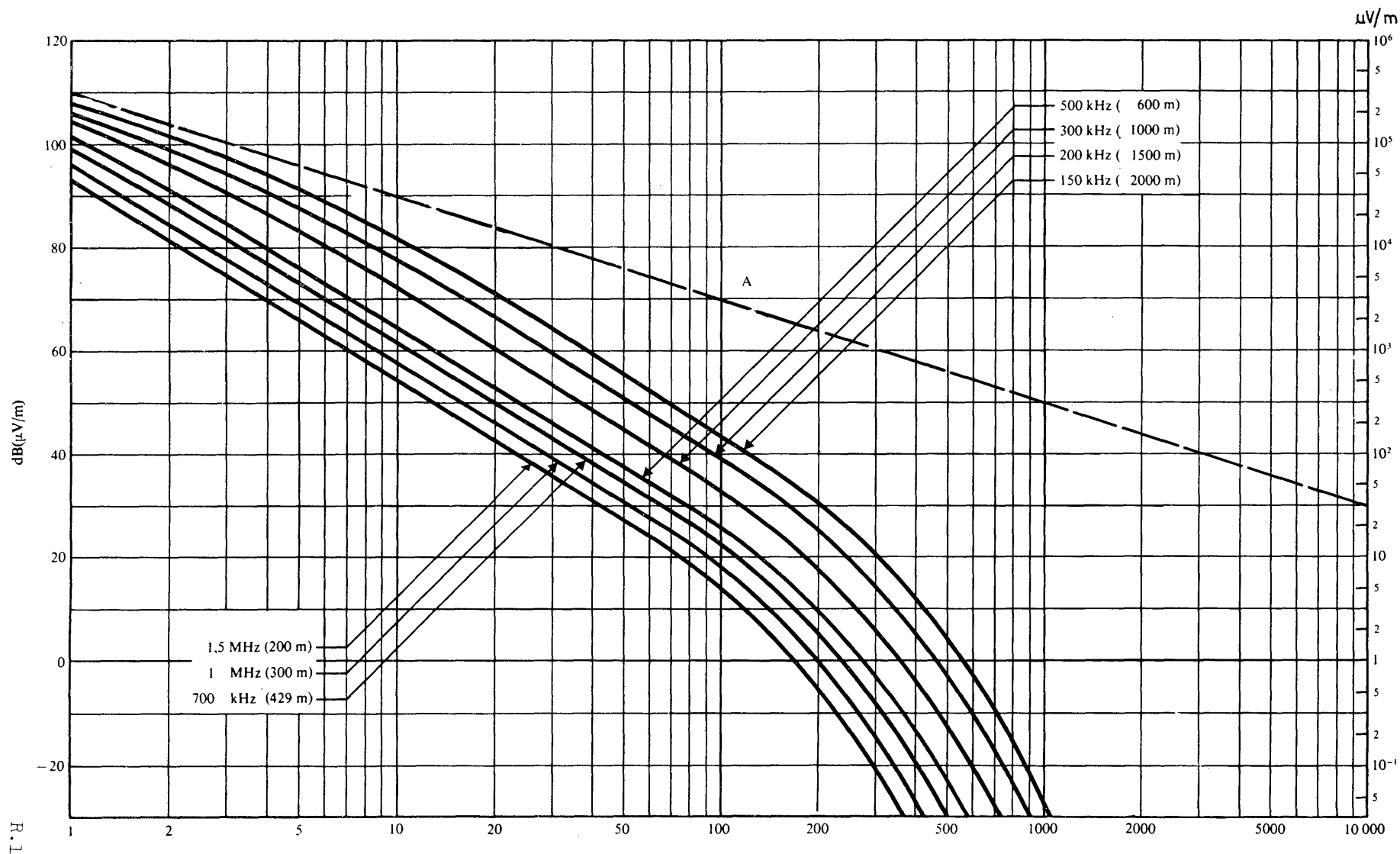


FIGURE 7

Ground-wave propagation curves; Earth

$$\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$$

A: Inverse distance curve

FIGURE 7

Courbes de propagation de l'onde de sol; Terre, $\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$

A: Inverse de la distance

FIGURA 7

Curvas de propagación de la onda de superficie;
 $\sigma = 10^{-4} \text{ S/m}, \epsilon = 4$ A: Inversa de la distancia

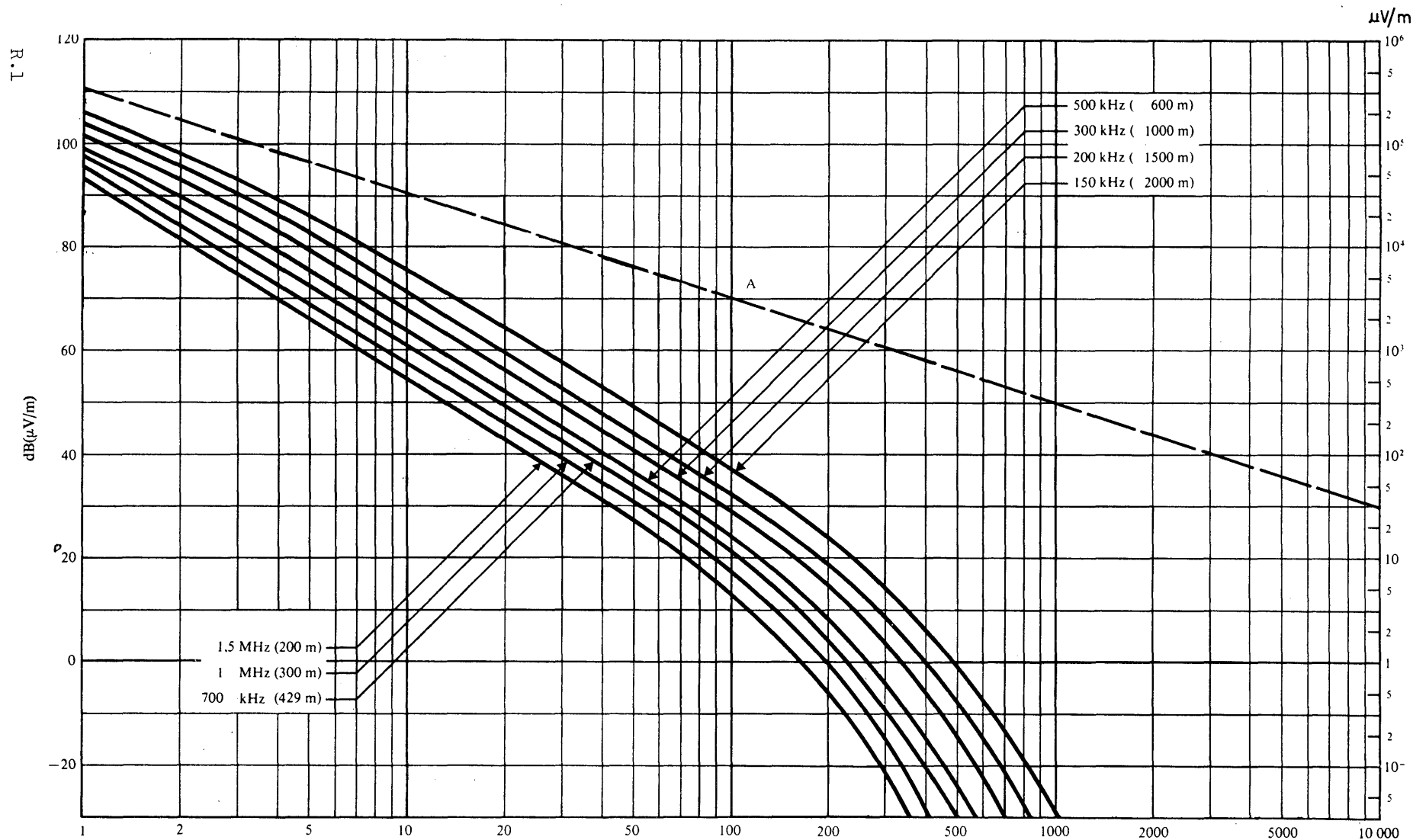


FIGURE 8

Ground-wave propagation curves; Earth

$$\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$$

A: Inverse distance curve

FIGURE 8

Courbes de propagation de l'onde de sol; Terre, $\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$

A: Inverse de la distance

FIGURA 8

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 3 \times 10^{-5} \text{ S/m}, \epsilon = 4$

A: inversa de la distancia

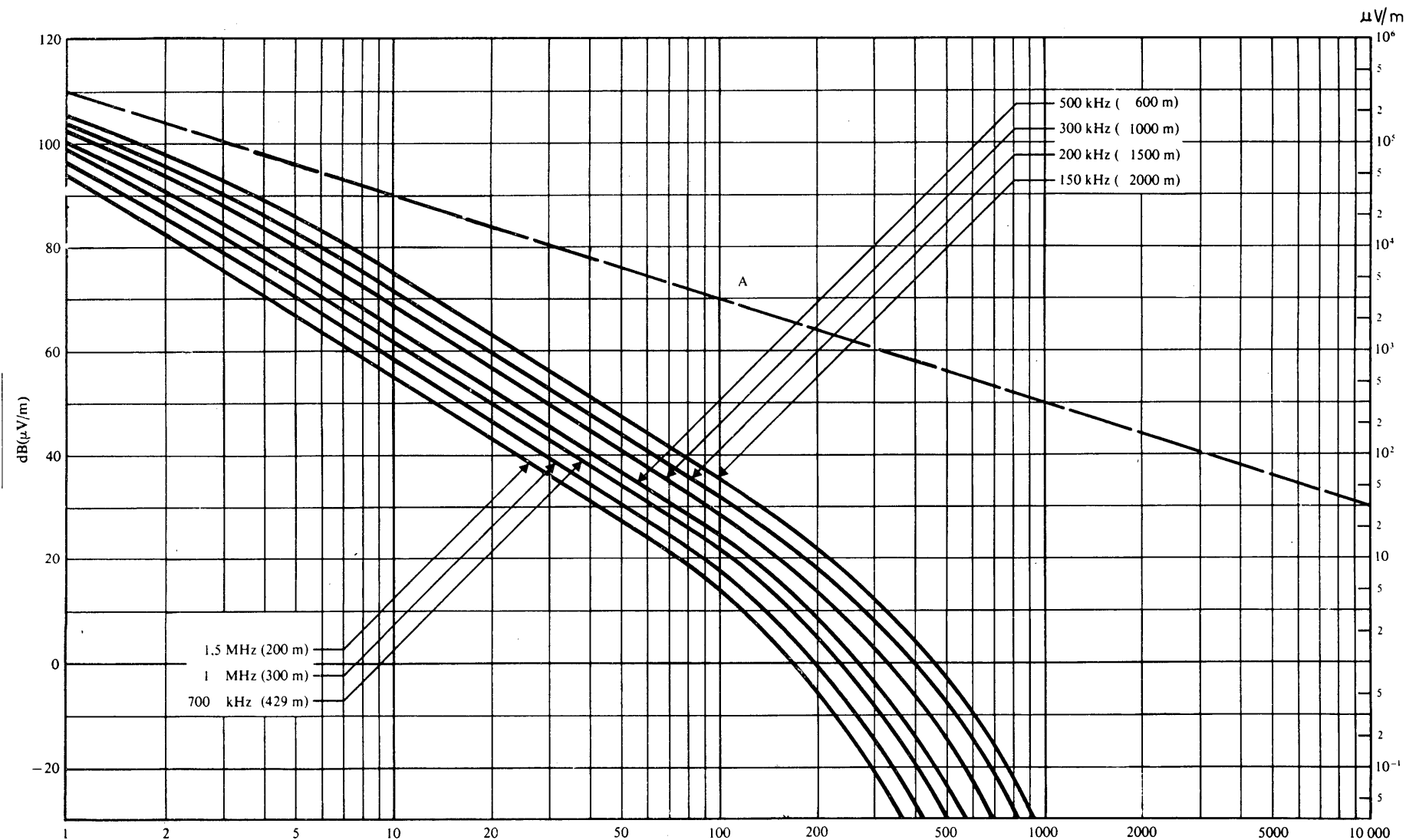


Figure 9

FIGURE 9

Courbe de propagation de l'onde de sol; Terre, $\sigma = 10^{-5}$ S/m, $\epsilon = 4$

A: Inverse de la distance

FIGURA 9

CURVAS DE PROPAGACION DE LA ONDA DE SUPERFICIE; TIERRA, $\sigma = 10^{-5}$ S/m, $\epsilon = 4$

A: inversa de la distancia

Ground-wave propagation curves; Earth

$\sigma = 10^{-5}$ S/m, $\epsilon = 4$

A = Inverse distance curve

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CHAPTER 3SKY-WAVE PROPAGATION3.1 Introduction

Within Region 1 the sky-wave propagation prediction method described in 3.3 should be used.

Within the Asian part of Region 3 situated North of the parallel 11°S , the sky-wave propagation prediction method described in 3.4 should be used.

Within the part of Region 3 situated South of the parallel 11°S , the method described in 3.5 should be used.

For a path with terminals in different regions, the method used should be that which applies at the mid-point of the great-circle path.

Within the whole of Regions 1 and 3 the radiation in a given direction is expressed in dB with reference to a c.m.f. of 300 V or an e.m.r.p. of 1 kW. The powers are expressed in dB relative to 1 kW.

3.2 Symbols

- b Solar-activity factor given in 3.3.2.6;
- d Great-circle ground distance between transmitter and receiver (km);
- F_o Annual median field strength at the reference time in dB relative to $1\mu\text{V/m}$;
- F_c Field strength in dB relative to $1\mu\text{V/m}$ deduced from the Cairo North/South curve (Figure 22);
- F_t Annual median field strength in dB relative to $1\mu\text{V/m}$ at time t ;
- f Frequency (kHz);
- f' A frequency (kHz) defined in equation (6);
- G Antenna gain (dB) referred to a short vertical antenna in the direction of propagation;

G_o	Sea gain for a path terminal on the coast (dB);	
G_S	Sea gain for a path terminal near the sea (dB);	
h	Transmitting antenna height (in wavelengths);	
h_r	Height of reflecting layer (km);	
I	Magnetic dip angle (degrees);	
k	Basic loss factor due to absorption in the ionosphere;	
k_R	Loss factor incorporating effects of ionospheric absorption, focusing and terminal losses, and losses between hops on multi-hop paths;	
L_P	Excess polarization coupling loss (dB);	
L_t	Hourly loss factor (dB);	
P	Radiated power (dB relative to 1 kW);	
p	Slant propagation distance (km);	
Q	A sea gain parameter given in 3.3.2.3;	
R	Twelve-month smoothed Zurich sunspot number (Wolf number);	
s	Distance of path terminal from sea (km) measured along great-circle path;	
t	Time relative to sunset or sunrise (hours);	
V	Transmitter electromotive force (dB relative to a reference electromotive force of 300 V);	
θ	Direction of propagation relative to magnetic East-West (degrees);	
λ	Wavelength;	
Φ	A geomagnetic latitude parameter;	
Φ_T	Geomagnetic latitude of transmitter	} in degrees, positive in Northern hemisphere, negative in Southern hemisphere.
Φ_R	Geomagnetic latitude of receiver	

3.3 Sky-wave field-strength prediction method for the frequency range 150 to 1 605 kHz for Region 1

3.3.1 Introduction

This method of prediction gives the night-time sky-wave field strength produced for a given power radiated from one or more vertical antennae, when measured by a loop antenna at ground level aligned in a vertical plane along the great-circle path to the transmitter. It applies for paths of lengths up to 12,000 km.

3.3.2 Annual median night-time field strength

The predicted sky-wave field strength is given by :

$$F_o = V + G_s - L_p + (105.3 - 20 \log_{10} p) - 10^{-3} k_R p \quad (1)$$

where F = annual median of half-hourly median field strengths (dB relative to 1 μ V/m) at the reference time defined in 3.3.2.1.

Figure 10 shows the value of $(105.3 - 20 \log_{10} p)$ as a function of the ground distance.

3.3.2.1 Reference time

The reference time is taken as six hours after the time at which the sun sets at a point S on the surface of the earth. For paths shorter than 2,000 km, S is the mid-point of the path. On longer paths, S is 750 km from the terminal where the sun sets last, measured along the great-circle path.

3.3.2.2 Cymomotive force

The cymomotive force V in the azimuth and the elevation of the direction of propagation is calculated by the formula :

$$V = P' + G \quad (2)$$

where P' , expressed in dB (kW), is the power supplied by the transmitter to the antenna transmission line, while neglecting various losses in the antenna and its transmission line,

and where G is the gain, in dB, of the antenna in the direction of propagation, referred to a short vertical antenna.

For a simple vertical antenna, without losses, this gain is given, in dB, by Figure 11.

3.3.2.3 Sea gain

G_S is the additional signal gain when one or both terminals is situated near the sea. G_S for a single terminal is given by :

$$G_S = G_O - 10^{-3} \frac{Q s f}{G_O} \quad (\text{dB}) \quad (3)$$

where G_O is the gain when the terminal is on the coast, f is the frequency in kHz and s is the distance in km of the terminal from the sea, measured along the great-circle path. $Q = 0.44$ in the LF band and 1.75 in the MF band. G_O is given in Figure 12 as a function of d for the above-mentioned bands. In the MF band, $G_O = 10$ dB when $d > 6,500$ km. Equation (3) applies for values of s such that $G_S > 0$. For larger values of s , $G_S = 0$. If both terminals are near the sea, G_S is the sum of the values of G_S for the individual terminals.

3.3.2.4 Excess polarization coupling loss

L_p is the excess polarization coupling loss. In the LF band, $L_p = 0$. In the MF band, at low latitudes, for $|I| \leq 45^\circ$, the following formula applies for each terminal :

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2 \text{ (dB)} \quad (4)$$

(see Figure 13)

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p values added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures 14 and 15).

3.3.2.5 Slant propagation distance

For paths longer than 1,000 km, p is approximately equal to the ground distance d (km). For shorter paths,

$$p = (d^2 + 4h_r^2)^{\frac{1}{2}} \quad (5)$$

where $h_r = 100$ km if $f \leq f'$ and 220 km if $f > f'$, where f' (in kHz) is given by

$$f' = 350 + \sqrt{(2.8d)^3 + 300^3}^{\frac{1}{3}} \quad (6)$$

(see Figure 16)

Equation (5) may be used for paths of any length with negligible error.

3.3.2.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by

$$k_R = k + 10^{-2} bR \quad (7)$$

where

$$k = 1.9 f^{0.15} + 0.24 f^{0.4} (\tan^2 \Phi - \tan^2 37^\circ) \quad (8)$$

(see Figure 17)

In the LF band, $b = 0$. In the MF band, $b = 1$ for Europe and 0 elsewhere.

For paths shorter than 3,000 km :

$$\Phi = 0.5 (\Phi_T + \Phi_R) \quad (9)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure 18) at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole having the geographical coordinates, 78.5°N, 69°W. Φ_T and Φ_R are taken as positive in the northern hemisphere and negative in the southern hemisphere. Paths longer than 3,000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = 0.25 (3\Phi_T + \Phi_R) \text{ for the first half of the path and} \quad (10)$$

$$\Phi = 0.25 (\Phi_T + 3\Phi_R) \text{ for the second half.} \quad (11)$$

The values of k calculated from equation (8) for the two half-paths are then averaged and used in equation (7).

If $|\Phi| > 60^\circ$, equation (8) is evaluated for $\Phi = 60^\circ$.

3.3.4 Nocturnal variation of annual median field strength

3.3.4.1 Nocturnal variation of annual median field strength is given by :

$$F_t = F_c - L_t$$

Figure 19 shows the average of the annual median variations during the night, derived from Figure 8 of C.C.I.R. Report 264 (1974) and Figure 5 of C.C.I.R. Report 431 (1974) respectively; the time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the mid-path position for $d < 2,000$ km and, for longer paths, at 750 km from the terminal where the sun sets last or rises first.

3.3.4.2 The calculation of the interfering signal strength of a station is based on the method indicated in 3.3.4.1, for the lowest hourly loss factor during the common operating schedule of the wanted and interfering transmitters. The results may be extrapolated where necessary.

3.3.4.3 For daytime operation administrations by mutual agreement may use Figure 20 (for temperate zones) and Figure 21 (for the equatorial zone) as the basis of calculation; the sky-wave field strength, calculated at the reference time at the interfering station, is then reduced by 20 dB, or by 40 dB in the case of the dotted curve of Figure 21. Figures 20 and 21 refer to local mean time at the station site. This local mean time (LMT) is equal to Greenwich Mean Time plus or minus the number of hours and minutes corresponding to the longitude of the station.

3.3.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 8 dB greater in the LF band and 10 dB greater in the MF band than the values of F_o and F_t given above.

3.4 Sky-wave field-strength prediction method for the frequency range 525 to 1 605 kHz for the Asian part of Region 3, North of 11°S

3.4.1 Propagation curve

In the Asian area of the Region 3 situated to the North of 11°S the Cairo North-South propagation curve referred to the annual midnight median value should be used for sky-wave predictions. This curve appears in Figure 22. This curve refers to an e.m.r.p. of 1 kW or a c.m.f. of 300 V. The field F_o , in dB, is given by

$$F_o = F_c - L_p + V \quad (12)$$

3.4.2 Excess polarization coupling loss (L_p)

L_p is the excess polarization coupling loss. In the MF band at low latitudes for $|I| \leq 45^\circ$ the following formula applies for each terminal :

$$L_p = 180 (36 + \theta^2 + I^2)^{-\frac{1}{2}} - 2(\text{dB}) \quad (\text{see Figure 13}) \quad (13)$$

where I is the magnetic dip in degrees at the terminal and θ is the path azimuth measured in degrees from the magnetic E-W direction, such that $|\theta| \leq 90^\circ$. For $|I| > 45^\circ$, $L_p = 0$. L_p should be evaluated separately for the two terminals, because of the different θ and I that may apply, and the two L_p values added. The most accurate available values of magnetic dip and declination should be used in determining θ and I (see Figures 14 and 14).

3.4.3 Nocturnal variation of annual median field strength

3.4.3.1 The nocturnal variation of the annual median field strength is given by

$$F_t = F_o - L_t \quad (14)$$

In Figure 19, time t is the time in hours relative to the sunrise or sunset reference times as appropriate. These are taken at the ground at the midpath position for $d < 2\,000$ km and at 750 km from the terminal where the sun sets last or rises first for longer paths.

3.4.3.2 The calculation of the interfering signal strength of a station is based on the method indicated in 3.4.3.1 for the lowest hourly loss factor during the common operating schedule of the wanted and interfering transmitters. The results may be extrapolated where necessary.

3.4.3.3 For daytime operation administrations by mutual agreement may use Figure 20 (for temperate zones) and Figure 21 (for the Equatorial zone) as the basis of calculation; the sky-wave field strength, calculated at the reference time at the interfering station, is then reduced by 20 dB, or by 40 dB in the case of the dotted curve of Figure 21. Figures 20 and 21 refer to local mean time at the station site. This local mean time (LMT) is equal to Greenwich Mean Time plus or minus the number of hours and minutes corresponding to the longitude of the station.

3.4.4 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 10 dB greater in the MF band than the values of F_o and F_t given above.

3.5 Sky-wave field-strength prediction method for the frequency range 525 to 1 605 kHz for the part of Region 3, South of parallel 11°S

3.5.1 Symbols

See 3.2.

3.5.2 Introduction

See 3.3.1 with regard to the MF band.

3.5.3 Annual median night-time field strength

The predicted sky-wave field strength is given by

$$F_o = V + G_S - L_p + 108 - 20 \log_{10} p - 0.8 \times 10^{-3} k_{Rp}$$

where F_o = annual median of half-hourly median field strengths (dB relative to 1 μ V/m) at the reference time defined in 3.3.2.1.

3.5.3.1 Reference time

See 3.3.2.1.

3.5.3.2 Cymomotive force

See 3.3.2.2.

3.5.3.3 Sea gain

See 3.3.2.3 with regard to the MF band.

3.5.3.4 Excess polarization coupling loss

See 3.3.2.4 with regard to the MF band.

3.5.3.5 Slant propagation distance

See 3.3.2.5.

3.5.3.6 Loss factor due to absorption in the ionosphere

The loss factor due to absorption in the ionosphere k_R is given by :

$$k_R = k + 10^{-2} bR \quad (16)$$

where

$$k = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \phi - \tan^2 37^\circ) \quad (\text{see Figure 17}) \quad (17)$$

In the MF band, $b = 1$

For paths shorter than 3 000 km

$$\Phi = 0.5 (\Phi_T + \Phi_R) \quad (18)$$

where Φ_T and Φ_R are the geomagnetic latitudes (see Figure /18_7/) at the transmitter and receiver respectively, determined by assuming an earth-centred dipole field model with northern pole having the geographical coordinates, 78.5°N, 69°W. Φ_T and Φ_R are taken as negative in the southern hemisphere. Paths longer than 3 000 km are divided into two equal sections which are considered separately. The value of Φ for each half-path is derived by taking the average of the geomagnetic latitudes at one terminal and at the mid-point of the whole path, the geomagnetic latitude at the mid-point of the whole path being assumed to be the average of Φ_T and Φ_R . As a consequence :

$$\Phi = 0.25 (3\Phi_T + \Phi_R) \quad (19)$$

for the first half of the path and

$$\Phi = 0.25 (\Phi_T + 3\Phi_R) \quad (20)$$

for the second half. The values of k calculated from equation (17) for the two half-paths are then averaged and used in equation (16).

If $|\Phi| > 60^\circ$, equation (17) is evaluated for $\Phi = 60^\circ$.

3.5.4 Nocturnal variation of annual median field strength

See 3.3.4.

3.5.5 Day-to-day and short-period variations of field strength

The field strength exceeded for 10% of the total time on a limited series of nights, during short periods centred on a specific hour is 7 dB greater in the MF band than the values of F_o and F_t given in 3.3.4.

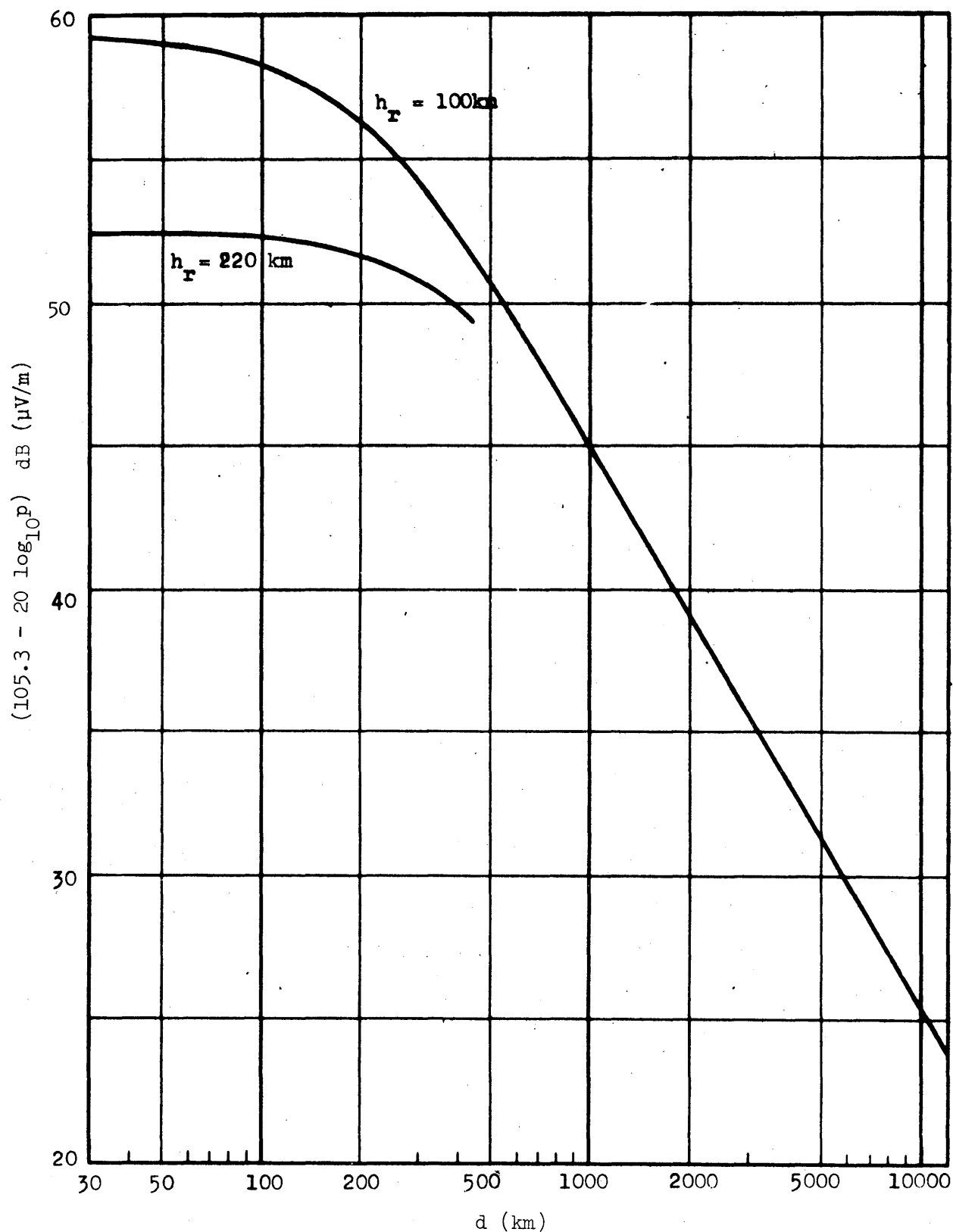
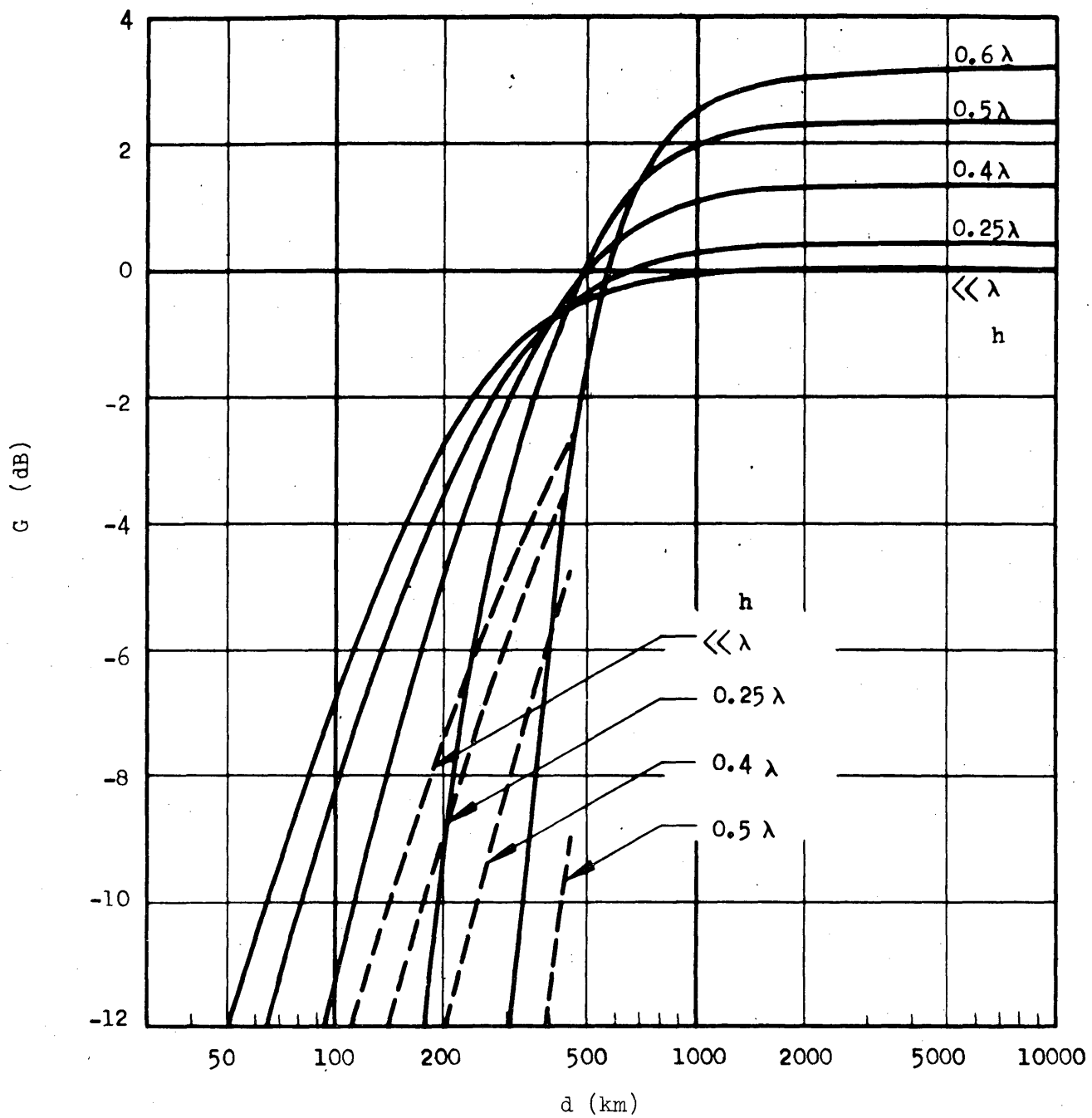


FIGURE 10

Basic field strength

Value of $(105.3 - 20 \log_{10} p)$ as a function of d
 where $p = (d^2 + 4h_r^2)^{\frac{1}{2}}$



— E layer reflection ($h_r = 100$ km)
 - - - F layer reflection ($h_r = 220$ km)

FIGURE 11

Transmitting antenna gain for
 a simple vertical antenna

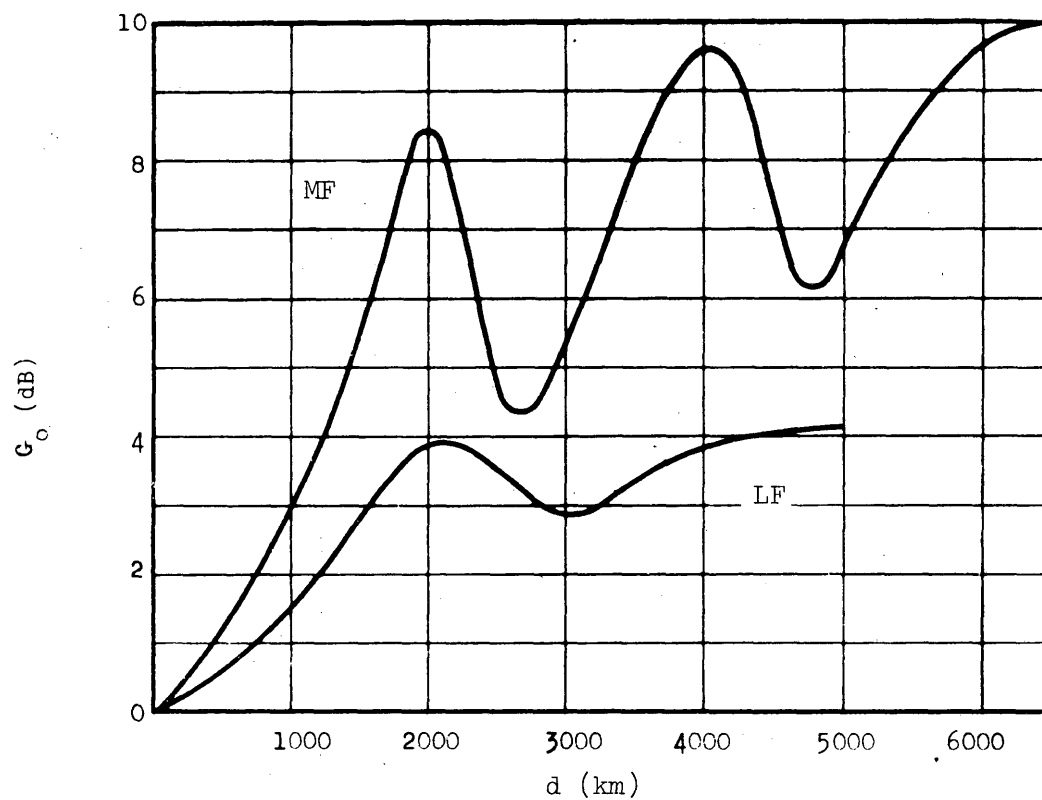


FIGURE 12

Sea gain for a single terminal on the coast

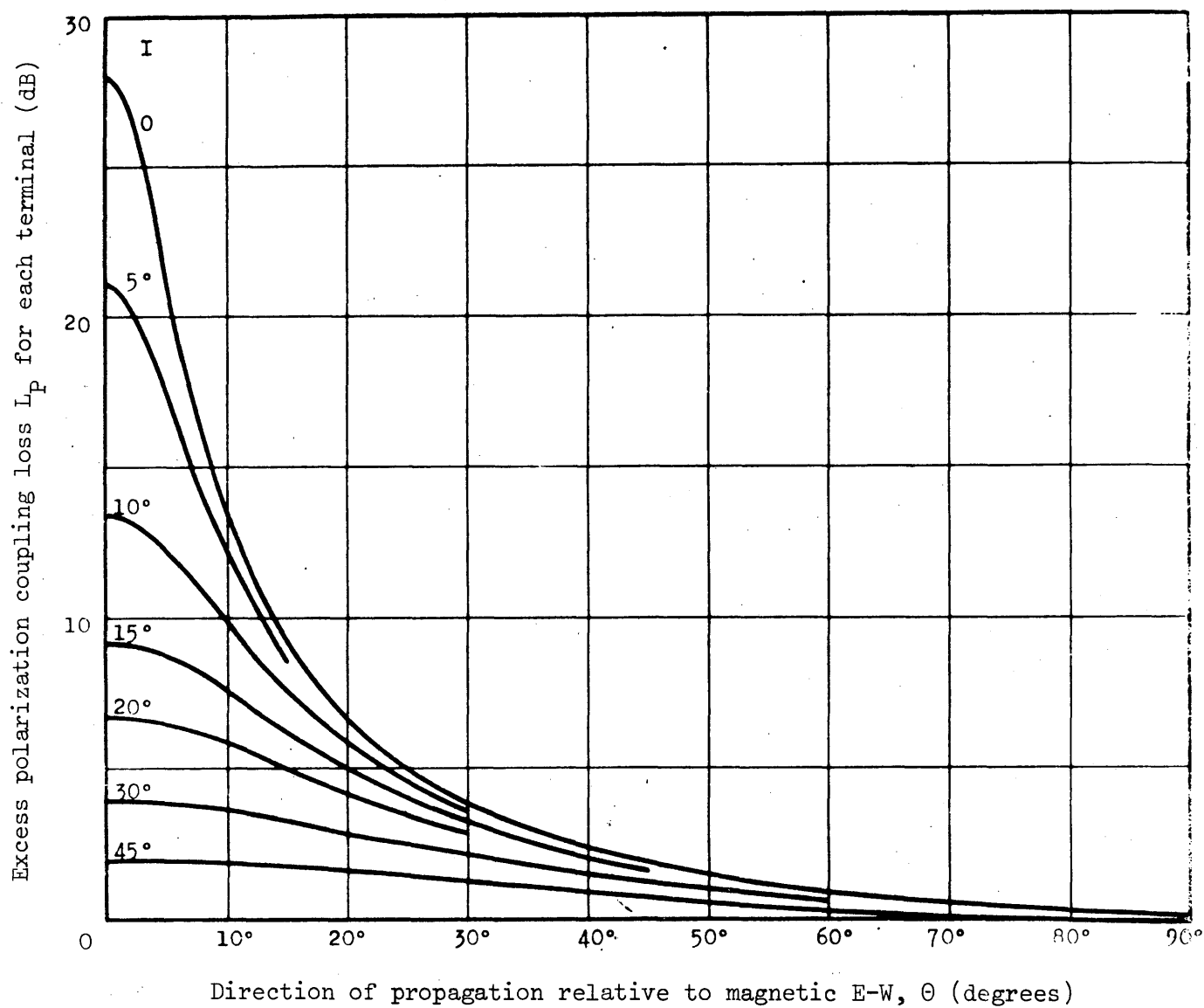


FIGURE 13

Excess polarization coupling loss

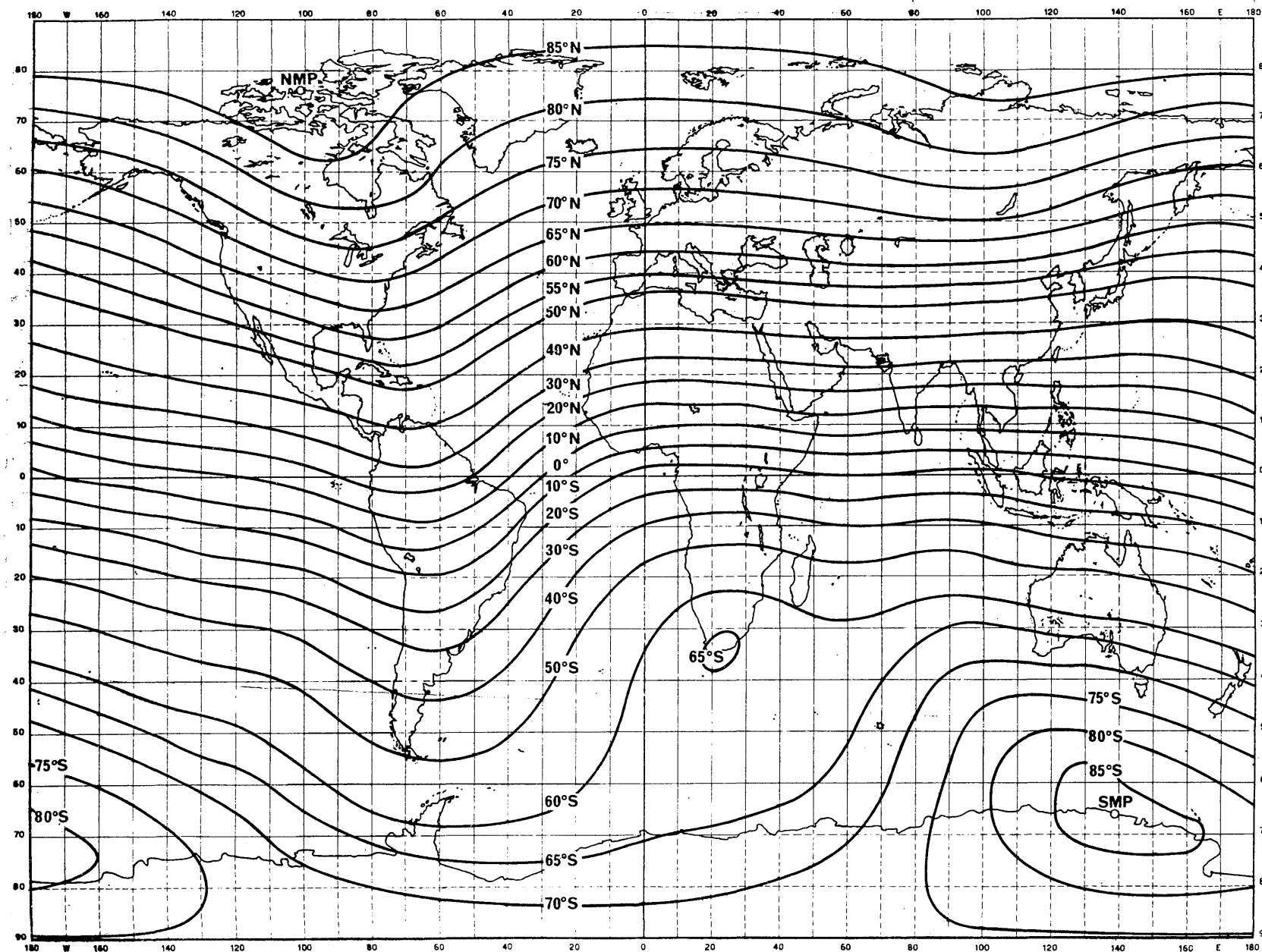


FIGURE 14 - FIGURA 14

Carte de l'inclinaison magnétique - Map of magnetic dip - Mapa de la inclinación magnética

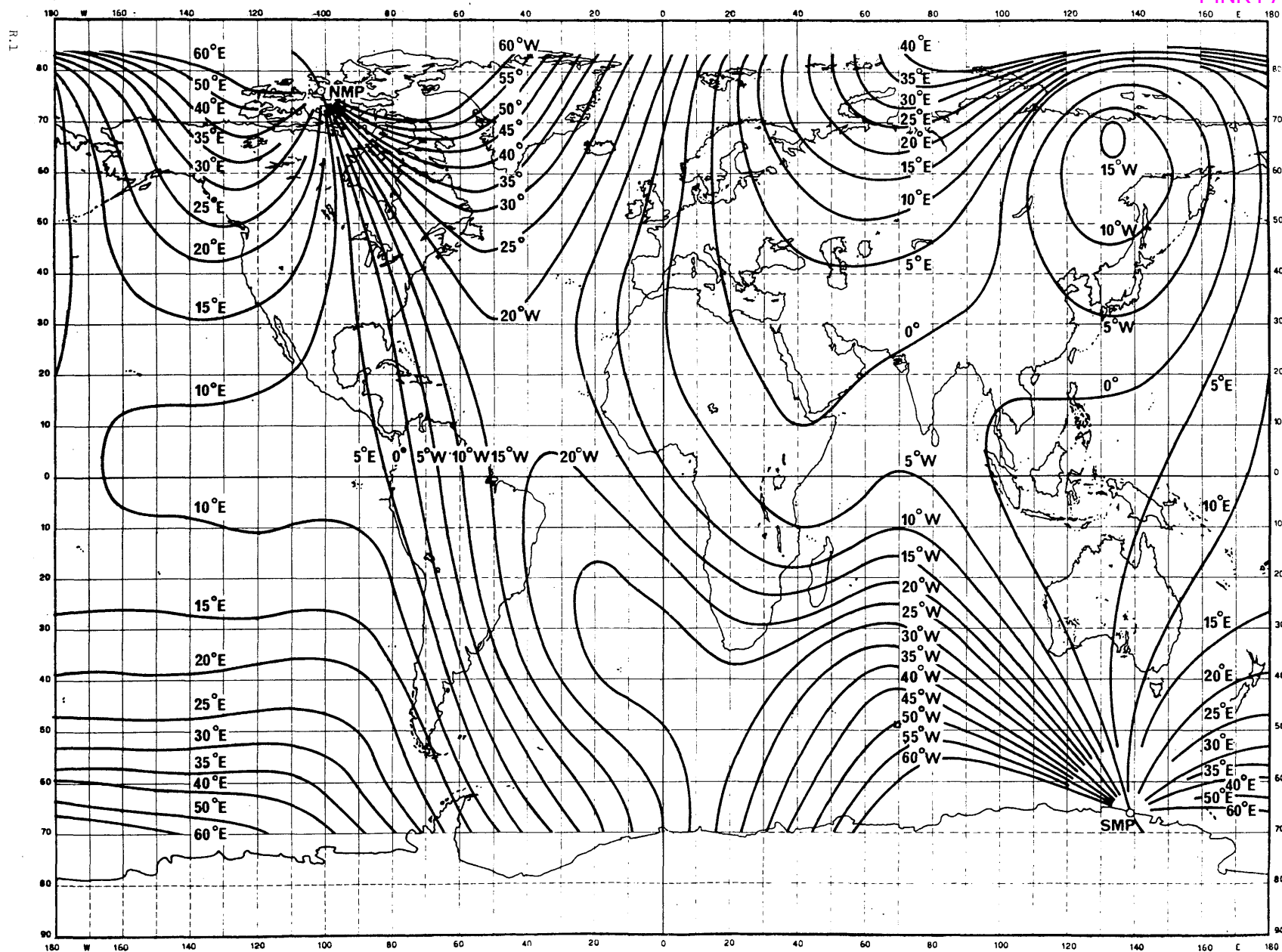


FIGURE 15 - FIGURA 15

Carte de déclinaison magnétique - Map of magnetic declination - Mapa de la declinación magnética

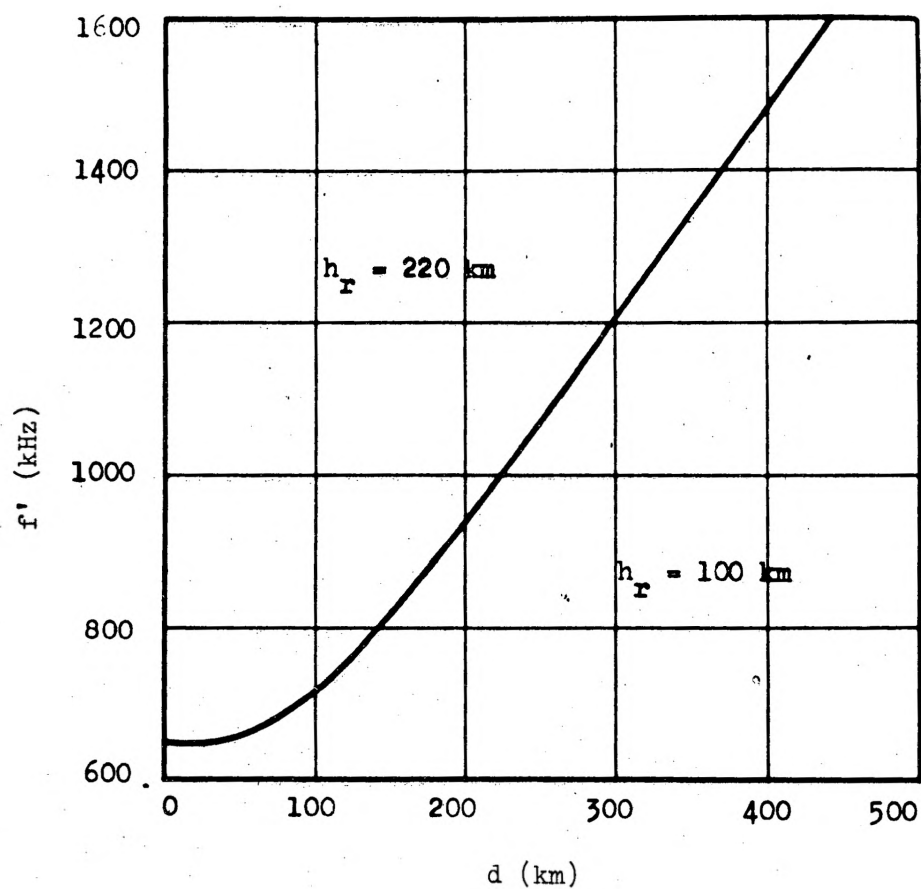


FIGURE 16

Frequency defined in equation (6)

$$f' = 350 + \sqrt[3]{(2.8 d)^3 + 300^3}^{\frac{1}{3}}$$

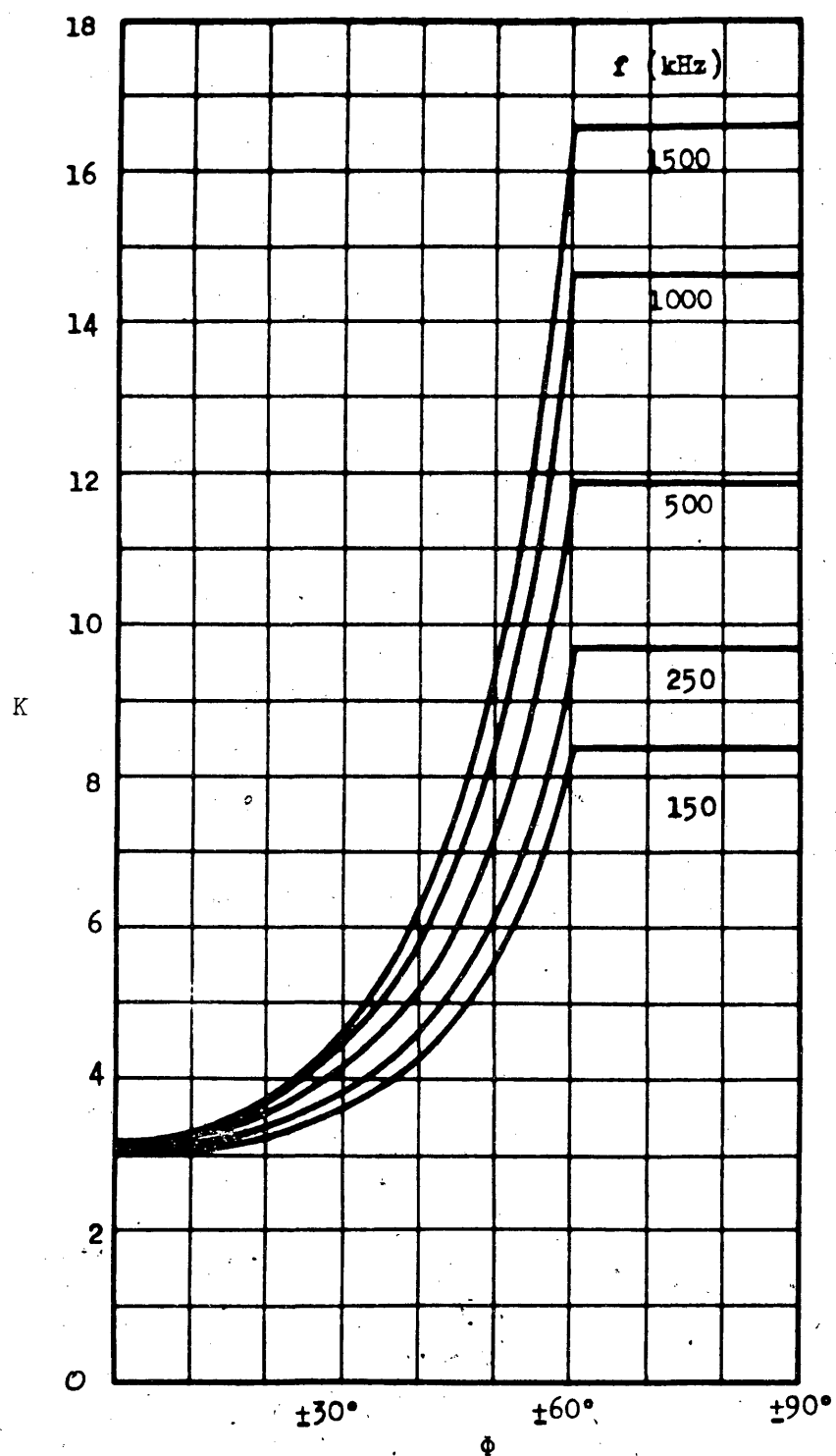


FIGURE 17

Basic loss factor due to ionospheric absorption

$$K = 1.9f^{0.15} + 0.24f^{0.4} (\tan^2 \Phi - \tan^2 37^\circ)$$

$$(0 \leq |\Phi| \leq 60^\circ)$$

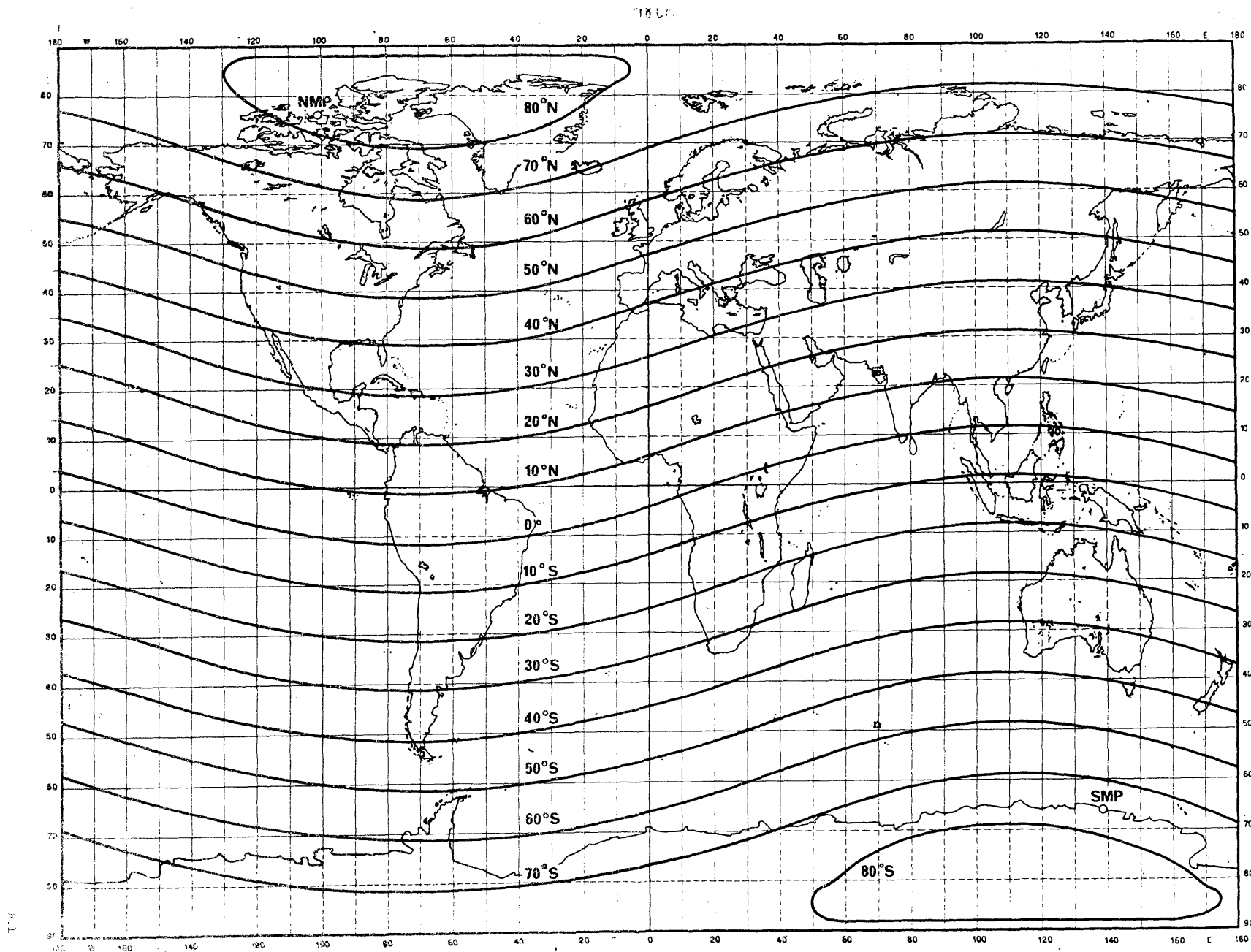


FIGURE 18 - FIGURA 18

Carte des latitudes géomagnétiques - Geomagnetic latitude map - Mapa de latitudes geomagnéticas

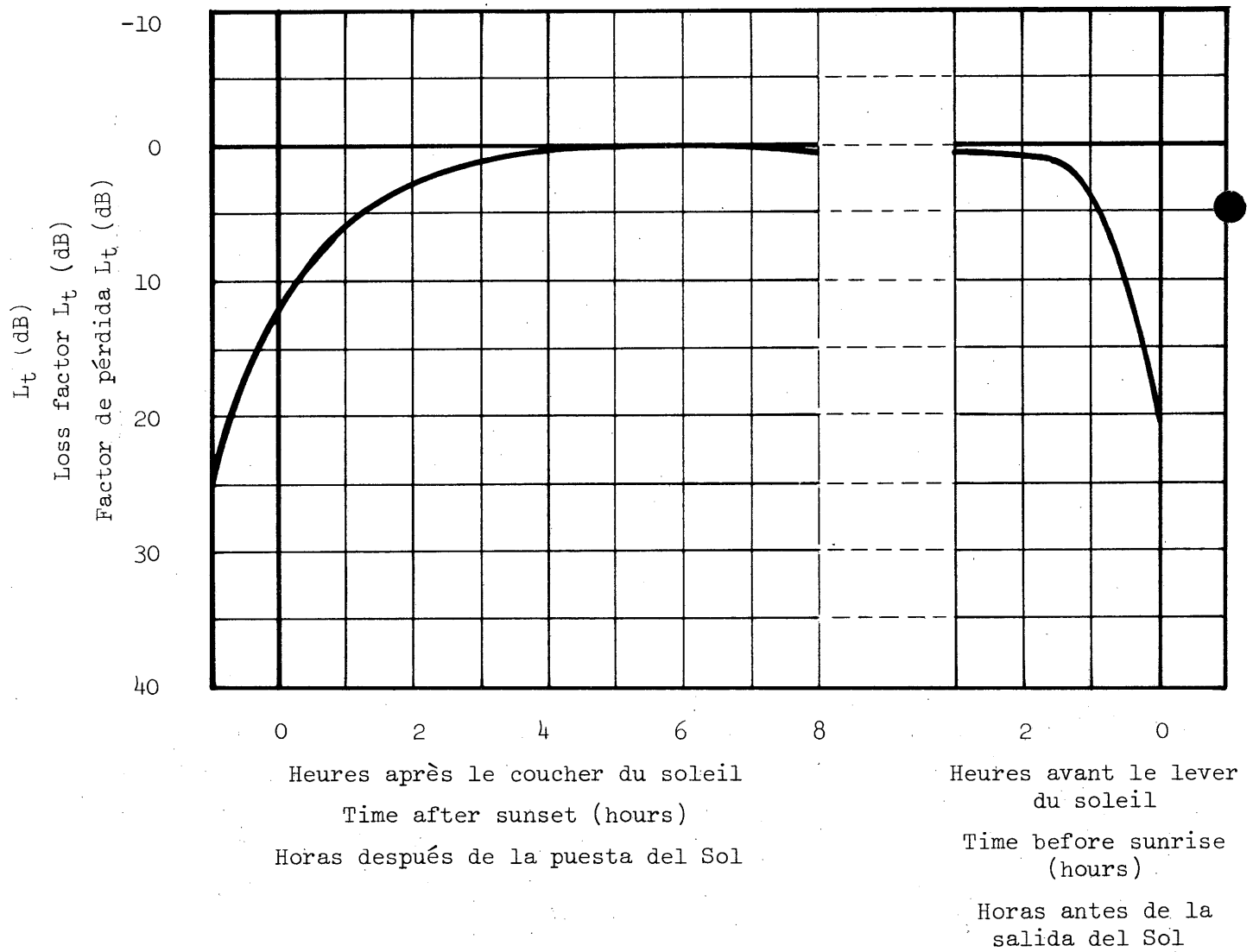


FIGURE 19 - FIGURA 19

Coefficient d'affaiblissement horaire
(entre le coucher et le lever du soleil)

Diurnal loss factor (L_t)

Factor de pérdida diurna (L_t)

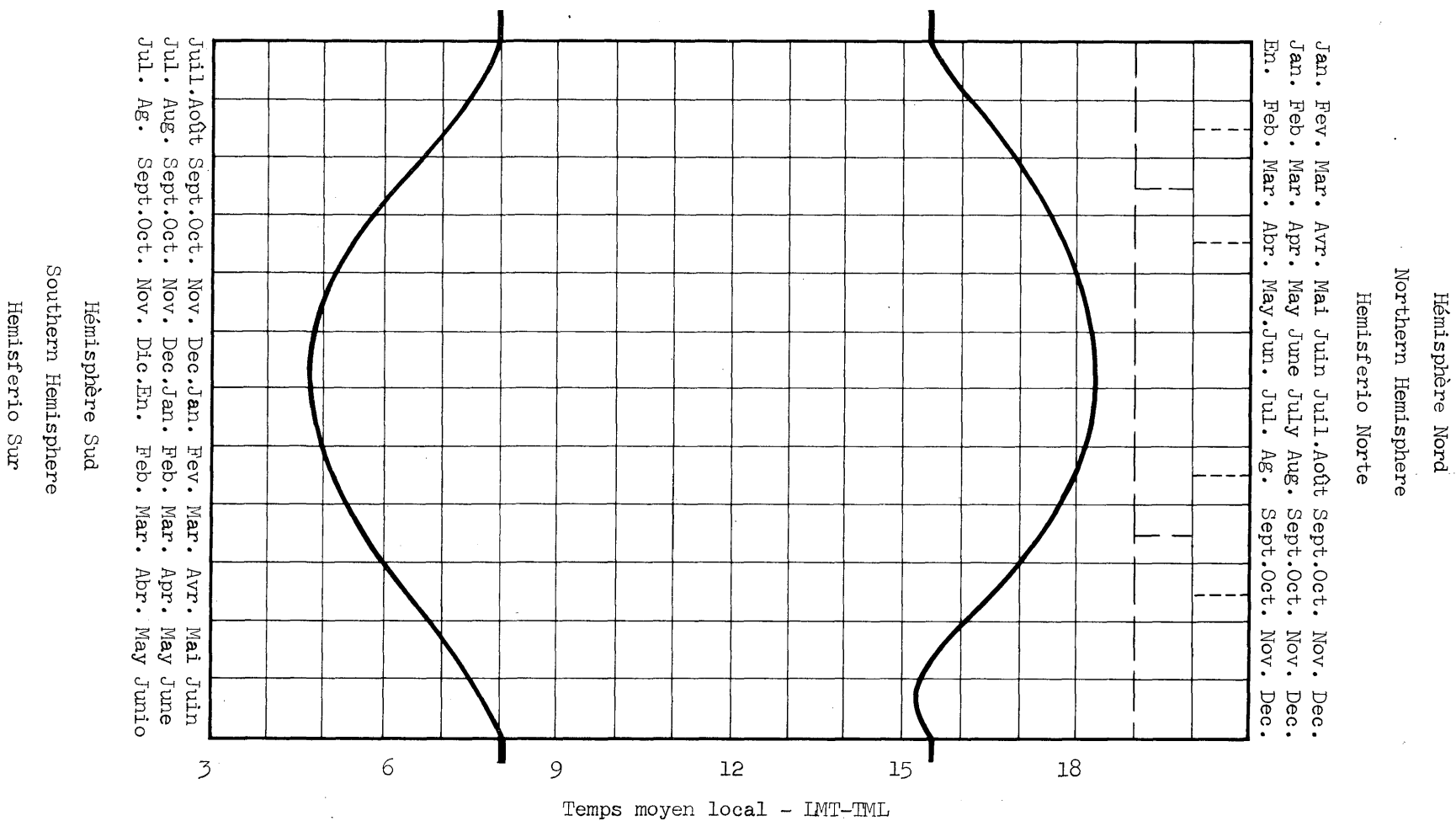


FIGURE 20 - FIGURA 20

Limites de fonctionnement de jour aux latitudes tempérées (30° - 60°)
Limits of daytime operation at temperate latitudes (30° - 60°)
Límites del funcionamiento diurno en latitudes templadas (30° - 60°)

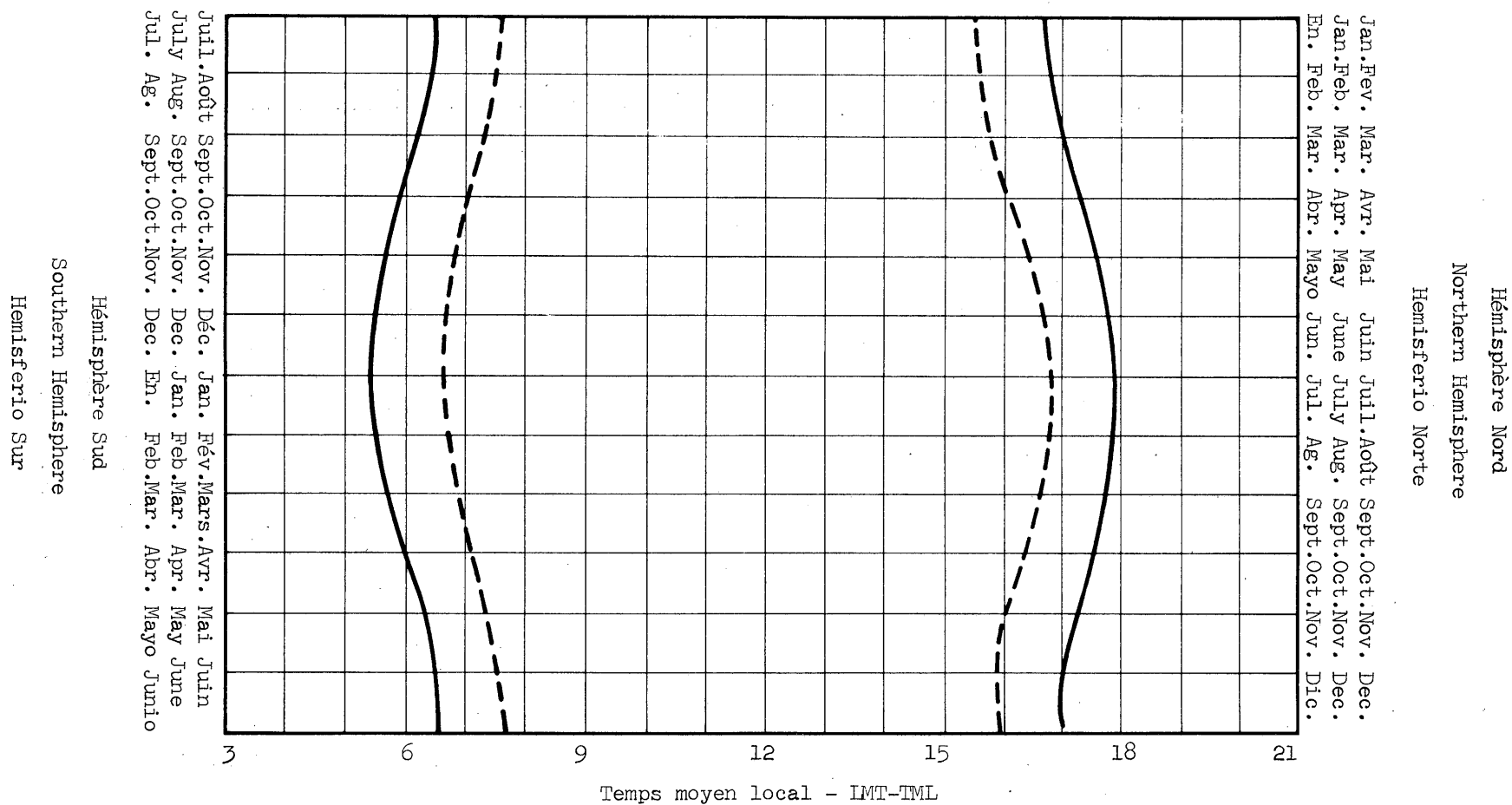


FIGURE 21 - FIGURA 21

Limites de fonctionnement de jour aux latitudes équatoriales (0° - 30°)

Limits of daytime operation at the equatorial latitudes (0° - 30°)

Límites de las horas diurnas en latitudes ecuatoriales (0° - 30°)

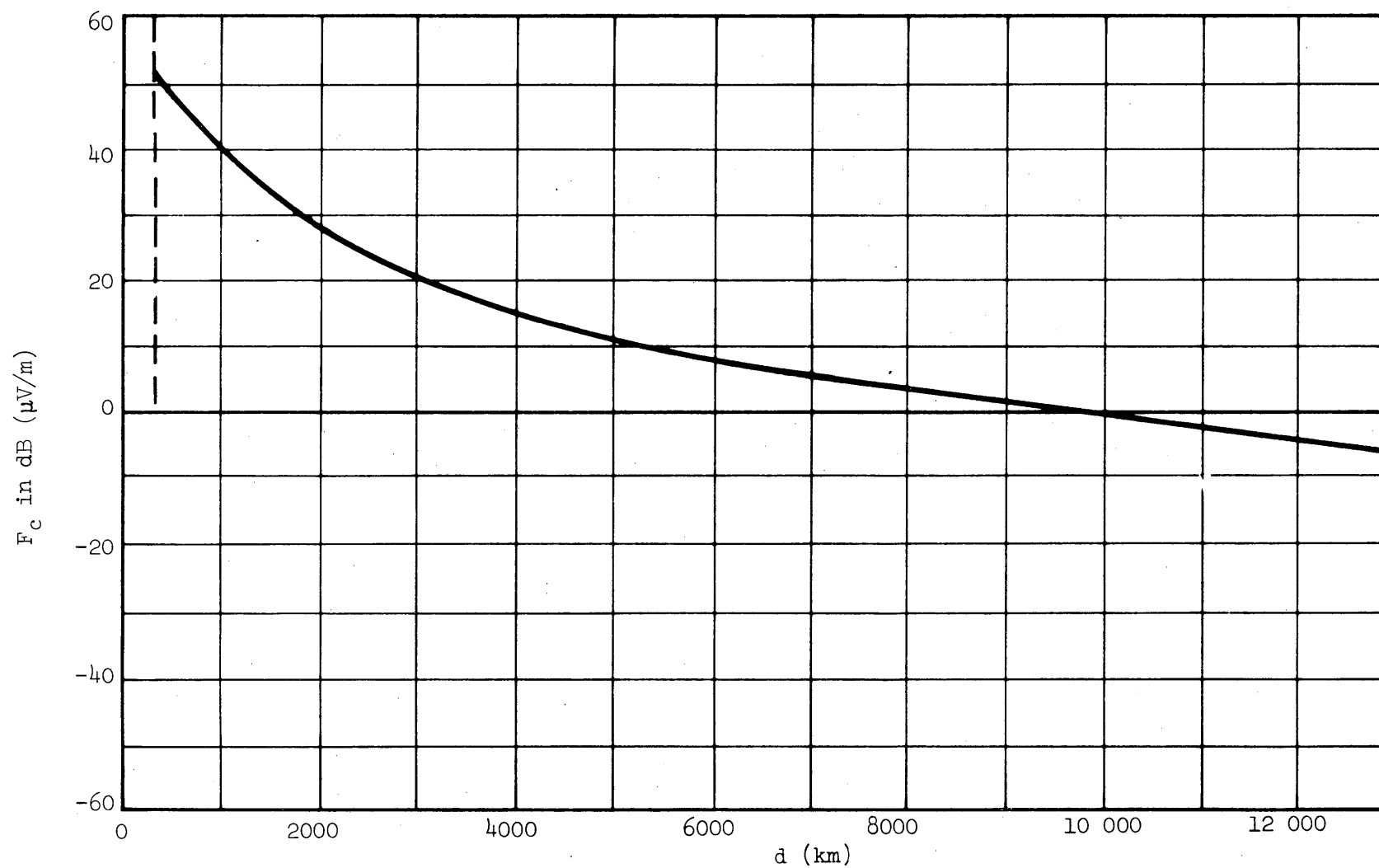


FIGURE 22

Annual midnight median value of sky-wave field strength of Cairo North/South curve

CHAPTER 4

BROADCASTING STANDARDS

4.1 Class of emission

The Plan is established for a system with double sideband amplitude modulation with full carrier (A3).

4.2 Power

The power of a transmitter is the carrier power in the absence of modulation.

4.3 Radiated power

[Pending]

4.4 Protection ratios

In applying the Agreement, the values of the co-channel and adjacent channel protection ratios given below, should be used unless otherwise agreed between the administrations concerned.

In the case of fluctuating wanted or unwanted signals, the values of the protection ratio apply for at least 50% of the nights of the year at midnight.

4.4.1 Co-channel protection ratios

30 dB for a stable wanted signal interfered with by a stable or fluctuating signal,

27 dB for a fluctuating wanted signal interfered with by a stable or fluctuating signal,

8 dB for a wanted signal interfered with by a signal from a transmitter in the same synchronized network.

4.4.2 Adjacent channel protection ratio

4.4.2.1 For a stable wanted signal the adjacent channel protection ratio in different cases is given below :

Case A : 9 dB when a limited degree of modulation compression is applied at the transmitter input, such as in good quality transmissions, and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

Case B : 7 dB when a high degree of modulation compression (at least 10 dB greater than in the preceding case) is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 10 kHz;

Case C : 5 dB when a limited degree of modulation compression is applied and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz;

Case D : 0 dB when a high degree of modulation compression is applied by means of an automatic device and when the bandwidth of the audio-frequency modulating signal is of the order of 4.5 kHz.

The above figures are valid when the same compression is applied to the wanted and unwanted emissions.

When two stations operating in adjacent channels use different bandwidths or different degrees of compression the higher of the two corresponding protection ratios shall be used, unless the two administrations concerned agree each to use the ratio corresponding to the interfering signal.

4.4.2.2 For a fluctuating wanted signal the adjacent channel protection ratio values mentioned in paragraph 4.4.2.1 shall be reduced by 3 dB.

4.5 Minimum value of field strength

4.5.1 The following minimum values of field strength necessary to overcome natural noise (at 1 MHz) in the three zones A, B and C have been adopted :

Zone A : + 60 dB/1 μ Vm

Zone B : + 70 dB/1 μ Vm

Zone C : + 63 dB/1 μ Vm

4.5.2 Zones A, B and C in Regions 1 and 3 shown in Figure 23 are delineated as follows :

4.5.2.1 The dividing line between zones A and B begins at the point of intersection of parallel 20°N with the western border of Region 1 (No. 126 of the Radio Regulations, 1959). Thence it follows the parallel 20°N up to the point of intersection with meridian 20°E ; thence by great circle arc to the intersection of meridian 44°E with the Equator; thence it follows the Equator up to the intersection with meridian 80°E ; thence by great circle arc to the point with coordinates 100°E , 20°N ; thence it follows the parallel 20°N up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations, 1959). The territory of the Islamic Republic of Mauritania lies entirely in zone A.

4.5.2.2 The dividing line between zones B and C begins at the point of intersection of parallel 6°S with the western border of Region 1 (No. 126 of the Radio Regulations, 1959); thence it follows the parallel 6°S up to the point of intersection with meridian 20°E ; thence by great circle arc to the point with coordinates 46°E , 26°S ; thence by great circle arc up to the point with coordinates 80°E , 20°S ; thence it follows the parallel 20°S up to the point of intersection with the eastern border of Region 3 (No. 128 of the Radio Regulations, 1959).

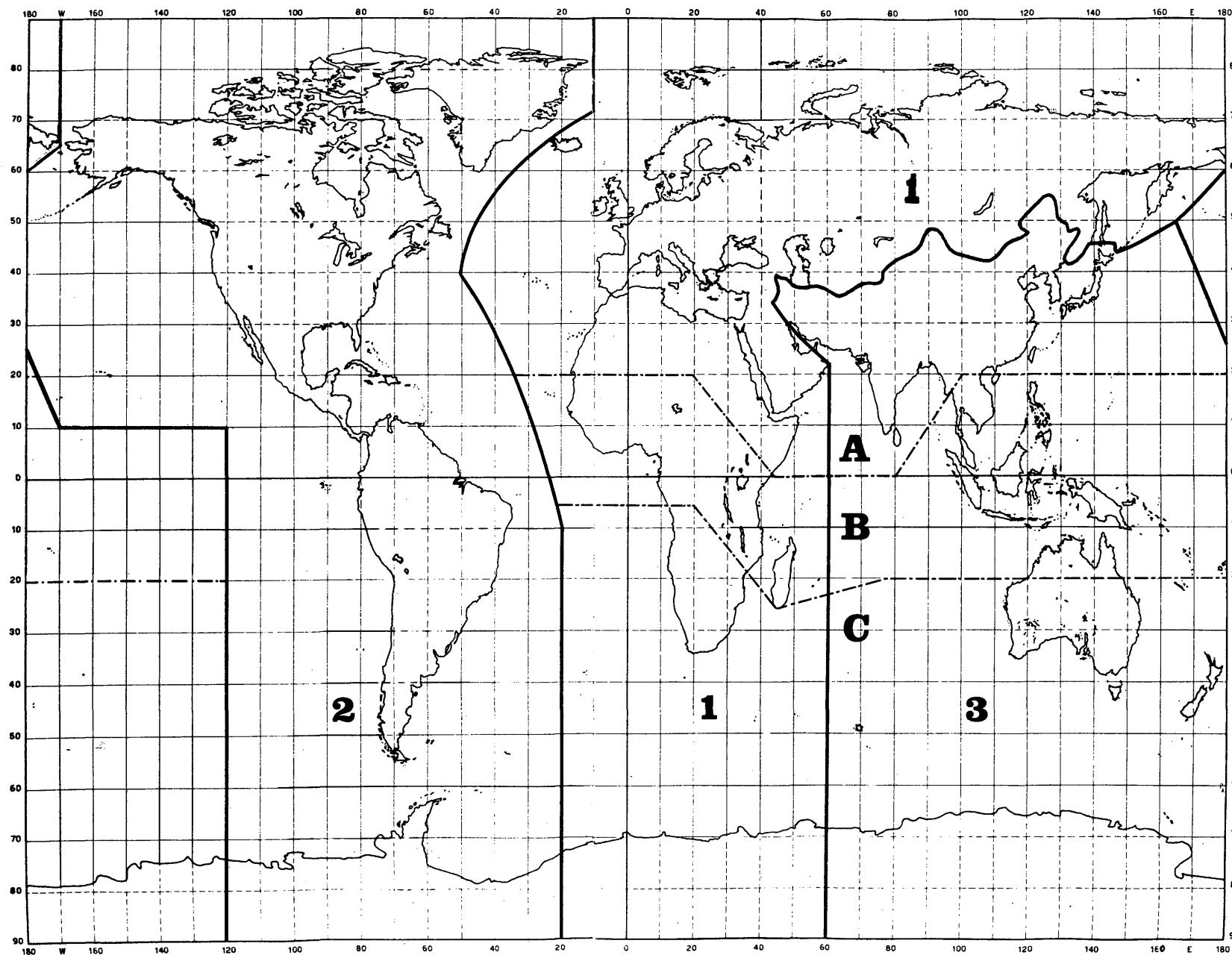


FIGURE 23 - FIGURA 23

Carte indiquant les limites des zones A, B et C dans les Régions 1 et 3

Map showing boundaries of Zones A, B and C in Regions 1 and 3

Mapa de las zonas A, B y C en las Regiones 1 y 3

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4.6 Nominal usable field strength

The nominal usable field strength values are shown in the following table in dB relative to $1\mu\text{V/m}$.

	ZONE A	ZONE B	ZONE C
A. <u>MF.</u>			
Daytime ground-wave service	63	73	66
Night ground-wave service*)			
- rural areas**)	71	81	74
- urban areas	77	87	80
Low-power channels	88	88	88
B. <u>LF.***)</u>	77	87	80

*) Where the transmitter power is sufficiently high for the ground wave service area to be limited by fading due to the sky wave of the same transmitter, a nominal usable field strength greater than the value given in the table may be chosen. It should not, however, be greater than the ground-wave field strength at the beginning of the fading zone. The fading zone may be defined by taking the protection ratio between the ground-wave and the sky wave to be equal to the internal protection ratio applicable to a synchronized network, i.e. 8 dB.

**) Some delegations consider a nominal usable field strength of 65 dB rel. $1\mu\text{V/m}$ to be suitable for rural areas in their countries.

***) Certain delegations consider a value of E_{nom} of the order of 73 dB rel. $1\mu\text{V/m}$ to be appropriate in non-tropical rural areas.

4.7 Usable field strength

In the presence of a group of transmitters the usable field strength is expressed by

$$E_u = \sqrt{\sum_i (a_i E_{ni})^2 + E_{\min}^2}$$

where

E_{ni} is the field strength of the i -th unwanted transmitter (in $\mu\text{V/m}$)

E_{\min} is the minimum usable field strength at the frequency in question (in $\mu\text{V/m}$) (see C.C.I.R. Recommendation 499, 1974)

a_i is the radio-frequency protection ratio associated with the i -th unwanted transmitter, expressed as a numerical ratio of field strengths.

In the absence of data on man-made noise, the minimum field strength, E_{\min} , can be calculated by correcting the minimum value given in 4.5.1 from the curve in Figure 24, which shows the variation Δa of that value with the frequency.

4.8 Low-power channels

4.8.1 The e.m.r.p. is limited in all cases to 1 kW. However, since the antennae used with low-power transmitters can have substantial losses, the nominal carrier power of the transmitters in these channels may be higher than 1 kW but should in no case exceed 3 kW.

4.8.2 The resultant field strength of a low-power transmitter network at the boundary of the territory of any other country should not exceed 0.5 mV/m, except by agreement between the administrations concerned. Where countries are separated by stretches of sea, the 0.5 mV/m field strength shall, in principle, not be exceeded at the mid-point of the over-sea path, unless the administrations concerned conclude other arrangements.

4.8.3 The resultant field strength in mV/m is calculated according to the formula

$$\sqrt{E_1^2 + E_2^2 + E_3^2 + \dots}$$

where E_1, E_2, E_3, \dots are the values in mV/m of field strength due to each individual transmitter in a country operating in a given low-power channel. These values are determined with the aid of Figure 25 and only stations within 500 km of the border of a neighbouring country or of the mid-point of an over-sea path will be included in the calculation.

4.8.4 In the application of Article 4 (...) of the Agreement, the table reproduced below will be used :

c.m.f. (V)	e.m.r.p. (kW)	Limiting distance (km)
300	1.0	600
260	0.75	500
212	0.5	400
150	0.25	200, 300*)
95	0.1	70, 250*)
67	0.05	50, 200*)

*) Values for a propagation path over sea.

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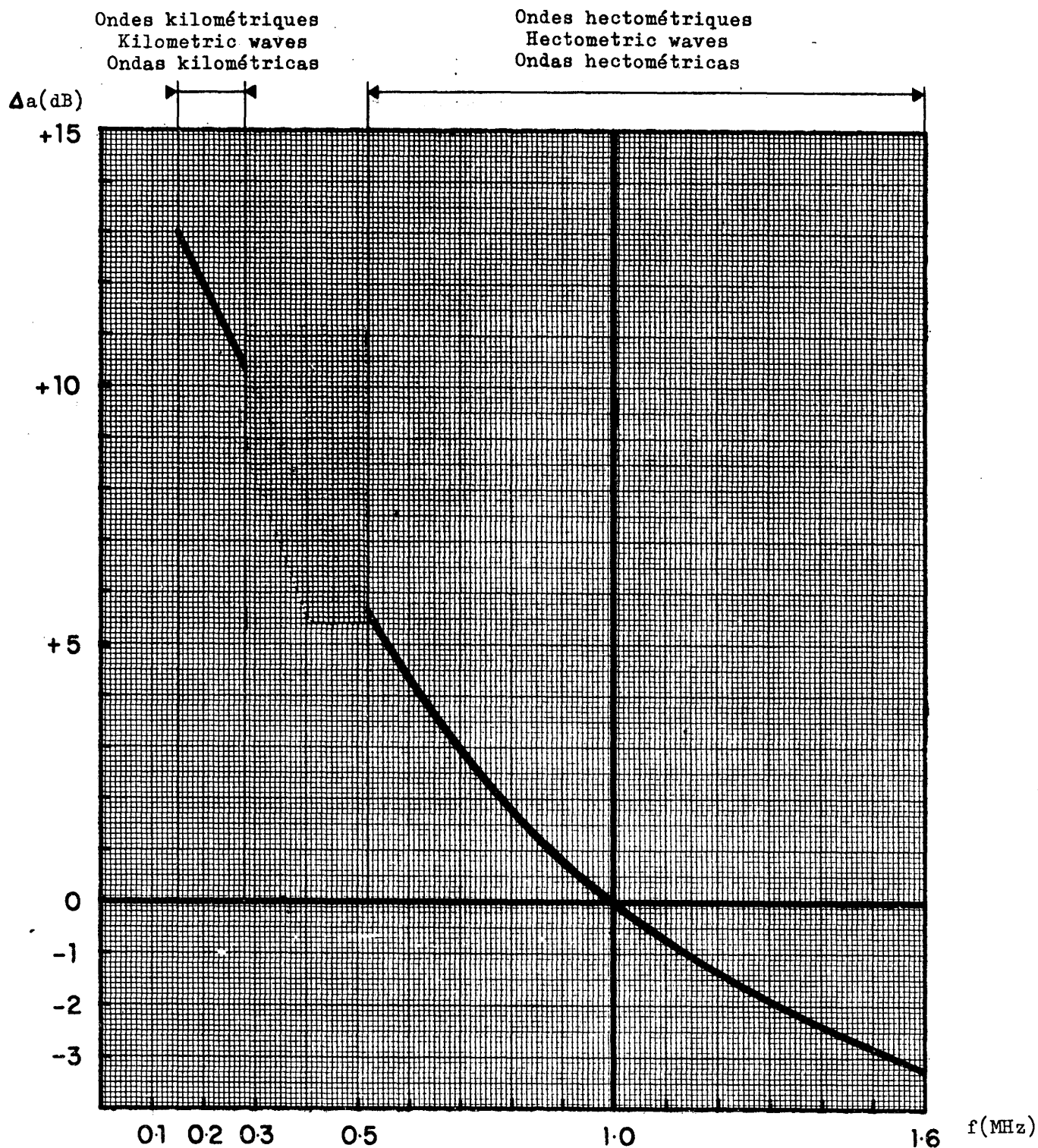


FIGURE 24 - FIGURA 24

Variation de la valeur minimale du champ en fonction de la fréquence

Variation of minimum value of field strength with frequency

Variación del valor mínimo de la intensidad de campo en función de la frecuencia

COURBES POUR LA PLANIFICATION DES CANAUX POUR EMETTEURS DE FAIBLE PUISSANCE ($f = 1,5 \text{ MHz}$)

CURVES FOR PLANNING LOW-POWER CHANNELS ($f = 1.5 \text{ MHz}$)

CURVAS PARA LA PLANIFICACIÓN DE CANALES DE BAJA POTENCIA ($f = 1,5 \text{ MHz}$)

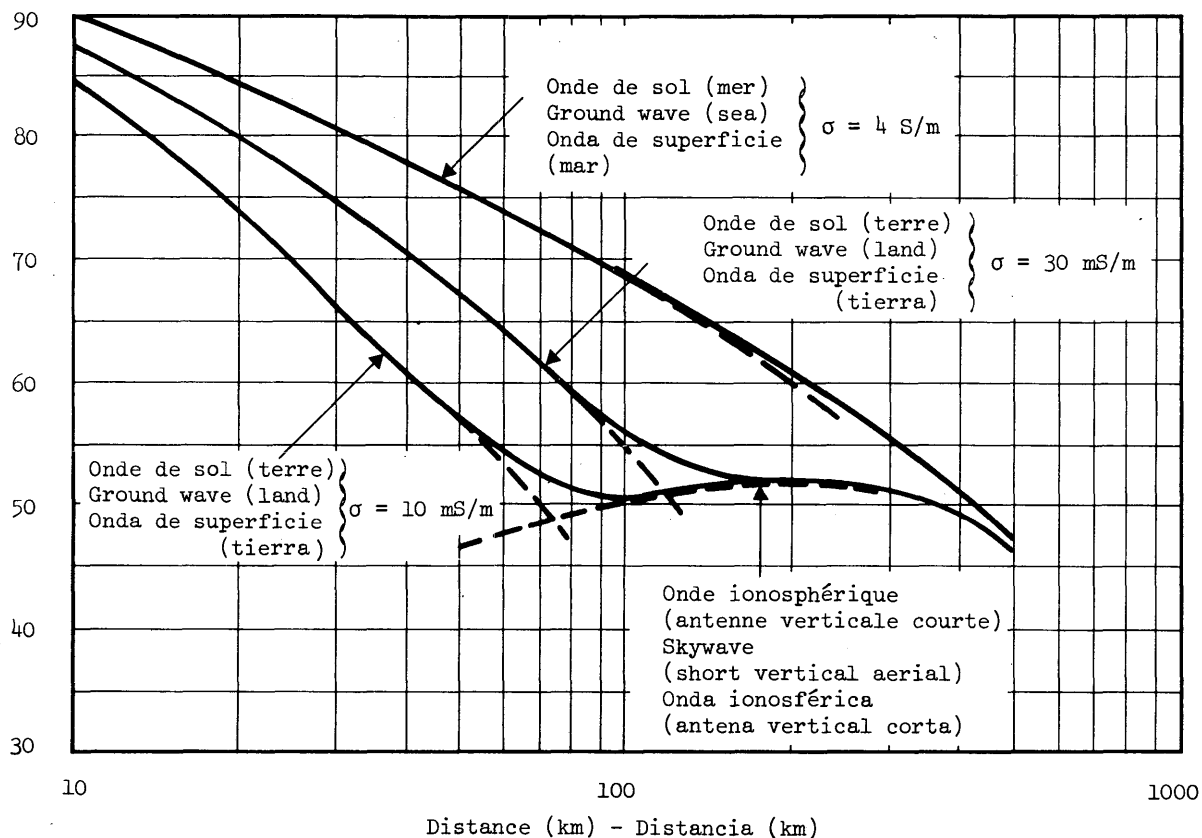


FIGURE 25 - FIGURA 25

Champ en dB ($\mu\text{V/m}$) pour une p.a.r.v. de 1 kW ou une f.c.m. de 300 V, dans le plan horizontal

Field strength dB ($\mu\text{V/m}$) for an e.m.r.p. of 1 kW or a c.m.f. of 300 V, in the horizontal plane

Intensidad de campo en dB ($\mu\text{V/m}$) con relación a 1 kW de p.r.a.v. (f.c.m. = 300 V) en el plano horizontal

/ 4.9 Transmitter siting of tolerances /

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 181-E

15 November 1975

Original : French

PLENARY MEETING

Saudi Arabia, Bangladesh, Cyprus, Ivory Coast, Egypt, United Arab Emirates,
Ethiopia, Gabon, Guinea, Indonesia, Kuwait, Libya, Malaysia, Morocco, Qatar,
Senegal, Sudan, Syria, Chad, Tunisia, Yugoslavia, Zaire and Zambia

DRAFT RECOMMENDATION

concerning improvements to the Plan

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

noting

that the Conference has not produced satisfactory results for all countries because of the excessive number of frequency requirements submitted;

considering

that it has as a result not been possible to make provision for the justified requirements of certain countries, in particular the developing countries and countries in special situations, in line with the criteria adopted at the first and second sessions of the Conference,

recommends

- a) that administrations should continue with bilateral and multilateral negotiations after the Conference with a view to improving the situation of services in the LF and MF bands, particularly by means of mutual concessions and commonly agreed reductions in the number of assignments recorded in the Plan for regions with very high levels of harmful interference;
- b) that, with this aim in view, the I.T.U. should grant the necessary assistance to administrations which so request, in accordance with the provisions of the Convention.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 182-E

15 November 1975

Original : English

PLENARY MEETING

REPORT BY COMMITTEE 2

(CREDENTIALS)

1. Terms of reference

The terms of reference of the Committee are laid down in Conference Document No. 30.

2. Meetings held

The following meetings were held :

- on 13 October 1975; at that meeting a Working Group was set up. The task of this Working Group was to examine in detail the credentials submitted and to report thereon to the Committee. Under the chairmanship of Mr. D.S. Variyan (Malaysia), Vice-Chairman of the Committee, it met three times. It was attended by delegates from the following countries : Australia, Bulgaria, Japan, Kenya, Norway and Switzerland;
- on 15 November 1975; the conclusions of the Working Groups (see Documents Nos. 55, 134 and 161) were adopted.

3. Conclusions

The Committee reached the conclusions shown in the Annex to the present report and it recommends that these conclusions be adopted by the Plenary Meeting.

4. Final remark

The Committee also recommends that the Chairman of the Committee (or the Vice-Chairman as the case may be) be authorized to examine the credentials deposited after the drawing up of the present report and before the end of the last Plenary Meeting of the Conference, and to report thereon direct to the Plenary Meeting.



D. S. VARIYAN
Vice-Chairman of Committee 2

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A N N E X

1. Delegations of countries which have signed the Convention or which have acceded thereto

1.1 Credentials which have been found in order :

Afghanistan (Republic of)	Iran
Algeria (Algerian Democratic and Popular Republic)	Ireland
Germany (Federal Republic of)	Iceland
Saudi Arabia (Kingdom of)	Israel (State of)
Australia	Italy
Austria	Japan
Bangladesh (People's Republic of)	Jordan (Hashemite Kingdom of)
Belgium	Kenya (Republic of)
Byelorussian Soviet Socialist Republic	Kuwait (State of)
Botswana (Republic of)	Lesotho (Kingdom of)
Bulgaria (People's Republic of)	Liberia (Republic of)
Burundi (Republic of)	Libyan Arab Republic
Cameroon (United Republic of)	Liechtenstein (Principality of)
Central African Republic	Luxembourg
China (People's Republic of)	Malaysia
Cyprus (Republic of)	Malawi
Vatican City State	Malagasy Republic
Congo (People's Republic of the)	Mali (Republic of)
Korea (Republic of)	Malta (Republic of)
Ivory Coast (Republic of the)	Morocco (Kingdom of)
Dahomey (Republic of)	Mauritius
Denmark	Mauritania (Islamic Republic of)
Egypt (Arab Republic of)	Monaco
United Arab Emirates	Mongolian People's Republic
Spain	Mozambique (People's Republic of)
Ethiopia	Nepal
Fiji	Niger (Republic of the)
Finland	Nigeria (Federal Republic of)
France	Norway
Gabon Republic	New Zealand
Gambia (Republic of the)	Oman (Sultanate of)
Ghana	Uganda (Republic of)
Greece	Pakistan
Guinea (Republic of)	Papua New Guinea
Upper Volta (Republic of)	Netherlands (Kingdom of the)
Hungarian People's Republic	Philippines (Republic of the)
India (Republic of)	Poland (People's Republic of)
Indonesia (Republic of)	Portugal
	Qatar (State of)

German Democratic Republic	Czechoslovak Socialist Republic
Ukrainian Soviet Socialist Republic	Thailand
Roumania (Socialist Republic of)	Togolese Republic
United Kingdom of Great Britain and Northern Ireland	Tunisia
Senegal (Republic of the)	Turkey
Singapore (Republic of)	Union of Soviet Socialist Republics
Sudan (Democratic Republic of the)	Yemen Arab Republic
Sri Lanka (Ceylon) (Republic of)	Yemen (People's Democratic Republic of)
Sweden	Yugoslavia (Socialist Federal Republic of)
Switzerland (Confederation of)	Zaire (Republic of)
Tanzania (United Republic of)	Zambia (Republic of)
Chad (Republic of the)	

These delegations can vote, they can sign the Final Acts of the Conference (Convention No. 367)

1.2 Provisional credentials have been deposited. The Committee recommends to the Plenary Meeting that they be adopted.

Lebanon

This delegation can vote; it cannot sign the Final Acts of the Conference. (The right to sign will be restored when credentials have been deposited and when the Plenary Meeting has approved them) (Convention No. 369)

2. Delegations of countries which have not signed the Convention and which have not acceded thereto (see Document No. 16(Rev.4))

2.1 Credentials have been found in order :

Albania (People's Republic of)
Syrian Arab Republic

These delegations cannot vote (see Document No. 16(Rev.3)); they can sign the Final Acts of the Conference

2.2 Credentials have not been deposited by the following delegation :

Nauru (Republic of)

This delegation cannot vote; it cannot sign the Final Acts of the Conference (Convention No. 359)

2.3 Transfer of powers (Convention No. 370)

From Tonga (Kingdom of) to New Zealand

This transfer has not been confirmed by an instrument signed by an appropriate authority.

New Zealand cannot vote on behalf of Tonga; it cannot sign the Final Acts on behalf of Tonga.

Note : By telegram dated 14 November, 1975 the Minister of Foreign Affairs confirms this transfer.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 183-E
16 November 1975

PLENARY MEETING

R.2

2nd SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for second reading :

Recommendation CC

Relating to the Convening of a Conference competent to revise the
Regional Agreement concerning the Use by the Broadcasting Service
of Frequencies in the Medium Frequency Bands in Regions 1 and 3
and in the Low Frequency Bands in Region 1

Recommendation DD

Relating to the Sharing of the LF Band between the Broadcasting
Service and other Radiocommunication Services (Region 1)

Recommendation BB

Relating to Methods of Predicting Sky-Wave Propagation

Resolution A

Relating to the determination of the service areas of the
stations in the Plan

Miss M. HUET
Chairman of the
Editorial Committee

Annexes : pages 3 to 6



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RECOMMENDATION CC

Relating to the Convening of a Conference competent to revise the Regional Agreement concerning the Use by the Broadcasting Service of Frequencies in the Medium Frequency Bands in Regions 1 and 3 and in the Low Frequency Bands in Region 1

The Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975,

considering

- a) the rapid development of broadcasting techniques;
- b) the future requirements of the developing countries, which may be substantial both in the LF and in the MF bands, if these countries are to be in a position to meet the needs of their national broadcasting services;
- c) that it has not been possible to accommodate in a satisfactory manner on a long term basis in the low and medium frequency bands allocated to the Broadcasting Service the requirements that have been submitted;
- d) that consequently the Agreement has been prepared on the basis of requirements for the next 14 years and therefore it is absolutely essential for the Agreement to be revised as soon as is practicable after that period;

recommends the Administrative Council

to arrange for the convening of a conference competent to revise the Agreement in 1989, unless it be necessary to convene such a conference earlier according to the provisions of the Convention.

RECOMMENDATION DD

Relating to the Sharing of the LF Band between the
Broadcasting Service and the other Radiocommunication
Services (Region 1)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that the sharing, on a basis of equality, of the band 255-285 kHz between the broadcasting service in a part of Region 1 and the aeronautical radionavigation service in practice results in harmful interference to aeronautical radiobeacons;
- b) that the aeronautical radionavigation service is a safety service (No. 69 of the Radio Regulations) and its adequate protection against harmful interference is essential to the safeguarding of human life;

considering

that it would be desirable to avoid allocations which permit sharing between the broadcasting service and other services, such as the maritime mobile and aeronautical radionavigation services;

recommends

that the World Administrative Radio Conference, 1979, examine this question with due regard to the interests of each of the services concerned.

RECOMMENDATION BB

Relating to Methods of Predicting Sky-Wave Propagation

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

that the methods of predicting sky-wave propagation used in
drawing up the Plan may be improved in the future;

recommends to administrations

that in their bilateral negotiations on modifications to the
Plan, they use the methods most recently adopted by the C.C.I.R. for
predicting sky-wave propagation or any other methods on which they may
agree.

RESOLUTION A

Relating to the determination of the service areas
of the stations [in the Plan]

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

that the work of the Conference has been based on calculations made
of the usable field strength of each frequency assignment in the direction
of the main interfering transmitter;

considering

- a) that it may be useful to know the boundaries of the service areas
resulting from the Plan;
- b) that time did not permit such boundaries to be determined during
the Conference;

instructs the I.F.R.B.

to prepare for publication by the Secretary-General a document
indicating, in 18 azimuths around each of the stations included [in the Plan]
when its power is equal to or greater than 20 kW or when a directional
antenna is used, the following values :

- the usable field strength of the ground wave by day and the
corresponding distance,
- the usable field strength of the ground wave by night and the
corresponding distance,
- the usable field strength of the sky wave and the corresponding
distance.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 184-E

16 November 1975

PLENARY MEETING

B.6

6th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEETO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for first reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C5	165	<u>Res. H</u> Relating to the continued coordination of Frequency Requirements of Countries not represented at the Conference
	-	§ 3 of Article <u>9</u> (Accession)
C6	-	Final Protocol
C6	172	<u>Res. G</u> Relating to Assignments in Low-Power Channels (LPC)
C5	-	<u>Appendix A</u> Antenna Gain

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 to 10



RESOLUTION H

Relating to the continued coordination of frequency requirements
of countries not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975

recalling

- a) that it invited countries not represented at the Conference to submit their requirements and to attend the Conference in time for the necessary bilateral and multilateral negotiations;
- b) that it asked the I.F.R.B., pursuant to No. 479 of the Radio Regulations, to assist countries not represented at the Conference by taking care of the requirements they submitted and which are listed in the Annex to this Resolution;

noting

- a) that certain Members of the Union not represented at the Conference submitted their requirements only towards the end of the Conference;
- b) that some of the requirements thus submitted were not accompanied by sufficient data to enable them to be coordinated;
- c) that these requirements substantially affect the requirements of other countries;
- d) that owing to the difficulties of communication experienced by the I.F.R.B. it was not possible to complete the coordination of requirements among the countries mentioned in a) and c) above;

noting moreover

that assignments to existing broadcasting stations of countries not represented at the Conference which are recorded in the Master Register or in the African Plan, Geneva, 1966, might be included in the Plan;

considering

- a) that the requirements of countries not represented at the Conference for which coordination has not been completed during the Conference may be coordinated after the Conference;
- b) that such coordination could possibly necessitate a change of frequencies or of other characteristics of assignments included in the Plan;
- c) that such changes might affect the assignments of administrations other than those whose requirements are directly affected by the requirements of countries not represented at the Conference;

resolves

- 1. that the assignments to broadcasting stations of countries not represented at the Conference which are recorded in the Master Register or in the African Plan, Geneva, 1966, shall be included in the Plan on the nearest new carrier frequencies of the Plan unless they are so incompatible with the other assignments in the Plan that coordination is necessary. In that case they shall be recorded in the Plan subject to coordination in accordance with the procedure specified in 3 to 5 below.
- 2. that, if the said procedure is satisfactorily completed, the frequency requirements listed in the annex to this Resolution, of countries not represented at the Conference and for which coordination was not completed during the Conference shall be transferred to the Plan;
- 3. that coordination of these requirements among the administrations concerned shall be continued after the Conference through the I.F.R.B. Efforts should be made to complete coordination before the date of entry into force of the Agreement;
- 4. that, if the above coordination requires consequential changes in assignments of other Contracting Members, the procedure provided for in Article 4 of the Agreement shall be applied. In any case, the results of the coordination shall be published in the special section of the I.F.R.B. weekly circular referred to in Article 4, 3.2.13.

5. that the administrations concerned shall endeavour to make satisfactory provision for the requirements in the annexed List, for example, by agreeing to an increase in the usable field strength above the value given in Article 4, paragraph 3.2.5 of the Agreement;

instructs the Secretary-General

1. to invite the countries Members of the Union not represented at the Conference to accede to the Agreement as soon as possible;
2. to bring the provisions of the International Telecommunication Convention to the attention of the other countries non-Members of the Union with a view to inviting them to accede to that instrument and then to this Agreement;
3. to bring this Resolution to the attention of these countries with a view to encouraging them to accede to the Agreement.

instructs the I.F.R.B.

1. to assist the administrations concerned in reaching a satisfactory solution;
2. to include in the master copy of the Plan the frequency assignments resulting from the successful application of the procedure mentioned in this Resolution.

/ Additional paragraph in Article / 9 / of the Agreement /

3. Any Member of the Union party to the Regional Agreement for the African Broadcasting Area (Geneva, 1966) which accedes to the present Agreement in conformity with paragraphs 1 and 2 of the present Article, shall by this act of accession terminate its participation in the Regional Agreement for the African Broadcasting Area and the Plan annexed thereto.

FINAL PROTOCOL
to the
REGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

At the time of signing the Regional Agreement concerning the use by the Broadcasting Service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1, the undersigned delegates take note of the following statements forming part of the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975 :

RESOLUTION G

Relating to Assignments in Low-Power Channels (LPC)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that the planning of LPC assignments is based on the criteria laid down in Annex 2 to the Agreement;
- b) that the provisions of Article 4, 3.3 of the Agreement apply to changes in or additions to LPC assignments made after 23 November 1978;

considering

- a) that it has not been possible, during the Conference, to examine all LPC requirements;
- b) that the LPC frequency assignments might be coordinated among administrations before the entry into force of the Agreement;

resolves

- 1. that the LPC frequency assignments shall form Appendix to the Plan;
- 2. that a provisional Appendix established by the Conference shall contain :
 - those LPC frequency assignments which do not require the agreement of any other administration, and those for which the agreement of all administrations concerned has been obtained; and
 - those LPC frequency assignments for which it has not been possible to seek or obtain the agreement of all the administrations concerned during the Conference; such assignments shall have a symbol indicating this fact and a list of any countries with which coordination has already been effected.

3. that the provisions of [Annex 2, 4.8.1 and 4.8.2] shall be used by administrations until 1 January 1978 to coordinate with one other the LPC frequency assignments;

instructs the I.F.R.B.

1. to prepare a Final Appendix to the Plan for publication by the Secretary-General within the time limit specified for this purpose; to this end the I.F.R.B. shall amend the Provisional Appendix by including therein these frequency assignments which it has been possible to coordinate and excluding these frequency assignments which it has not been possible to coordinate;

2. to provide every assistance to administrations which so request in order to facilitate coordination;

instructs the Secretary-General

to publish by 1 May 1978 the Appendix thus prepared by the I.F.R.B.

APPENDICE A - APPENDIX A - APÉNDICE A

GAIN DE L'ANTENNE POUR DIFFERENTS AZIMUTS ET ANGLES DE SITE

ANTENNA GAIN FOR DIFFERENT AZIMUTHS AND ANGLES OF ELEVATION

GANANCIAS DE ANTENA PARA DIFERENTES ACIMUTES Y ÁNGULOS DE ELEVACIÓN

1 2 3 4 5

AZIMUT - AZIMUTH - ACIMUT

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

G-H 0
G-V 1
G-V 2
G-V 3
G-V 4
G-V 5
G-V 6
G-V 7
G-V 8
G-V 9

INFORMATION CONCERNING THE RADIATION CHARACTERISTICS OF
TRANSMITTING ANTENNAE OTHER THAN SIMPLE VERTICAL
BASE-FED ANTENNAE

- Column 1 : Symbol designating the country or the geographical area in which the station is located.
- Column 2 : Channel frequency (kHz)
- Column 3 : Name of transmitting station.
- Column 4 : G-H = gain in the horizontal plane
G-V = gain in the vertical plane
- Column 5 : angle of elevation (expressed in tens of degrees)
- Azimuth column : (divided into tens of degrees)
The values shown opposite the symbol G-H (column 4) and 0 (column 5) are those of the gain (in dB) in the horizontal plane for the corresponding azimuth. The values shown opposite the symbol G-V (column 4) are those of the gain (in dB) at the angle of elevation shown in column 5 for the corresponding azimuth.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 185-E

15 November 1975

Original : French

PLENARY MEETING

SEVENTH AND LAST REPORT OF COMMITTEE 5

(AGREEMENT)

- Subjects discussed :
- Draft resolution on continued coordination of requirements of countries not represented at the Conference
 - Resolution on the updating of the Master International Frequency Register to the date of entry into force of the Agreement
 - Resolution relating to assignments for low-power channels
 - Amendments to Resolution / B / (Document No. 168)
 - Additional paragraph to Resolution No. / Document No. 142(Rev.2) /
 - Additional paragraph for article / D / of the Agreement

Committee 5 unanimously adopted the texts referred to above, which were transmitted direct to the Editorial Committee.

A. PETTI
Chairman of Committee 5



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 186-E

17 November 1975

Original : English

PLENARY MEETING

Note by the Chairman
of the Conference

The attached letter from the Head of the Delegation of the U.S.S.R. is published for the information of the Conference.

Derek C. ROSE
Chairman of the
Conference

Annex : 1



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A N N E X

Geneva, 17 November 1975

To the
Chairman of the Second Session
of the Broadcasting Conference,
Mr. Derek C. Rose
Geneva

Sir,

The delegation of the Union of Soviet Socialist Republics to the Second Session of the Broadcasting Conference has the honour to inform you that it will take note of statements, conference documents and results of the Conference referring to Berlin (West) only to the extent that they are in accordance with the Quadripartite Agreement of 3 September 1971.

I ask you to circulate this letter as a conference document.

Accept, Sir, the assurances of my high consideration.

V. CHAMCHIN
Head of the delegation
of the Union of Soviet Socialist Republics

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 187-E(Rev.1)

19 November 1975

Original : French

PLENARY MEETING

Note by the Secretary-General

LIST OF FREQUENCY ASSIGNMENTS FOR COUNTRIES NOT REPRESENTED AT THE CONFERENCE

I submit to the Conference herewith a memorandum from the
I.F.R.B. Secretariat.

M. MILI

Secretary-General

Annex : 1 (with 3 lists)



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A N N E X

I.F.R.B. Memorandum

LISTS OF FREQUENCY ASSIGNMENTS FOR COUNTRIES NOT
REPRESENTED AT THE CONFERENCE

Pursuant to the decisions adopted by the Conference, the I.F.R.B. has compiled, as at 6 November 1975, the annexed lists of frequency assignments for countries which are not represented at the Conference with a view to their inclusion in the Plan or in an annex to Resolution H (Document 184).

Within the time available, the Board was unable to draw a distinction between the countries covered by paragraph 1 and those covered by paragraph 2 of Resolution No. H, or even to ascertain the situation with regard to the requirements of these countries in relation to the Master Register. Assignments for countries not represented at the Conference are contained in three separate lists attached hereto. The I.F.R.B. has also included in these lists countries which were registered but which were represented only during part of the Conference.

List I

Frequency assignments with a usable field strength below the average prevailing in the region and whose contribution to interference with other transmitters is below that prevailing in the region of the transmitters suffering interference.

List II

Frequency assignments with a usable field strength above the average prevailing in the region and whose contribution to interference with other transmitters is below that prevailing in the region of the transmitters suffering interference.

The Board takes the view that, if these assignments are included in the Plan, they may be accompanied, in the Remarks column, by a symbol indicating : "This assignment may, if the administration considers it necessary, be coordinated with the other administrations concerned in pursuance of paragraph 3 of Resolution [H]".

List III

Frequency assignments whose contribution to interference with other transmitters is above the average prevailing in the region.

Annexes : 3 lists

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LISTE N° 1 - LIST No. 1 - LISTA N.° 1

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
Angola Angola Angola AGL	7401 7402 7403 7404 7405 7406 7407 7408 7409 7410 7411 8927 1413 7414 8928 7415 7416 7417 7418	612 657 702 774 810 885 864 891 909 945 990 1026 1044 1089 1116 1134 1161 1170 1197

1	2	3
Angola (suite)		
Angola (cont.)		
Angola		
AGL	7419	1215
	7421	1233
	7422	1242
	8929	1251
	8930	1260
	8931	1278
	7423	1296
	7424	1314
	7426	1350
	7427	1368
	7428	1386
	7429	1404
	7430	1422
	7433	1503
	7434	1530
	7435	1566
	7436	1566
	8933	1575
	7437	1593
Namibie		
Namibia		
Namibia		
ASO	7086	594
	7090	675
	7087	747
	7088	864
	7089	882
	7091	963
	7093	1224
	7094	1260
	7096	1386

1	2	3
Namibie (Suite)		
Namibia (Cont.)		
Namibia		
ASO	7097	1467
	7098	1494
	7100	1575
Etat de Bahreïn		
State of Bahrain		
Estado de Bahrein		
BHR	0059	1215
Union de Birmanie		
Union of Burma		
Unión de Birmania		
BRM	0061	1152
Carolines		
Caroline Islands		
Carolinias		
CAR	0240	1449
Cambodge		
Cambodia		
Cambodia		
CBG	7440	738
	7441	954
	7443	1242
	7444	1314
	7445	1341
	7446	1413
	7447	1431
	7448	1539

1	2	3
Iles du Cap-Vert Cape Verde Islands Islas del Cabo Verde		
CPV	6908	675
	6909	945
	6911	1242
	6912	1260
	6913	1332
	6914	1494
	6915	1530
	6916	1548
Guam Guam Guam		
GUM	0244	612
	0245	630
	0246	720
	0247	774
	0248	936
	0249	1089
Guinée-Bissau Guinea-Bissau Guinea-Bissau		
GNP	7454	900
	7455	927
	7456	1035
	7457	1197
	7458	1233
République d'Iraq Republic of Iraq República de Iraq		
IRQ	0546	756
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea		
KRE	8139	576
	8141	594

1	2	3
République Populaire Démocratique de Corée (Suite) People's Democratic Republic of Korea República Popular Democrática de Corea (Cont.)		
KRE	8147	648
	8150	675
	8152	693
	8156	729
	8158	747
	8173	909
	8175	936
	8177	954
	8179	972
	8181	990
	8186	1053
	8187	1071
	8189	1098
	8192	1125
	8193	1152
	8194	1161
	8197	1206
	8200	1233
	8203	1278
	8204	1287
	8205	1296
	8207	1314
	8209	1332
	8211	1350
	8213	1368
	8214	1377

1	2	3
République Populaire Démocratique de Corée (Suite) People's Democratic Republic of Korea República Popular Democrática de Corea (Cont.)		
KRE	8215	1386
	8216	1395
	8217	1404
	8218	1413
	8220	1449
	8221	1458
	8226	1503
	8230	1539
	8231	1557
	8235	1575
	8234	1593
Laos		
LAO	6904	702
	6905	738
	6906	1026
	6907	1368
Mariannes Mariana Islands Marianas		
MRA	0250	1350

1	2	3
Marshall Marshall Islands Marshall		
MRL	0251	1098
	0252	1224
Sultanat d'Oman Sultanate of Oman Sultanía de Oman		
OMA	0088	1278
Iles Phoenix Phoenix Islands Islas Fenix		
PHX	0253	1386
République Rwandaise Republic of Rwanda República Ruandesa		
RRW	6212	1530

1	2	3
Samoa Américain American Samoa Samoa Norteamericano		
SMA	0254	1116
République Démocratique Somalie Somali Democratic Republic República Democrática Somalí		
SOM	7061	666
	7063	810
	7080	963
	7064	1125
	7065	1152
	7066	1197
	7067	1251
	0981	1341
	7068	1377
	7069	1404
	7071	1503
	7072	1557
Sierra Leone Sierra Leone Sierra Leona		
SRL	0257	576
	0258	729
	0259	864
	0260	936
	0261	1080
	026401	1206
	026402	1206
	026403	1206
	026404	1206
	026405	1206
	026406	1206

1	2	3
Sierra Leone (Suite) Sierra Leone (Cont.) Sierra Leona		
SRL	026407	1206
	026408	1206
	0262	1278
	0263	1494
S. Tomé et Principe S. Thome and Principe Sto. Tome y Príncipe		
STP	7452	1503
Royaume du Swaziland Kingdom of Swaziland Reino de Suazilandia		
SWZ	2627	882
	2630	1053
	2628	1377
République Démocratique du Viet-Nam Democratic Republic of Viet-Nam República Democrática del Viet-Nam		
VTD		
Pas de demandes reçues et aucune inscription dans le Fichier de référence. No requirements received and no assignments in the Master Register. No se recibieron solicitudes y no existen asignaciones en el Registro.		
République du Sud Viet-Nam Viet-Nam (South) República de Viet-Nam del Sur		
VTN	1615	585
	1617	612
	1618	639
	1619	675
	1620	693

1	2	3
République du Sud Viet-Nam (Suite) Viet-Nam (South) (Cont.) República de Viet-Nam del Sur		
VTN	1622	720
	1623	738
	1624	783
	1625	801
	1626	819
	1627	873
	1628	1413
Ile Wake Wake Island Isla Wake WAK	0255	1485

LISTE N° 2 - LIST No. 2 - LISTA N.° 2

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia	Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3	1	2	3
Iles du Cap-Vert Cape Verde Islands Islas de Cabo Verde CPV	6910	1071	KRE	8176 8178 8180 8183 8184 8185 8190 8195 8198 8201 8202 8206 8208 8212 8222 8223 8225 8232	945 963 981 1008 1017 1035 1107 1170 1215 1242 1260 1305 1323 1359 1467 1476 1494 1566
République de la Guinée équatoriale Republic of Equatorial Guinea República de Guinea Ecuatorial GNE	7118	675	Laos LAO	6902 6903	576 639
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea KRE	8149 8154 8159 8161 8163 8167 8171 8172	666 711 756 774 792 837 891 900			

LISTE N° 2 - LIST No. 2 - LISTA N.° 2 (suite/Cont.)

1	2	3
République Rwandaise Republic of Rwanda República Ruandesa RRW	6211	1512
République Démocratique Somalie Somali Democratic Republic República Democrática Somali SOM	7060 7070	603 1449
S. Tomé et Príncipe S. Thome and Príncipe Sto. Tomé y Príncipe STP	7449 7450 7451	747 846 945

1	2	3
République du Sud Viet-Nam Viet-Nam (South) Republica de Viet-Nam del Sur VTN	1616	603

LISTE N° 3 - LIST No. 3 - LISTA N.° 3

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
Namibie Namibia Namibia		
ASO	7095	990
	7092	1062
	7099	1557
République Khmère Khmer Republic República Khmer		
CBG	7442	999
Etat de Bahreïn State of Bahrain Estado de Bahrein		
BHR	0057	558
	0058	612
Union de Birmanie Union of Burma Union de Birmania		
BRM	0060	954
République de la Guinée équatoriale Republic of Equatorial Guinea República de Guinea Ecuatorial		
GNE	7118	675

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
République d'Iraq Republic of Iraq República de Iraq		
IRQ	0543	558
	0544	603
	0545	693
	0547	846
	0548	909
	0549	1035
	0551	1359
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea		
KRE	8137	540
	8138	549
	8140	585
	8142	603
	8143	612
	8144	621
	8145	630
	8146	639
	8148	657
	8151	684
	8153	702
	8155	720
	8157	738
	8160	765
	8162	783
	8164	801
	8165	810
	8166	819

LISTE N° 3 - LIST No. 3 - LISTA N.° 3 (suite/cont.)

1	2	3
KRE (suite) (Cont.)		
	8168	855
	8169	864
	8170	882
	8174	927
	8182	999
	8188	1080
	8191	1116
	8196	1179
	8199	1224
	8210	1341
	8219	1440
	8227	1512
	8228	1521
	8229	1530
République des Maldives Republic of Maldives República de los Maldivas		
MLD	3020	1458
Sultanat d'Oman Sultanate of Oman Sultanía de Oman		
OMA	4345	702
	0090	738
	0086	1035
	0087	1242
	0089	1368
	0091	1395
République Démocratique Somalie Somali Democratic Republic República Democrática Somalí		
SOM	7062	702

1	2	3
Sierra Leone Sierra Leone Sierra Leona		
SRL	0256	558
Royaume du Swaziland Kindgom of Swaziland Reino de Suazilandia		
SWZ	2629	954
République du Sud Viet-Nam Viet-Nam (South) República de Viet-Nam del Sur		
VTN	1621	702

UNION INTERNATIONALE DES TELECOMMUNICATIONS
CONFERENCE DE RADIODIFFUSION
(DEUXIEME SESSION) GENEVE, 1975

Addendum N° 1 au
Document N° 187-F/E/S
18 novembre 1975
Original : français
anglais
espagnol

SEANCE PLENIERE
PLENARY MEETING
SESIÓN PLENARIA

Le cas figurant en Annexe au présent Document doit être ajouté
dans la Liste N° 1 du Document N° 187 du 17 novembre 1975

The case in the Annex to this Document is to be added in List No. 1
of the Document No. 187 of 17 November 1975.

El caso que figura en el Anexo al presente Documento debe incluirse
en la Lista N.º 1 del Documento N.º 187 del 17 de noviembre de 1975.



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A N N E X E

LISTE N° 1 - LIST No. 1 - LISTA N.º 1

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.º de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
Guinée-Bissau Guinea-Bissau Guinea-Bissau		
GNP	7454	900
	7455	927
	7456	1035
	7457	1197
	7458	1233

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 187-E

17 November 1975

Original : French

PLENARY MEETING

Note by the Secretary-General

LIST OF FREQUENCY ASSIGNMENTS FOR COUNTRIES NOT REPRESENTED AT THE CONFERENCE

I submit to the Conference herewith a memorandum from the
I.F.R.B. Secretariat.

M. MILI

Secretary-General

Annex : 1 (with 3 lists)



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A N N E X

I.F.R.B. Memorandum

LISTS OF FREQUENCY ASSIGNMENTS FOR COUNTRIES NOT
REPRESENTED AT THE CONFERENCE

Pursuant to the decisions adopted by the Conference, the I.F.R.B. has compiled, as at 6 November 1975, the annexed lists of frequency assignments for countries which are not represented at the Conference with a view to their inclusion in the Plan or in an annex to Resolution H (Document 184).

Within the time available, the Board was unable to draw a distinction between the countries covered by paragraph 1 and those covered by paragraph 2 of Resolution No. H, or even to ascertain the situation with regard to the requirements of these countries in relation to the Master Register. Assignments for countries not represented at the Conference are contained in three separate lists attached hereto. The I.F.R.B. has also included in these lists countries which were registered but which were represented only during part of the Conference.

List I

Frequency assignments with a usable field strength below the average prevailing in the region and whose contribution to interference with other transmitters is below that prevailing in the region of the transmitters suffering interference.

List II

Frequency assignments with a usable field strength above the average prevailing in the region and whose contribution to interference with other transmitters is below that prevailing in the region of the transmitters suffering interference.

The Board takes the view that, if these assignments are included in the Plan, they may be accompanied, in the Remarks column, by a symbol indicating : "This assignment may, if the administration considers it necessary, be coordinated with the other administrations concerned in pursuance of paragraph 3 of Resolution / H /".

List III

Frequency assignments whose contribution to interference with other transmitters is above the average prevailing in the region.

In compiling these three lists, the Board applied the mean usable field strength values calculated for the geographic regions referred to in the table below, and contained in Document DL/37 of 11 November 1975 prepared for the Steering Committee by the Chairman of Committee 4.

TABLE

	Eu mean (dBμ)
AFRICA	88
ASIA	94
AUSTRALIA and NEW ZEALAND }	79
EUROPE	92

Annexes : 3 lists

LISTE N° 1 - LIST No. 1 - LISTA N.º 1

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.º de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
République Sudafricaine Republic of South Africa República Sudafricana		
AFS	0356	567
	0357	576
	0358	603
	8456	657
	0361	702
	845501	729
	845502	729
	0364	765
	0365	783
	0366	801
	0367	846
	0368	1035
	0369	1044
	0371	1116
	0372	1152
	0373	1179
	8457	1287
	8458	1440

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.º de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
Angola Angola Angola		
AGL	7401	612
	7402	657
	7403	702
	7404	774
	7405	810
	7406	885
	7407	864
	7408	891
	7409	909
	7410	945
	7411	990
	7412	1008
	1413	1044
	7414	1089
	7415	1134
	7416	1161
	7417	1170
	7418	1197

1	2	3
Angola (suite) Angola (cont.) Angola		
AGL	7419	1215
	7420	1224
	7421	1233
	7422	1242
	7423	1296
	7424	1314
	7425	1332
	7426	1350
	7427	1368
	7428	1386
	7429	1404
	7430	1422
	7431	1458
	7433	1503
	7434	1530
	7435	1566
	7436	1566
	7437	1593
Sud-Ouest africain South West Africa Sudoeste Africano		
ASO	7086	594
	7090	675
	7087	747
	7088	864
	7089	882
	7091	963
	7093	1224
	7094	1260
	7096	1386

1	2	3
Sud-Ouest Africain (Suite) South West Africa (Cont.) Sudoeste Africano		
ASO	7097	1467
	7098	1494
	7100	1575
Etat de Bahreïn State of Bahrain Estado de Bahrein		
BHR	0058	612
	0059	1215
Union de Birmanie Union of Burma Unión de Birmania		
BRM	0060	954
	0061	1152
Carolines Caroline Islands Carolinas		
CAR	0240	1449
République Khmère Khmer Republic República Khmer		
CBG	7440	738
	7441	954
	7443	1242
	7444	1314
	7445	1341
	7446	1413
	7447	1431
	7448	1539

1	2	3
Iles du Cap-Vert Cape Verde Islands Islas del Cabo Verde		
CPV	6908	675
	6909	945
	6911	1242
	6912	1260
	6913	1332
	6914	1494
	6915	1530
	6916	1548
Guam Guam Guam		
GUM	0244	612
	0245	630
	0246	720
	0247	774
	0248	936
	0249	1089
République d'Iraq Republic of Iraq República de Iraq		
IRQ	0546	756
	0548	909
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea		
KRE	8137	540
	8138	549
	8139	576
	8141	594
	8143	612

1	2	3
République Populaire Démocratique de Corée (Suite) People's Democratic Republic of Korea República Popular Democrática de Corea (Cont.)		
KRE	8147	648
	8150	675
	8152	693
	8153	702
	8156	729
	8158	747
	8160	765
	8173	909
	8175	936
	8177	954
	8179	972
	8181	990
	8186	1053
	8187	1071
	8189	1098
	8192	1125
	8193	1152
	8194	1161
	8197	1206
	8200	1233
	8203	1278
	8204	1287
	8205	1296
	8207	1314
	8209	1332
	8211	1350
	8213	1368
	8214	1377

1	2	3
République Populaire Démocratique de Corée (Suite) People's Democratic Republic of Korea República Popular Democrática de Corea (Cont.)		
KRE	8215	1386
	8216	1395
	8217	1404
	8218	1413
	8220	1449
	8221	1458
	8226	1503
	8227	1512
	8228	1521
	8230	1539
	8231	1557
	8235	1575
	8234	1593
Royaume du Laos Kingdom of Laos Reino de Laos		
LAO	6904	702
	6905	738
	6906	1026
	6907	1368
République des Maldives Republic of Maldives República de las Maldivas		
MLD	3020	1458
Mariannes Mariana Islands Marianas		
MRA	0250	1350

1	2	3
Marshall Marshall Islands Marshall		
MRL	0251	1098
	0252	1224
Sultanat d'Oman Sultanate of Oman Sultanía de Oman		
OMA	4344	702
	0086	1035
	0088	1278
	0089	1368
	4346	1413
Iles Phoenix Phoenix Islands Islas Fenix		
PHX	0253	1386
Rhodésie Rhodesia Rhodesia		
RHS	1931	585
	1932	612
	1933	684
	1934	711
	1935	792
	1938	981
	1939	999
	1940	1242
	1941	1251
	1942	1341
	1943	1368
République Rwandaise Republic of Rwanda República Ruandesa		
RRW	6212	1530

1	2	3
Samoa Américain American Samoa Samoa Norteamericano		
SMA	0254	1116
République Démocratique Somalie Somali Democratic Republic República Democrática Somalí		
SOM	7061	666
	7063	810
	7080	963
	7064	1125
	7065	1152
	7066	1197
	7067	1251
	0981	1341
	7068	1377
	7069	1404
	7071	1503
	7072	1557
Sierra Leone Sierra Leone Sierra Leona		
SRL	0257	576
	0258	729
	0259	864
	0260	936
	0261	1080
	026401	1206
	026402	1206
	026403	1206
	026404	1206
	026405	1206
	026406	1206

1	2	3
Sierra Leone (Suite) Sierra Leone (Cont.) Sierra Leona		
SRL	026407	1206
	026408	1206
	0262	1278
	0263	1494
S. Tomé et Príncipe S. Thome and Principe Sto. Tome y Príncipe		
STP	7452	1503
Royaume du Swaziland Kingdom of Swaziland Reino de Suazilandia		
SWZ	2627	882
	2630	1053
	2628	1377
République Démocratique du Viet-Nam Democratic Republic of Viet-Nam República Democrática del Viet-Nam		
VTD		
Pas de demandes reçues et aucune inscription dans le Fichier de référence. No requirements received and no assignments in the Master Register. No se recibieron solicitudes y no existen asignaciones en el Registro.		
République du Viet-Nam Republic of Viet-Nam República de Viet-Nam		
VTN	1615	585
	1617	612
	1618	639
	1619	675
	1620	693

1	2	3
République du Viet-Nam (Suite) Republic of Viet-Nam (Cont.) República de Viet-Nam		
VTN	1621	702
	1622	720
	1623	738
	1624	783
	1625	801
	1626	819
	1627	873
	1628	1413
Ile Wake Wake Island Isla Wake		
WAK	0255	1485
République du Zaïre Republic of Zaire República del Zaira		
ZAI	3897	531
	8117	666
	8118	702
	8119	747
	8120	756
	8122	792
	3901	837
	8124	936
	3903	1026
	3904	1035
	8126	1035
	3905	1044
	3906	1062
	3907	1161

1	2	3
République du Zaïre (Suite) Republic of Zaire (Cont.) República del Zaira		
ZAI	8127	1188
	8129	1287
	3908	1287
	8130	1341
	8131	1377
	3909	1449
	8132	1449
	8133	1467
	8135	1566
	8136	1593

LISTE N° 2 - LIST No. 2 - LISTA N.° 2

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia	Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3	1	2	3
Bahreïn (Etat de) Bahrain (State of) Bahrein (Estado de) BHR	0057	558	KRE	8176 8178 8180 8183 8184 8185 8190 8195 8198 8201 8202 8206 8208 8212 8222 8223 8225 8232	945 963 981 1008 1017 1035 1107 1170 1215 1242 1260 1305 1323 1359 1467 1476 1494 1566
Iles du Cap-Vert Cape Verde Islands Islas de Cabo Verde CPV	6910	1071			
République de la Guinée équatoriale Republic of Equatorial Guinea República de Guinea Ecuatorial GNE	7118	675			
République d'Iraq Republic of Iraq República de Iraq IRQ	0551	1359			
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea KRE	8149 8154 8159 8161 8163 8167 8171 8172	666 711 756 774 792 837 891 900	Royaume du Laos Kingdom of Laos Reino de Laos LAO	6902 6903	576 639
			Rhodésie Rhodesia Rhodesia RHS	1936 1937	855 891

LISTE N° 2 - LIST No. 2 - LISTA N.° 2 (suite/Cont.)

1	2	3
République Rwandaise Republic of Rwanda República Ruandesa RRW	6211	1512
République Démocratique Somalie Somali Democratic Republic República Democrática Somalí SOM	7060 7070	603 1449
S. Tomé et Príncipe S. Thome and Príncipe Sto. Tomé y Príncipe STP	7449 7450 7451	747 846 945

1	2	3
République du Viet-Nam Republic of Viet-Nam República de Viet-Nam VTN	1616	603
Zaïre (République du) Zaire (Republic of) Zaira (República del) ZAI	3898 8114 8115 8116 8121 8123 8125 8128	567 603 603 603 765 846 963 1242

LISTE N° 3 - LIST No. 3 - LISTA N.° 3

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
République Sudafricaine Republic of South Africa República Sudafricana		
AFS	0355	558
	0370	1098
	0375	1314
	0359	1332
Sud-Ouest africain South-West Africa Sudoeste africano		
ASO	7095	990
	7092	1062
	7099	1557
République Khmère Khmer Republic República Khmer		
CBG	7442	999
Etat de Bahreïn State of Bahrain Estado de Bahrein		
BHR	0057	558
République de la Guinée équatoriale Republic of Equatorial Guinea República de Guinea Ecuatorial		
GNE	7118	675

Pays Country País	N° de série de l'I.F.R.B. I.F.R.B. Serial No. N.° de serie de la I.F.R.B.	Fréquence Frequency Frecuencia
1	2	3
République d'Iraq Republic of Iraq República de Iraq		
IRQ	0543	558
	0544	603
	0545	693
	0547	846
	0549	1035
République Populaire Démocratique de Corée People's Democratic Republic of Korea República Popular Democrática de Corea		
KRE	8140	585
	8142	603
	8144	621
	8145	630
	8146	639
	8148	657
	8151	684
	8155	720
	8157	738
	8162	783
	8164	801
	8165	810
	8166	819

LISTE N.º 3 - LIST No. 3 - LISTA N.º 3 (suite/Cont.)

1	2	3
KRE (suite) (Cont.)	8168	855
	8169	864
	8170	882
	8174	927
	8182	999
	8188	1080
	8191	1116
	8196	1179
	8199	1224
	8210	1341
	8219	1440
	8229	1530
Sultanat d'Oman Sultanate of Oman Sultanía de Oman		
	OMA 4345	702
	0090	738
	0087	1242
	0091	1395
République Démocratique Somalie Somali Democratic Republic República Democrática Somalí		
SOM	7062	702

1	2	3
Sierra Leone Sierra Leone Sierra Leona		
	SRL 0256	558
Royaume du Swaziland Kindgom of Swaziland Reino de Suazilandia		
	SWZ 2629	954
République du Zaïre Republic of Zaire República del Zaira		
	ZAI 3899	693
	3900	801
	3902	1008

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 188-E

17 November 1975

Original : French

PLENARY MEETING

FINAL PROTOCOL

For the Republic of Afghanistan :

The delegation of the Republic of Afghanistan to the Regional Administrative LF/MF Radio Conference (Second Session, Geneva, 1975) reserves its Government's right to take any measures it may deem necessary to protect its interests if other countries fail to observe the provisions adopted by the Conference.



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 189-E

17 November 1975

Original : English

PLENARY MEETING

Note by the Secretary-General

MEMORANDUM BY THE I.F.R.B. ON DOCUMENT No. 179

I have the honour to submit to the Conference, in the Annex to this Document, a Memorandum by the I.F.R.B. Secretariat.

M. MILI

Secretary-General

Annex : 1



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A N N E XMEMORANDUM BY THE INTERNATIONAL FREQUENCY REGISTRATION BOARDON DOCUMENT No. 179

The Board has examined questions raised in the Seventh Plenary Meeting concerning the use of 522 kHz by Austria (Document No. 179) and has reached the following conclusion :

I. No. 185 of the Radio Regulations reads as follows :

"185 In the European Maritime Area, subject to the conditions specified in the Final Acts of the European Maritime Conference (Copenhagen 1948), and any subsequent revision of that Agreement, the administrations concerned may keep in the bands 415-485 kHz and 515-525 kHz such of the following broadcasting stations as will not cause harmful interference to the maritime mobile service : Hamar, Innsbruck, Oerstersund, Oulu."

/ NOTE : The station names indicated in No. 185 belong to the following countries :

HAMAR - NORWAY, INNSBRUCK - AUSTRIA, OERSTERSUND - SWEDEN,
(520 kHz)
OULU - FINLAND /
(433 kHz)

II. The Master International Frequency Register contains entries in the name of Austria on 520 kHz as shown in Annex 1.

Thus, of the six stations mentioned in the Annex to Document No. 179,

- I) INNSBRUCK, LIENZ OSTT and LIEZEN are recorded in the Master Register with 10 kW power each, under No. 115 of the Radio Regulations (Hours of operation 04-24 GMT);
- II) MURAU is recorded in the Master Register with 50 W power under No. 115 of the Radio Regulations (Hours of operation 04-24 GMT);
- III) MUEHLBACH HKG and NEUKIRCHEN GRV are not recorded in the Master Register.

III. Interference situation for stations contained in the Annex to Document No. 179 vis-à-vis stations of the other services

a) The Board made its first examination on 1 October 1975 with 20 kHz bandwidth for each of the six Austrian stations contained in the Annex and concluded that there was probability of harmful interference from the Austrian stations (with carrier frequency 522 kHz) to stations of the maritime mobile service of other administrations, which are recorded in the Master International Frequency Register as shown in Table 1 in Annex 2.

b) The Board has reviewed its examination on the basis of the use of 9 kHz bandwidth by the Austrian stations. The stations on frequencies 515 and 516 kHz would receive no harmful interference from the Austrian stations due to reduction of bandwidth. However, the difference in the carrier frequencies between stations of the maritime mobile service on 519, 520, 522, 522.6 and 524 kHz and the Austrian stations proposing to use 522 kHz being inadequate to provide additional protection due to frequency separation, the stations shown in Table 1 on these frequencies would continue to receive harmful interference from the Austrian stations. Table 2 in Annex 3 shows this position.

c) In view of the foregoing, the Board is of the view that the overall interference that will result from the operation of these stations on 522 kHz will be less than the present operation on 520 kHz.

Annex 1

Extracts of the Master International Frequency Register showing the stations
of Austria on 520 kHz recorded therein

Sr No	Freq. (kHz)	Country	Name	Coord.	Sce Area	Class of stn.	Clem & BW	Power (kW)	Direc.	Hours of opn	Remarks
1.	520	AUT	BLUDENZ	09E 47N	LCL	BC	12A3	0,05	ND	0424	B20.4.64 DB D526 RR115 B220764
2.	520	AUT	GMUENDKAE	13E 46N	LCL	BC	15A3	0,05	ND	0424	B 010558 DA D
3.	520	AUT	INNSBRUCK	11E 47N	INTR	BC	12A3	10,00	ND	0424	B200464 DB D526 D RR 115 B 220764
4.	520	AUT	LANDECK	10E 47N	LCL	BC	15A3	0,05	ND	0424	B 1.5.58 DA D
5.	520	AUT	LIENZ OSTT	12E 46N	INTR	BC	15A3	10,00	ND	0424	B21.4.64 DB D 526 D RR 115, B 220764
6.	520	AUT	LIEZEN	14E 47N	LCL	BC	12A3	10,00	ND	0424	B 6.11.67 DB, D 526, RR 115, B 270268
7.	520	AUT	MURAU	14E 47N	LCL	BC	12A3	0,05	ND	0424	B 200464, DB D 526 D RR 115, B 220764

Annex 2TABLE 1

Freq.	Station	515 kHz	516 kHz	519 kHz	520 kHz	522 kHz	522,6	524 kHz	TOTAL
(kHz)									
(Bandwidth)									
	MUEHLBACK HKG (0.1 kW)	-	GRC, NOR	-	-	DDR	-	-	3
	MURAU (0.1kW)	ROU	GRC, NOR	-	-	DDR	-	-	4
	NEUKIRCHEN GRV(0,1 kW)	-	GRC, NOR	-	-	DDR	-	-	3
	INNSBRUCK ALDR (30 kW)	BUL, ROU	AZR, GRC, I, IRL, NOR(2), POR, TUR(2), UKR, URS(2)	AZR, DNK, FNL, G, I, S, URS	USA*	DDR, NOR, URS, USA*	BUL	FNL, I, NOR, POL, TUR	32
	LIENZ OSTTIROL (20 kW)	BUL, ROU	AZR, GRC, I, IRL, NOR(2), POR, TUR(2), UKR, URS(2)	DNK, FNL, G, I, S, URS	USA*	DDR, NOR, URS, USA*	BUL	FNL, I, NOR, POL, TUR	31
522 (20 kHz)	LIEZEN (10 kW)	BUL, ROU	GRC, I, IRL, NOR(2), POR, TUR(2), UKR, URS(2)	DNK, FNL, G, I, S, URS	-	DDR, NOR, URS	BUL	FNL, I, POL, TUR	27

* Aeronautical Mobile Service

NOTE : Aeronautical radionavigation service is a secondary service in Region 1 in the band 510-525 kHz. Some stations of this service are also likely to receive harmful interference according to the technical examination carried out by the Board. They are however not shown in the above Table 1.

Annex 3TABLE 2

Freq. (Bandwidth)	Stations	519 kHz	520 kHz	522 kHz	522,6 kHz	524 kHz	TOTAL
522 kHz (9 kHz)	MUEHLBACH HKG (0,1 kW)	-	-	DDR	-	-	1
	MURAU (0,1 kW)	-	-	DDR	-	-	1
	NEUKIRCHEN GRV (0,1 kW)	-	-	DDR	-	-	1
	INNSBRUCK ALDR (30 kW)	AZR, DNK, FNL, G, I, S, URS	USA*	DDR, NOR, URS, USA*	BUL	FNL, I, NOR POL, TUR	18
	LIENZ OSTTIROL (10 kW)	DNK, FNL, G, I, S, URS	-	DDR, NOR, URS	BUL	FNL, I, POL, TUR	14
	OIEZEN (10 kW)	DNK, FNL, G, I, S, URS	-	DDR, NOR, URS	BUL	FNL, I, POL, TUR	14

*Aeronautical Mobile Service

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 190-E(Rev.1)

18 November 1975

Original : French

PLENARY MEETING

Group 4B (Africa)

DRAFT RESOLUTION

concerning Member and non-Member countries
not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

1. the provisions of Resolution No. 31 of the Plenipotentiary Conference of the International Telecommunication Union (Malaga-Torremolinos, 1973) excluding the Government of the Republic of South Africa from the Plenipotentiary Conference and from all other conferences and meetings of the Union,
2. the situation of Member and non-Member countries absent from the Conference,
3. the Resolutions and provisions adopted by the Conference in order to provide an appropriate solution to the different problems of those countries in connection with the Agreement and the annexed Plans,

decides

that the provisions and Resolutions adopted by the Conference for the benefit of Member and non-Member countries absent from the Conference shall not be applied to the Government of the Republic of South Africa.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 190-E

17 November 1975

Original : French

PLENARY MEETING

Group 4B (Africa)

DRAFT RESOLUTION

concerning Member and non-Member countries
not represented at the Conference

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

on the one hand, the situation of Member and non-Member countries
absent from the Conference;

on the other, the resolutions and provisions adopted by the
Conference in order to provide an appropriate solution to the different
problems of those countries in connection with the Agreement and the annexed
Plans;

decides

that the provisions and resolutions adopted by the Conference
for the benefit of Member and non-Member countries absent from the
Conference shall in no case be applicable to the Government of South Africa.



INTERNATIONAL TELECOMMUNICATION UNION
BROADCASTING CONFERENCE
(SECOND SESSION) GENEVA, 1975

PINK PAGES

Document No. 191-E
17 November 1975

PLENARY MEETING

R.3

3rd SERIES OF TEXTS SUBMITTED BY THE
EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting
for second reading :

Agreement : Preamble, Article 1-14, Final Formula

Annex 1 : Title

Columns of the Plan

Information included in the columns of the Plan

§ 4.3 of Chapter 4

§ 4.9 of Chapter 4

Final Protocol

Additional Protocol I

Additional Protocol II

Resolution B

Resolution C

Resolution D

Resolution E

Resolution F

Resolution G

Recommendation AA

Appendix 2 to the Plan

Miss M. HUET
Chairman of the
Editorial Committee

Annexes : pages 3 to 37



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REGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

PREAMBLE

With the object of facilitating relations, mutual understanding and cooperation in the field of LF/MF broadcasting;

with a view to improving the use of the frequency bands allocated to the broadcasting service in order to ensure satisfactory reception of the broadcasting service for all countries;

recognizing that all countries large and small have equal rights and that the needs of all countries and in particular the needs of the developing countries shall be fulfilled as far as possible in the implementation of this agreement;

the delegates of the following Members of the International Telecommunication Union, meeting in Geneva for a Regional Administrative Conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973), have adopted, subject to the approval of their respective competent authorities, the following provisions relating to the broadcasting service in Regions 1 and 3 for the medium frequency bands and in Region 1 for the low frequency bands.

ARTICLE / 1 /Definitions

For the purposes of this Agreement, the following terms shall have the meanings defined below :

Union : The International Telecommunication Union;

Secretary-General : The Secretary-General of the Union;

I.F.R.B. : The International Frequency Registration Board;

C.C.I.R. : The International Radio Consultative Committee;

Convention : The International Telecommunication Convention;

Radio Regulations : The Radio Regulations annexed to the Convention;

Regions 1 and 3 : The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations, Geneva, 1959;

Agreement : The whole of this Agreement including the Plan and the other annexes;

Plan : The Plan forming Annex 1 to the Agreement;

Contracting Member : Any Member of the Union which has approved or acceded to the Agreement;

Administration : Any governmental department or service responsible for discharging the obligations undertaken in the Convention and the Radio Regulations.

ARTICLE 2Frequency bands

The provisions of this Agreement apply to the frequency bands between 150 and 285 kHz and between 525 and 1 605 kHz allocated to the broadcasting service under Article 5 of the Radio Regulations.

ARTICLE 3Execution of the Agreement

1. The Contracting Members shall adopt, for their broadcasting stations operating in Regions 1 and 3 in the frequency bands referred to in the Agreement, the characteristics specified in the Plan.
2. The Contracting Members shall not bring assignments complying with the Plan into use, change the technical characteristics of stations specified in the Plan, or bring new stations into use, except under the conditions set out in Articles and of this Agreement.
3. The Contracting Members shall endeavour to agree on the action required to reduce any harmful interference caused by the application of this Agreement.

ARTICLE 4PROCEDURE FOR MODIFICATIONS TO THE PLAN

1. When a Contracting Member proposes to make a modification to the Plan, i.e. either :
 - to change the characteristics of a frequency assignment to a broadcasting station shown in the Plan, whether or not the station has been brought into use, or
 - to bring into use an assignment to a broadcasting station not appearing in the Plan, or
 - to change the characteristics of a frequency assignment to a broadcasting station for which the procedure in this Article has been successfully applied, whether or not the station has been brought into use, or
 - to cancel a frequency assignment to a broadcasting station,the following procedure shall be applied before any notification is made under the provisions of Article 9*) of the Radio Regulations (see Article 5).
2. In the remainder of the present Article, the term "assignment in accordance with the Agreement" means any frequency assignment appearing in the Plan or for which the procedure of this Article has been successfully applied.
3. Proposed changes in the characteristics of an assignment or the bringing into use of a new assignment
- 3.1 Any administration proposing a change in the characteristics of an assignment or the bringing into use of a new assignment shall seek the agreement of all the administrations having an assignment in accordance with the Agreement, in the same channel or an adjacent channel, which is considered to be affected (see 3.2.5 and 3.3.1).

*) or the corresponding article of the Radio Regulations currently in force.

3.2 Channels other than low-power channels

3.2.1 An administration proposing to change the characteristics of an assignment or to bring a new assignment into use shall so inform the I.F.R.B. and furnish the characteristics of the modification or addition in the form adopted in the Plan and its annexes.

3.2.1.1 Where the proposed modification is within the limits defined in 3.2.9, the information shall contain a reference to that paragraph.

3.2.1.2 In all other cases, in order to arrive at the agreement referred to in 3.1, the administration shall notify to the I.F.R.B. the names of the administrations whose agreement it considers should be sought and of those with which agreement has been reached.

3.2.2 The I.F.R.B. shall determine on the basis of Annex 2 to the Agreement the administrations having frequency assignments in accordance with the Agreement which are considered to be affected within the meaning of 3.2.5. The results of these calculations shall be sent immediately by the I.F.R.B. to the administration proposing the modification to the Plan. The I.F.R.B. shall include the names of these administrations in the information received and shall publish the complete information in a special section of its weekly circular.

3.2.3 The I.F.R.B. shall send a telegram to the administrations listed in the special section of the weekly circular drawing their attention to the information it contains and shall also send to them the results of its calculations.

3.2.4 Any administration which considers that it should have been included in the list of administrations whose frequency assignments are considered to be affected, may, giving its reasons for so doing, request the I.F.R.B. to include its name. A copy of the request shall be sent to the administration proposing the modifications to the Plan.

3.2.5 Any assignment may be considered affected when its usable field strength is increased by a value equal to or greater than 0.5 dB as a consequence of the proposed modification to the Plan. The usable field strength is calculated at any point on the boundary of the service area resulting from the first recording of the assignment in the Plan. When the original assignment in the Plan has been modified in accordance with the Agreement, the calculation shall take account of this modification. The increase in the usable field strength is calculated in accordance with Annex 2 to the Agreement.

3.2.6 An administration seeking agreement under 3.1 for daytime operation of a station may, by agreement with the affected administrations, use the simplified method of calculation defined in 3.3.4.3 or 3.4.3.3, as appropriate, of Annex 2 to the Agreement.

3.2.7 An administration may ask the administration proposing the modification for the additional information it considers necessary to calculate the increase of the usable field strength. Similarly, the administration proposing the modification may ask any administration whose agreement it seeks for the additional information it considers necessary. The administrations shall inform the I.F.R.B. of such requests.

3.2.8 Comments from administrations on information published pursuant to 3.2.2 should be sent either directly to the administration proposing the modification or through the I.F.R.B. In any event the I.F.R.B. shall be informed that comments have been made.

3.2.9 The agreement mentioned in 3.1 is not required if the proposed modification either :

- entails no increase in effective monopole radiated power in any direction, or
- relates to a change in the site of the station, within the tolerances specified in 4.9 of Annex 2 to the Agreement.

In either case, the Administration intending to modify the Plan may put its project into effect, subject to the application of the provisions of Article 9*) of the Radio Regulations.

3.2.10 An administration which has not notified its comments either to the administration concerned or to the I.F.R.B. within a period of sixteen weeks following the date of the weekly circular referred to in 3.2.2 shall be understood to have agreed to the proposed change. This time limit may be extended by eight weeks in the case of an administration which has requested additional information pursuant to paragraph 3.2.7.

*) or the corresponding article of the Radio Regulations currently in force.

- 3.2.11 If in seeking agreement an administration makes changes in its initial proposal, it shall again apply the provisions of 3.2.1 and the consequent procedure.
- 3.2.12 If no comments have been received on expiry of the periods specified in 3.2.10, or if agreement has been reached with the administrations which have made comments, the administration proposing the modification may proceed with its project and shall inform the I.F.R.B. indicating the final characteristics of the assignment together with the names of the administrations with which agreement has been reached.
- 3.2.13 When the proposed modification to the Plan involves a developing country, administrations shall seek a solution conducive to economical development of the broadcasting system of the developing country, giving due consideration to the principles enunciated to this effect in the Preamble to this Agreement.
- 3.2.14 The I.F.R.B. shall publish in a special section of its weekly circular the information received under 3.2.12, together with the names of any administrations with which the provisions of this article have been successfully applied. With respect to Contracting Members, the assignment concerned shall enjoy the same status as those appearing in the Plan.

3.3 Low-power channels

- 3.3.1 Any administration proposing a change in the characteristics of a frequency assignment in a low-power channel or the bringing into use of a new station in such a channel shall seek the agreement of any other administration when the distance between the proposed station and the nearest point on the boundary of the territory of that other administration is less than the corresponding values given in 4.8.3 of Annex 2.
- 3.3.2 After having obtained the agreement of the administrations concerned, the administration proposing the modification shall inform the I.F.R.B. indicating the characteristics of the station together with the names of the administrations with which agreement has been reached.
- 3.3.3 The I.F.R.B. shall publish this information in a special section of its weekly circular. With respect to Contracting Members the assignment concerned shall enjoy the same status as those appearing in the Plan.
- 3.3.4 The administration may then proceed with its project.

3.4 Additional provisions for channels in shared bands

The provisions of this Article apply also to frequency assignments to broadcasting stations in frequency bands shared with other radiocommunication services. However, the special sections of the I.F.R.B. weekly circular mentioned in 3.2.2 and 3.2.3 which concern the proposed modifications shall be considered by these other services to be for information only (see also Resolution D).

3.5 Provisions common to all channels

3.5.1 If no agreement is reached between the administrations concerned, the I.F.R.B. shall make any study that may be requested by these administrations; the Board shall inform them of the result of the study and shall make such recommendations it may be able to offer for the solution of the problem.

3.5.2 Any administration may at any stage in the procedure described, or before applying it, request the assistance of the I.F.R.B., particularly in seeking the agreement of another administration.

3.5.3 If, after application of the procedure described in this Article, the administrations concerned have been unable to reach agreement, they may resort to the procedure described in Article 50 of the Convention. Administrations may also agree to apply the Optional Additional Protocol to the Convention.

3.5.4 In any case, the relevant provisions of the Article 9*) of the Radio Regulations shall be applied when assignments are notified. When, no agreement having been reached, the I.F.R.B., following the notification of an assignment, records it in the Master International Frequency Register, the entry shall be accompanied by a symbol indicating that the entry has been made subject to the reservation that no harmful interference will be caused to frequency assignments in conformity with the Agreement.

3.5.5 The I.F.R.B. shall maintain an up-to-date master copy of the Plan, and of Appendix / 1 / relating to low-power channels, taking account of the application of the procedure specified in this Article; to this end the I.F.R.B. shall prepare a document listing the amendments to be made to the Plan and Appendix / 1 / as a result of modifications made in accordance with the procedure of this Article and of the addition of new assignments in conformity with the Agreement.

*) or the corresponding article of the Radio Regulations currently in force.

3.5.6 The Secretary-General shall be informed by the I.F.R.B. of these changes made in the Plan and shall publish an up-to-date version of the Plan in an appropriate form as and when the circumstances justify and in any case every three years.

4. Cancellation of assignments

When an assignment in accordance with the Agreement is released, whether or not as a result of a modification (for instance a change of frequency), the administration concerned shall immediately so inform the I.F.R.B. The I.F.R.B. shall publish this information in a special section of its weekly circular.

ARTICLE 5

NOTIFICATION OF FREQUENCY ASSIGNMENTS

1. Whenever an administration intends to put into use an assignment in conformity with the Agreement it shall notify this assignment to the I.F.R.B. in accordance with the provisions of Article 9*) of the Radio Regulations. Any such assignment recorded in the Master Register as a result of the application of the provisions of Article 9*) of the Radio Regulations, shall, in addition to a date in Column 2a or Column 2b, bear a special symbol in the Remarks column.
2. In relations between Contracting Members, all frequency assignments brought into use in conformity with the Agreement and recorded in the Master Register, shall be considered to have the same status, irrespective of the dates entered in Column 2a or Column 2b for such assignments.

*) or the corresponding article of the Radio Regulations currently in force.

ARTICLE 6Special Arrangements

In addition to the procedures provided for in Article 4 of the Agreement and to facilitate their application with a view to improving the utilization of the Plan, Contracting Members may conclude special arrangements in accordance with the pertinent provisions of the Convention and of the Radio Regulations.

ARTICLE 7Scope of application of the Agreement

1. This Agreement shall bind Contracting Members in their relations with one another but does not bind those Members with respect to non-Contracting countries.
2. If a Member makes reservations with regard to any provision of this Agreement, other Members shall be free to disregard that provision in their relations with the Member which has made such reservations.

ARTICLE 8Approval of the Agreement

Members shall notify their approval of this Agreement, as promptly as possible, to the Secretary-General who shall at once inform the other Members of the Union.

ARTICLE 9Accession to the Agreement

1. Any Member of the Union in Regions 1 and 3 which has not signed this Agreement may accede thereto at any time. Such accession shall extend to the Plan as amended at the time of the accession and shall be made without reservation. The Secretary-General shall be notified thereof, and he shall inform the other Members of the Union.
2. Accession to the Agreement shall take effect on the date on which the notification of accession is received by the Secretary-General.
3. Any Member of the Union party to the Regional Agreement for the African Broadcasting Area (Geneva, 1966) which accedes to the present Agreement in conformity with paragraphs 1 and 2 of this Article, shall by this act of accession terminate its participation in the Regional Agreement for the African Broadcasting Area and the Plan annexed thereto.

ARTICLE / 10 /Termination of participation in the Agreement

1. Any Contracting Member shall have the right at any time to terminate its participation in the Agreement by a notification sent to the Secretary-General, who shall inform the other Members of the Union.
2. Such termination of participation shall take effect after a period of one year from the date of receipt, by the Secretary-General, of the said notification.

ARTICLE / 11 /Abrogation of the European Broadcasting Convention(Copenhagen, 1948) and annexed Copenhagen Plan

Additional Protocol I to the Final Acts of the Conference provides for the abrogation of the European Broadcasting Convention (Copenhagen, 1948) and the annexed Copenhagen Plan.

ARTICLE / 12 /Abrogation of the Regional Agreement for theAfrican Broadcasting Area, Geneva, 1966and the Plan annexed thereto

Additional Protocol II to the Final Acts of the Conference provides for the abrogation of the Regional Agreement for the African Broadcasting Area, Geneva, 1966, and the Plan annexed thereto.

ARTICLE / 13 /Effective date of the Agreement

The Agreement shall enter into force on twenty-three November, one thousand nine hundred and seventy-eight at 0001 hours GMT.

ARTICLE / 14 /Duration of the Agreement

1. The Agreement and the annexed Plan have been established with a view to meeting the requirements of the broadcasting services in the bands concerned for a period of .. years from the date of entry into force of the Agreement.
2. The Agreement shall remain in force until it is revised by a competent Conference of the Members of the Union in Regions 1 and 3, convened in accordance with the procedure specified in the Convention in force.

In witness whereof, the Delegates of the Members of the Union mentioned above have, on behalf of their respective competent authorities, signed this Agreement in a single copy in the Chinese, English, French, Russian and Spanish languages, in which, in case of dispute, the French text shall prevail. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member in Regions 1 and 3.

Done at Geneva,

A N N E X 1

to the

REGIONAL AGREEMENT CONCERNING THE USE BY
THE BROADCASTING SERVICE OF FREQUENCIES
IN THE MEDIUM FREQUENCY BANDS IN REGIONS 1 AND 3
AND IN THE LOW FREQUENCY BANDS IN REGION 1

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/ PLAN D'ASSIGNATIONS DE FREQUENCE AUX STATIONS DE RADIODIFFUSION DANS LES BANDES DES ONDES HECTOMETRIQUES (A L'EXCEPTION DES STATIONS UTILISANT LES CANAUX POUR EMETTEURS DE FAIBLE PUISSANCE) DANS LES REGIONS 1 ET 3 ET DANS LES BANDES DES ONDES KILOMETRIQUES DANS LA REGION 1.7

/ PLAN FOR THE ASSIGNMENT OF FREQUENCIES TO BROADCASTING STATIONS IN THE MEDIUM FREQUENCY BANDS (OTHER THAN TO STATIONS USING LOW-POWER CHANNELS) IN REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1.7

/ PLAN DE ASIGNACIÓN DE FRECUENCIAS A LAS ESTACIONES DE RADIODIFUSIÓN EN LAS BANDAS DE ONDAS HECTOMÉTRICAS (EXCEPTO LAS ESTACIONES QUE UTILIZAN LOS CANALES DE BAJA POTENCIA) EN LAS REGIONES 1 Y 3 Y EN LAS BANDAS DE ONDAS KILOMÉTRICAS EN LA REGIÓN 1.7

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	Rayonnement autorisé Authorized radiation Radiación autorizada		Limitations de rayonnement Restrictions on radiation Limitaciones de radiación (Pour antennes directives seulement) (For directional antennae only) (Sólo para antenas directivas)		Antenne Antenna Antena		Conductivité du sol (mS/m)	Horaire de fonctionnement (TMG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Rayonnement maximal Maximum radiation Radiación máxima	Azimet de rayonnement maximal Azimuth of maximum radiation Acimet de radiación máxima	Azimuts définissant le secteur à rayonnement limité Azimuths defining the sector of limited radiation Acimutes que definen el sector con radiación limitada	Rayonnement maximal dans le secteur Maximum radiation in the sector Radiación máxima en el sector	Type Tipo	Hauteur Height Altura	Ground Conductivity (mS/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	(dB)			(dB)		(m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

INFORMATION INCLUDED IN THE COLUMNS OF THE PLAN

- Column 1 : Channel frequency (kHz).
Channel number; this number is shown in brackets.
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in degrees and minutes.
- Column 5 : Necessary bandwidth (kHz); the value in kHz is preceded by the symbol A, B, C or D indicating the adjacent channel protection ratio that is to be employed in calculating the usable field strength. The cases corresponding to these symbols are listed in / 4.4.2 / of Annex / 2 / to the Agreement.
- Column 6 : Carrier power (kW).
- Column 7 : Maximum radiation in dB relative to 300 V c.m.f. or 1 kW e.m.r.p., determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.
- Column 8 : Azimuth of maximum radiation in degrees (clockwise) from True North.
- Column 9 : Azimuths defining the sector of limited radiation in degrees (clockwise) from True North.
- Column 10 : Maximum radiation in the sector, in dB relative to 300 V c.m.f. or 1 kW agreed e.m.r.p. determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.
- Column 11 : Type of antenna. The symbol A indicates a simple vertical base-fed antenna and the symbol B any other type of antenna described in Appendix / A / to the Plan.
- Column 12 : Height (metres) for a simple vertical antenna only.

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Column 13 : Ground conductivity in millisiemens/metre (mS/m).

Column 14 : Hours of operation (GMT) in hours and minutes, e.g., 0730 - 1800,
0000 - 2400 or 0500 - 0230.

Column 15 : Remarks indicated by symbols which are explained in
Appendix / B / to the Plan.

CHAPTER 4

4.3 Radiated power

The radiated power is assumed to be the produce of the nominal power of the transmitter and the gain of the antenna (relative to a short vertical antenna) without taking into account any losses*). It is expressed either by the cymomotive force (c.m.f. in V or in dB relative to 300 V) or by the effective monopole radiated power (e.m.r.p. in kW or in dB relative to 1 kW).

*) In practice, for transmitters of nominal power equal to or less than 3 kW account may be taken of various losses if the antenna is short. However, these losses should not exceed :

5 dB for antennae of height less than 0.1λ

2 dB for antennae of height less than 0.2λ

Moreover, in cyclonic zones (as to be defined by the W.M.O.) the power of the transmitter indicated above can be up to 10 kW instead of 3 kW.

4.9 Transmitter siting tolerances

The tolerances for the siting of transmitters are as follows :

4.9.1 Where both the interfering and the affected transmitters (on the same or adjacent channel) are situated in the part of Region 3 which is North of 11° S or where only one of them is located in this part of Region 3 but the mid-point between the two transmitters is also located in this Region, the tolerance is given in column Δd_t of Table 1 relating to the MF band.

4.9.2 For other transmitters, the tolerances are as follows :

4.9.2.1 When a transmitter is situated inland, the tolerable resiting distance is given in columns Δd_t of Table 1 or Table 2, as the case may be, provided that the new site is at a distance of not less than 100 km from the coast (MF band) or 200 km (LF band).

4.9.2.2 When the distance of the transmitter from the coast is, or becomes, less than 100 km for MF or 200 km for LF and if the transmitter is moved towards a station on the same or the adjacent channel in the direction of the sea, it is further required that the distance between the transmitter and the coast shall not be reduced by more than is shown in Δd_m of Tables 1 and 2.

TABLE 1MF band

Distance between transmitters (km)		Δd_t (km)	Δd_m (km)
same channel	adjacent channel		
> 1,000	> 700	20	2
500 - 1,000	200 - 700	10	2
< 500	< 200	5	2

TABLE 2LF band

Distance between transmitters (km)		Δd_t (km)	Δd_m (km)
same channel	adjacent channel		
> 1,000	> 400	20	5
≤ 1,000	≤ 400	10	5

FINAL PROTOCOLto theREGIONAL AGREEMENT CONCERNING THE USE BY THE BROADCASTING
SERVICE OF FREQUENCIES IN THE MEDIUM FREQUENCY BANDS IN
REGIONS 1 AND 3 AND IN THE LOW FREQUENCY BANDS IN REGION 1

At the time of signing the Regional Agreement concerning the use by the broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1, the undersigned delegates take note of the following statements forming part of the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975 :

ADDITIONAL PROTOCOL IRelating to the Abrogation of the European Broadcasting Convention

(Copenhagen, 1948) and the annexed Copenhagen Plan

The Delegates of the following Members of the International Telecommunication Union :

.....
 parties to the European Broadcasting Convention (Copenhagen, 1948) and meeting in Geneva for the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva 1975, convened in accordance with the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973),

agree that

1. the Regional Agreement concerning the use by the Broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1 and the annexed Plan shall replace the European Broadcasting Convention and annexed Copenhagen Plan which shall be abrogated*) save that the rights and obligations in respect of the coast stations listed in Chapter II of the Copenhagen Plan shall continue until modified by the agreement of the parties concerned or by a competent conference;
2. the abrogation of the European Broadcasting Convention and Copenhagen Plan in accordance with 1) above shall take effect on the coming into force of the Regional Agreement concerning the use by the Broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1 and of the annexed Plan provided that each of the contracting Governments to the European Broadcasting Convention shall have deposited with the Government of the Kingdom of Denmark (the depository of the aforesaid Convention) a declaration of acceptance of the abrogation of the European Broadcasting Convention and the annexed Copenhagen Plan;
3. the aforesaid Members shall take action to inform the Government of the Kingdom of Denmark that they formally agree to the abrogation of the European Broadcasting Convention and the Copenhagen Plan annexed thereto;
4. the aforesaid notification procedure shall be taken as soon as practicable before entry into force of the Regional Agreement concerning the use by the Broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1 and of the annexed Plan;
5. the Government of the Kingdom of Denmark should be asked to inform the Governments who are parties to the European Broadcasting Convention and the Secretary-General of the International Telecommunication Union of the notifications received in accordance with 3) above.

*) Explanatory information about the abrogation of the European Broadcasting Convention and annexed Copenhagen Plan is recorded in Document No. 125 of this Conference.

ADDITIONAL PROTOCOL II

Abrogating the Regional Agreement concerning the Use
by the Broadcasting Service of Frequencies in the
Medium Frequency Band in the African Broadcasting Area,
Geneva, 1966, and the Plan annexed thereto

The Delegates of the following countries Members of the
International Telecommunication Union :

.....

parties to the Regional Agreement concerning the use by the broadcasting service
of frequencies in the medium frequency band in the African Broadcasting Area,
Geneva, 1966, and meeting in Geneva for the Regional Administrative LF/MF
Broadcasting Conference (Regions 1 and 3), convened in accordance with the
provisions of the International Telecommunication Convention
(Malaga-Torremolinos, 1973),

agree

that the Regional Agreement concerning the use by the broadcasting
service of frequencies in the medium frequency band in the African Broadcasting
Area, Geneva, 1966 and the Plan annexed thereto shall be abrogated and
replaced by the Regional Agreement concerning the use by the broadcasting
service of frequencies in the medium frequency bands in Regions 1 and 3 and
in the low frequency bands in Region 1 on the date of entry into force of
this Agreement.

RESOLUTION B

Relating to the Accession to the Agreement of Countries
which are neither represented at the Conference
nor have sent their Frequency Requirements

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the Plan annexed to the Agreement cannot be truly comprehensive unless it takes into account the requirements of all countries in Regions 1 and 3;
- b) that some countries Members of the Union which were invited to the Conference have been unable, for one reason or another, to participate in its work and to inform it of their frequency requirements;
- c) that countries which are not at present Members of the Union should be encouraged to accede to the Agreement after acceding to the International Telecommunication Convention;
- d) that when these countries accede to the Agreement they might have some difficulty in obtaining satisfactory inclusion of their frequency requirements in the Plan;
- e) that these countries should be fully informed of their rights and obligations under the Agreement;

resolves

- 1. that when any of the countries mentioned in considering b) or c) indicates its intention of acceding to the Agreement the Secretary-General shall immediately bring this Resolution to its notice and invite it to inform the I.F.R.B. of its frequency requirements for inclusion in the Plan;

2. that if the assistance of the I.F.R.B. is requested, it shall undertake any necessary studies or examinations and communicate the results to the administration concerned;
3. that the administration concerned shall apply, either directly or through the I.F.R.B., the procedure laid down in Article 4 of the Agreement;
4. that Administrations shall endeavour to make satisfactory provision for the requirements thus expressed, for example, by agreeing to an increase in the usable field strength above the value given in Article 4, 3.2.5 of the Agreement.

RESOLUTION CRelating to the Low Frequencies
in the African Broadcasting Area

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3); Geneva, 1975,

noting

- a) that the World Administrative Radio Conference to be held in 1979 may modify the conditions governing the use of the 150-285 kHz band in Region 1;
- b) that in certain parts of Region 1 this frequency band is not allocated to broadcasting;
- c) that, owing to the lack of experimental data, the possibilities of using the LF band in the African Broadcasting Area are not yet known;
- d) that, apart from a few requirements, the countries in the African Broadcasting Area have not expressed any needs in this band;

considering

that this should not be interpreted as meaning that these countries are willing to forego the use of this band for broadcasting;

resolves

- 1. that, if one of the Contracting Members in the African Broadcasting Area proposes to bring a broadcasting station into service in the 150-285 kHz band in conformity with the Radio Regulations, the procedure laid down in Article 4 shall be applied;
- 2. that administrations shall endeavour to find a solution to meet these needs, for example, by accepting an increase of the usable field strength above the value laid down in Article 4, 3.25, of the Agreement.

RESOLUTION D

Relating to the Use of LF Bands shared between
the Broadcasting Service and the other
Radiocommunication Services

The Regional Administrative LF/MF Broadcasting Conference, (Regions 1 and 3), Geneva, 1975,

noting

that the use of the LF bands by broadcasting stations could adversely affect the stations of other radiocommunication services to which these bands are allocated in Regions 1 and 3, and particularly stations in the aeronautical radionavigation service and the maritime mobile service involving the safety of human life;

considering

- a) the terms of Chapter 8 of the Report of the First Session;
- b) that the Plan includes a number of new broadcasting transmitters in these bands and increases in the power of transmitters already in use, thereby considerably increasing the probability of harmful interference to the safety services;

taking into account

the provisions of Nos. 116 and 117 of the Radio Regulations;

resolves

1. that from the date of signature of the Final Acts of this Conference, new LF broadcasting transmitters shall not be brought into use nor changes be made to the characteristics of existing LF assignments until after the World Administrative Radio Conference to be held in 1979 has decided about the allocation of LF bands between the radiocommunication services concerned;
2. that if, nevertheless, such changes or additions would not increase the probability of harmful interference to the assignments of the other radiocommunication services, they may be brought into use;

3. that if such changes or additions would increase the probability of harmful interference to the assignments of the other radiocommunication services, they may be brought into use only with the agreement of the administrations whose frequency assignments to such stations, in conformity with the Table of Frequency Allocations, have been recorded in the Master Register;

4. that the administrations of Contracting Members be asked to bring this Resolution to the attention of the competent organizations in their countries responsible for other radiocommunication services and to recommend them to refrain, so far as possible, from bringing into use new stations likely to cause harmful interference to broadcasting stations operating in conformity with the Table of Frequency Allocations, pending the decisions the World Administrative Radio Conference, 1979, may make concerning the use of these shared frequency bands;

requests the Secretary-General

to bring this Resolution and Recommendation DD to the notice of all administrations.

RESOLUTION E

Relating to the Use of Bandwidth Saving Modulation Systems

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the application of bandwidth saving modulation systems will lead to more efficient use of the LF and MF bands;
- b) that the transition to such systems would pose difficulties with regard to transmitters and receivers, and frequency planning;

invites the C.C.I.R.

to expedite its studies of bandwidth saving modulation methods with particular reference to the technical and operational aspects of single-sideband and independent sideband modulation, taking into account the problems of compatibility with existing receivers;

resolves

- 1. that broadcasting stations may provisionally use bandwidth saving modulation methods on condition that interference in the same or adjacent channels concerned does not exceed the interference resulting from the application of double sideband modulation with full carrier (A3);
- 2. that any administration which envisages using these methods of emission shall seek the agreement of all affected administrations by following the procedure specified in Article 4 of the Agreement.

RESOLUTION F

Relating to the Updating of the Master International Frequency Register
on the Date of Entry into Force of the Agreement

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that in accordance with Article 5 of the Agreement, administrations shall notify to the I.F.R.B., in conformity with Article 9 of the Radio Regulations, frequency assignments which will be in use at the date of entry into force of the Agreement;
- b) that according to the provisions of Article 9 of the Radio Regulations, Contracting Members may possess, for their frequency assignments, certain rights attaching to the dates entered in Column 2a or 2b of the Master International Frequency Register opposite the assignments concerned with respect to other frequency assignments :

- to the broadcasting stations of non-Contracting Members, or
- stations of other radiocommunication services;

considering

- a) that, under the terms of the Agreement, Contracting Members have adopted for their broadcasting stations in Regions 1 and 3 the characteristics specified in the Plan and that consequently such stations will operate from the date of entry into force of the Agreement in conformity with the characteristics specified in the Plan, except in those cases covered by Resolution D;
- b) that the Conference has adopted uniform channel spacing necessitating modification of the carrier frequency of most of the stations in use and that this modification may affect, in particular, stations of other radiocommunication services;

resolves

1. that, on 23 November 1978 at 0001 hours (GMT), administrations shall change the carrier frequency and the other characteristics of their existing broadcasting stations in order to bring them into conformity with the Plan, except in those cases covered by Resolution D;
2. that administrations shall notify to the I.F.R.B. the frequency assignments which are so modified. This notification shall be made as soon as possible within the period specified in Article 9*) of the Radio Regulations (that is, ninety days before the date of entry into force of the Agreement);
3. that in addition to the information specified in Appendix 1 to the Radio Regulations, administrations shall indicate the frequency assignments whose entries are as a consequence to be deleted from the Master Register;
4. that in accordance with the provisions of Article 9*) of the Radio Regulations the I.F.R.B. shall examine these notifications with respect to existing entries in the Master Register and which relate to broadcasting stations of non-Contracting Members and stations of other radiocommunication services;
5. that, according to its finding, the I.F.R.B. shall record these assignments in the Master Register with the appropriate date in Column 2a or 2b. However, when the date to be recorded in Column 2a or 2b is different from that already registered this latter date shall be transferred to Column 13c with an appropriate symbol. At the same time the I.F.R.B. shall enter another symbol in the Remarks Column to indicate that this frequency assignment is in conformity with the Plan and that as a result it shall be considered as having the same status as any other assignments in conformity with the Plan irrespective of the date these later assignments may have in Column 2a or 2b;
6. that, three months after the date of entry into force of the Agreement, the I.F.R.B. shall send to each administration a list of its frequency assignments recorded in the Master Register for which the I.F.R.B. has received no notification and it shall urge such administrations to provide the necessary information for updating the Master Register;
7. that, if in spite of its reminder the I.F.R.B. receives no reply a symbol shall be inserted in the Remarks Column indicating that the assignment concerned is not in conformity with the Agreement.

invites the I.F.R.B.

to assist administrations in implementing the provisions of this Resolution.

*) or the corresponding article of the Radio Regulations currently in force.

RESOLUTION G

Relating to Frequency Assignments in Low-Power Channels (LPC)

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

noting

- a) that the planning of LPC frequency assignments is based on the criteria laid down in Annex 2 to the Agreement;
- b) that the provisions of Article 4, 3.3 of the Agreement apply to changes in or additions to LPC frequency assignments made after 23 November 1978;

considering

- a) that it has not been possible, during the Conference, to examine all LPC requirements;
- b) that the LPC frequency assignments might be coordinated among administrations before the entry into force of the Agreement;

resolves

- 1. that the LPC frequency assignments shall form Appendix 1 to the Plan;
- 2. that a provisional appendix established by the Conference shall contain :
 - those LPC frequency assignments which do not require the agreement of any other administration, and those for which the agreement of all administrations concerned has been obtained; and
 - those LPC frequency assignments for which it has not been possible to seek or obtain the agreement of all the administrations concerned during the Conference; such assignments shall have a symbol indicating this a list of any countries with which agreement has already been reached.

3. that the provisions of 4.8.1 of Annex 2 to the Agreement shall be used by administrations until 1 January 1978 to coordinate the LPC frequency assignments;

instructs the I.F.R.B.

1. to prepare a Final Appendix to the Plan for publication by the Secretary-General within the time limit specified for this purpose; to this end the I.F.R.B. shall amend the Provisional Appendix by including therein those frequency assignments which it has been possible to coordinate and by excluding these frequency assignments which it has not been possible to coordinate;

2. to provide every assistance to administrations which so request in order to facilitate coordination;

instructs the Secretary-General

to publish by 1 May 1978 the Appendix thus prepared by the I.F.R.B.

RECOMMENDATION AA

Relating to the Publication of a Handbook of
Radiation Diagrams of Directional Antennae
that can be used in the Broadcasting Service

The Regional Administrative LF/MF Broadcasting Conference
(Regions 1 and 3), Geneva, 1975,

considering

- a) that the calculation criteria adopted by the Conference, the essentials of which are contained in Annex 2 to the Agreement, require a knowledge of the antenna gain in the direction of propagation;
- b) that it is useful to have up-to-date information on the characteristics of LF and MF broadcasting antennae,
- c) that a handbook of radiation diagrams of directional antennae that can be used in the LF/MF broadcasting service is being prepared by the C.C.I.R. Secretariat in accordance with C.C.I.R. Recommendation 414 and Resolution 59;
- d) that it would be useful for measured values of antenna radiation diagrams to be available for comparison with the calculated radiation diagrams,

recommends

that administrations communicate to the Director of the C.C.I.R. all the results they may have of relevant measurements.

[/ APPENDICE 2 AU PLAN] - [/ APPENDIX 2 TO THE PLAN] - [/ APÉNDICE 2 AL PLAN]GAIN DE L'ANTENNE (en dB) POUR DIFFERENTS AZIMUTS ET ANGLES DE SITEANTENNA GAIN (dB) FOR DIFFERENT AZIMUTHS AND ANGLES OF ELEVATIONGANANCIAS DE ANTENA (en dB) PARA DIFERENTES ACIMUTES Y ANGULOS DE ELEVACIÓN

1 2 3 4

AZIMUT - AZIMUTH - ACIMUT

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INFORMATION CONCERNING THE RADIATION CHARACTERISTICS OF
TRANSMITTING ANTENNAE OTHER THAN SIMPLE VERTICAL
BASE-FED ANTENNAE

Column 1 : Symbol designating the country or the geographical area in which the station is located.

Column 2 : Channel frequency (kHz)

Column 3 : Name of transmitting station.

Column 4 : Angle of elevation

Note.- The azimuths and angles of elevation are expressed in terms of degrees.

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 192-E

17 November 1975

PLENARY MEETING

B.7

7th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE
TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for
first reading :

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C5	159(Rev.1 + Corr.)	Appendix to the Plan (stations in low-power channels)

Miss M. HUET
Chairman of the
Editorial Committee

Annex : pages 2 and 3



/ APPENDICE 1 AU PLAN / - / APPENDIX 1 TO THE PLAN / - / APÉNDICE 1 AL PLAN /

ASSIGNATIONS DE FREQUENCE DANS LES CANAUX POUR EMETTEURS DE FAIBLE PUISSANCE

FREQUENCY ASSIGNMENTS TO STATIONS IN THE LOW-POWER CHANNELS

ASIGNACIONES DE FRECUENCIA A ESTACIONES EN LOS CANALES DE BAJA POTENCIA

Fréquence assignée (kHz) (Numéro du canal)	Nom de la station d'émission	Symbole désignant le pays	Coordonnées géographiques de la station d'émission	Largeur de bande nécessaire (kHz)	Puissance de l'onde porteuse (kW)	Puissance apparente rayonnée sur antenne verticale courte (p.a.r.v.) (kW)	Hauteur de l'antenne (m)	Conductivité du sol (mS/m)	Horaire de fonctionnement (TMG)	Observations
Assigned frequency (kHz) (Channel number)	Name of transmitting station	Country symbol	Geographical coordinates of transmitting station	Necessary Bandwidth (kHz)	Carrier power (kW)	Effective monopole radiated power (e.m.r.p.) (kW)	Antenna height (m)	Ground Conductivity (mS/m)	Hours of operation (GMT)	Remarks
Frecuencia asignada (kHz) (Número del canal)	Nombre de la estación transmisora	Símbolo del país	Coordenadas geográficas de la estación transmisora	Anchura de banda necesaria (kHz)	Potencia de la portadora (kW)	Potencia radiada aparente respecto a una antena vertical corta (p.a.r.v.) (kW)	Altura de la antena (m)	Conductividad del suelo (mS/m)	Horario de funcionamiento (TMG)	Observaciones
1	2	3	4	5	6	7	8	9	10	11

INFORMATION INCLUDED IN THE COLUMNS OF THE TABLE INAPPENDIX / 1 / TO THE PLAN

- Column 1 : Channel frequency (kHz)
Channel number; this number is shown in brackets.
- Column 2 : Name of transmitting station.
- Column 3 : Symbol designating the country or the geographical area in which the station is located.
- Column 4 : Geographical coordinates of the transmitting station in degrees and minutes.
- Column 5 : Necessary bandwidth (kHz); the value in kHz is preceded by the symbol A, B, C or D indicating the curve in Figure in Annex that is to be employed in calculating the usable field strength. (See in Annex).
- Column 6 : Carrier power (kW).
- Column 7 : Effective monopole radiated power (kW).
- Column 8 : Height of antenna (metres).
- Column 9 : Ground conductivity, milliSiemens/metre (mS/m)
- Column 10 : Hours of operation (GMT) in hours and minutes, e.g., 0730 - 1800, 0000 - 2400 or 0500 - 0230.
- Column 11 : Remarks indicated by symbols which have the following meaning :
- 3 This assignment is to be coordinated (see Resolution No. / /).
- 4/... This assignment has already been coordinated with /... .., however coordination is still to be completed with other countries.

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 193-E

17 November 1975

Original : French

PLENARY MEETING

FINAL PROTOCOL

For Algeria

(Algerian Democratic and Popular Republic) :

The Algerian delegation, having noted the frequency assignment requirements for EL-AYOUN and VILLA CISNEROS submitted by the delegation of Spain, and having regard to the decolonization process now in progress under the auspices of the United Nations, declares that, by virtue of the principle of the right of peoples to self-determination, any arrangements adopted by the Conference concerning the Western Sahara cannot, when the time comes, either affect or limit the Sahraoui people in the exercise of their sovereign rights in respect of such arrangements.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 194-E

17 November 1975

Original : French

PLENARY MEETING

FINAL PROTOCOL

For France :

With regard to the station Sud-Radio 819 kHz, the French authorities, in conjunction with the competent administrations for the VALLEYS of ANDORRA, will seek practical means of installing a directional antenna at the Sud-Radio station in order to reduce the radiation from that station in the directions of WARSAW (sector between azimuths 45° and 55°) and RABAT (sector between azimuths 210° and 225°).

The administrations concerned will carry out a bilateral study on these arrangements with a view to the desired coordination.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 195-E

17 November 1975

Original : English

PLENARY MEETING

FINAL PROTOCOL

For the Syrian Arab Republic :

A. The Administration of Syria cannot agree to the assignment of frequency 666 to radio broadcasting transmitter in Greece with power 250 kw at night because it decreases the usable distance to the Syrian existing transmitter to 19 km.

The Administration of Syria reserves the right to take all requisite action with respect to the transmitter to avoid prejudice to radio broadcasting and to the economic interests connected therewith.

B. The Administration of Syria cannot agree to the assignment of frequency 954 kHz to Turkish station Serial No. 3059 which decreases the coverage area of the Syrian transmitter to 14 km with interference more than 100 dB.

C. The Administration of Syria cannot agree with the harmful interference from Bulgarian high power transmitter working on frequency 747 kHz.

The Administration of Syria requests the Administration of Bulgaria to make every effort to reduce the interference level.



BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 196-E

18 November 1975

Original : French

COMMITTEE 3

REPORT OF THE BUDGET CONTROL COMMITTEE TO THE PLENARY MEETING

The Budget Control Committee held five meetings during the second Session of the Broadcasting Conference and examined the various points arising from its terms of reference.

As a result of its work and in accordance with Chapter XI, Rule 5, of the International Telecommunication Convention, Torremolinos, 1973, this report is presented for consideration by the Plenary Meeting.

1. Budget of the Conference

The Budget Control Committee took note of the budget of the Conference as approved by the Administrative Council at its 29th Session and revised at its 30th Session in 1975. This budget amounted to 3.417.000 Swiss francs (see Document No. 19).

2. Situation of Conference expenditure

In accordance with the provisions of the International Telecommunication Convention, Torremolinos, 1973, the Budget Control Committee presents to the Plenary Meeting a report showing, as accurately as possible, the estimated expenditure of the Conference.



In accordance with these provisions, a statement including the budget as adjusted by the Administrative Council at its 30th Session, the breakdown of the amounts set aside in the budget for the various chapters and items, and the expenditure incurred up to 14 November 1975 for the Broadcasting Conference is submitted for consideration by the Plenary Meeting. This statement, which is given in Annex I to this document is supplemented by an indication of the commitments to expenditure up to that date and estimates of foreseeable expenditure until the close of the Conference.

It can be seen from this statement that total expenditure is estimated at 3,411,000 Swiss francs, or 6,000 Swiss francs less than the budget approved by the Administrative Council.

This statement of expenses takes account of the cost of using computers outside the Union, amounting to 10,000 Swiss francs per weekend. These costs are estimated at 81,000 Swiss francs, including the use of the computer before the beginning of the Conference. It will be noted that this expenditure of 81,000 Swiss francs, which was not foreseen in the budget, could be entirely absorbed by savings on other budget items.

With regard to the item "Reimbursement of salaries to the ordinary budget" (see Article 17, Point 2, of the Financial Regulations), the Budget Control Committee noted that in the case of a regional conference meeting in Geneva, there are difficulties in defining the amount to be borne by the regional conference and credited to the ordinary budget. The Committee accordingly decided to recommend that the sum provided in the budget by the Administrative Council - i.e., 120,000 Swiss francs - should be maintained unchanged in the accounts of the Conference.

It should also be noted that, under Article 15, paragraph 3, of the Financial Regulations, the Budget Control Committee authorized the following transfers of credits from one chapter to another :

Chapter I to Chapter II	56,000 Swiss francs
Chapter III to Chapter II	76,000 Swiss francs.

3. Contributions of recognized private operating agencies and non-exempted international organizations

Under Article 16 of the Financial Regulations of the I.T.U., the report of the Budget Control Committee to the Plenary Meeting must include a list of the recognized private operating agencies and international organizations which are required to contribute to defraying the expenses of the Broadcasting Conference. To this list must be added a list of the international organizations which have been exempted from payment in accordance with No. 548 of the Convention.

The list in question is given in Annex 3 to this document.

4. Breakdown of Conference expenditure

Since this Conference is a regional conference within the meaning of Article 7, No. 42, of the Torremolinos Convention, 1973, and concerns countries situated in Regions 1 and 3 as defined in Article 5 of the Radio Regulations, the costs involved must be borne by all the Members of those Regions in accordance with their classes of contribution and on the same basis by the Members of Region 2 participating in it. The list of Members responsible for meeting the costs of the Conference will be found in Annex 2.

At its 27th Session, the Administrative Council decided that the Regional Broadcasting Conference should be divided into two sessions. Since, however, its new Convention came into force on 1 January 1975, the costs of the First Session in 1974 were charged to Members at the end of the year 1974.

According to the figures given in Annex 1 to this document, total expenditure is estimated at 3,411,000 Swiss francs. Taking account of the contributory units of Members responsible for meeting the costs of the Conference (see Annex 2), the amount of the contributory unit works out at 10,320 Swiss francs.

5. Organization of the Conferences

In accordance with Chapter XI, Rule 5, No. 442 of the Convention, the Budget Control Committee is also responsible for assessing the organization and the facilities made available to delegates.

The Budget Control Committee has looked into this matter and it considered that, in general, the facilities available to delegates and the organization of the Conference were very satisfactory.

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In accordance with No. 445 of the Torremolinos Convention, 1973, this report together with the observations of the Plenary Meeting will be transmitted to the Secretary-General for submission to the Administrative Council at its next annual session.

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The Plenary Meeting is requested to approve this report.

M.K. BASU
Chairman

Annexes : 3

A N N E X 1

No.	Item	Approved budget	Expenditure at 14 November 1975			Total expenditure	Difference
			Actual	Committed	Estimated		
14.100	<u>I. Staff</u>						
14.101	Salaries and related expenses	2,083,000	988,000	893,000	185,000	2,066,000 1)	- 17,000
14.102	Reimbursement of salaries to the ordinary budget	120,000	-	120,000	-	120,000	-
14.103	Travel expenses	138,000	32,000	62,000	2,000	96,000	- 42,000
14.104	Insurance	43,000	9,000	-	37,000	46,000	+ 3,000
		2,384,000	1,029,000	1,075,000	224,000	2,328,000	- 56,000 *)
14.200	<u>II. Premises and equipment</u>						
14.201	Premises, furniture, machines	610,000	291,000	301,000	30,000	622,000	+ 12,000
14.202	Document production	163,000	167,000	11,000	9,000	187,000	+ 24,000
14.203	Office supplies and overheads	19,000	15,000	12,000	2,000	29,000	+ 10,000
14.204	Post, telegraph and telephone	24,000	27,000	4,000	4,000	35,000	+ 11,000
14.205	Technical material	1,000	25,000	28,000	28,000	81,000 2)	+ 80,000
14.206	Sundry and unforeseen	10,000	2,000	-	3,000	5,000	- 5,000
		827,000	527,000	356,000	76,000	959,000	+ 132,000 *)
14.300	<u>III. Other expenses</u>						
14.301	I.F.R.B. preparatory work	13,000	5,000	-	-	5,000	- 8,000
14.302	Final Acts of the Conference	103,000	-	-	70,000	70,000	- 33,000
14.303	Interest credited to the ordinary budget	90,000	-	-	49,000	49,000	- 41,000
		206,000	5,000	-	119,000	124,000	- 82,000 *)
	TOTAL	3,417,000	1,561,000	1,431,000	419,000	3,411,000	- 6,000
*) Expenditure in excess of the credit for Chapter II covered by transfer of credits from Chapter I (56,000 frs.) and Chapter III (76,000 frs.), in accordance with the provisions of Article 15 of the Financial Regulations of the Union. 1) Including 237,000 frs. for overtime. 2) Including expenditure for the use of computers.							

A N N E X 2

LIST OF MEMBERS AND ASSOCIATE MEMBERS OF THE UNION
AND CONTRIBUTORY UNITS

<u>A. Members in Regions 1 and 3</u>	<u>Contributory units</u>
1. Afghanistan (Republic of)	$\frac{1}{2}$
2. Albania (People's Republic of)	$\frac{1}{2}$
3. Algeria (Algerian Democratic and Popular Republic)	1
4. Germany (Federal Republic of)	20
5. Saudi Arabia (Kingdom of)	1
6. Australia	18
7. Austria	1
8. Bahrain (State of)	$\frac{1}{2}$
9. Bangladesh (People's Republic of)	1
10. Belgium	5
11. Byelorussian Soviet Socialist Republic	1
12. Burma (Socialist Republic of the Union of)	$\frac{1}{2}$
13. Botswana (Republic of)	$\frac{1}{2}$
14. Bulgaria (People's Republic of)	1
15. Burundi (Republic of)	$\frac{1}{2}$
16. Cameroon (United Republic of)	$\frac{1}{2}$
17. Central African Republic	$\frac{1}{2}$
18. China (People's Republic of)	20
19. Cyprus (Republic of)	$\frac{1}{2}$
20. Vatican City State	$\frac{1}{2}$
21. Congo (People's Republic of the)	$\frac{1}{2}$
22. Korea (Republic of)	1
23. Korea (Democratic People's Republic of) *)	
24. Ivory Coast (Republic of the)	1
25. Dahomey (Republic of)	$\frac{1}{2}$
26. Denmark	5
27. Egypt (Arab Republic of)	2
28. United Arab Emirates	1
29. Spain	3
30. Ethiopia	1
31. Fiji	$\frac{1}{2}$
32. Finland	3
33. France	30
34. Gabon Republic	$\frac{1}{2}$
35. Gambia	$\frac{1}{2}$
36. Ghana	1
37. Greece	1
38. Guinea (Republic of)	$\frac{1}{2}$
39. Equatorial Guinea (Republic of)	$\frac{1}{2}$
40. Upper Volta (Republic of)	$\frac{1}{2}$
41. Hungarian People's Republic	1

*) The General Secretariat has not yet been informed of the class of contribution.

Members in Regions 1 and 3 (continued)Contributory
units

42. India (Republic of)	13
43. Indonesia (Republic of)	1
44. Iran	1
45. Iraq (Republic of)	$\frac{1}{2}$
46. Ireland	2
47. Iceland	$\frac{1}{2}$
48. Israel (State of)	1
49. Italy	10
50. Japan	20
51. Jordan (Hashemite Kingdom of)	$\frac{1}{2}$
52. Kenya (Republic of)	$\frac{1}{2}$
53. Khmer Republic	$\frac{1}{2}$
54. Kuwait (State of)	1
55. Laos (Kingdom of)	$\frac{1}{2}$
56. Lesotho (Kingdom of)	$\frac{1}{2}$
57. Lebanon	1
58. Liberia (Republic of)	1
59. Libyan Arab Republic	$\frac{1}{2}$
60. Liechtenstein (Principality of)	$\frac{1}{2}$
61. Luxembourg	$\frac{1}{2}$
62. Malaysia	3
63. Malawi	$\frac{1}{2}$
64. Maldives (Republic of)	$\frac{1}{2}$
65. Malagasy Republic	1
66. Mali (Republic of)	$\frac{1}{2}$
67. Malta (Republic of)	$\frac{1}{2}$
68. Morocco (Kingdom of)	1
69. Mauritius	$\frac{1}{2}$
70. Mauritania (Islamic Republic of)	$\frac{1}{2}$
71. Monaco	$\frac{1}{2}$
72. Mongolian People's Republic	$\frac{1}{2}$
73. Nauru (Republic of)	$\frac{1}{2}$
74. Nepal	$\frac{1}{2}$
75. Niger (Republic of the)	$\frac{1}{2}$
76. Nigeria (Federal Republic of)	2
77. Norway	5
78. New Zealand	3
79. Oman (Sultanate of)	$\frac{1}{2}$
80. Uganda (Republic of)	$\frac{1}{2}$
81. Pakistan	2
82. Papua New Guinea	$\frac{1}{2}$
83. Netherlands (Kingdom of the)	10
84. Philippines (Republic of the)	1
85. Poland (People's Republic of)	3
86. Portugal	$\frac{1}{2}$
87. Qatar (State of)	$\frac{1}{2}$
88. Syrian Arab Republic	$\frac{1}{2}$
89. German Democratic Republic	3

Members in Regions 1 and 3 (continued)Contributory
units

90. Ukrainian Soviet Socialist Republic	3
91. Roumania (Socialist Republic of)	1
92. United Kingdom of Great Britain and Northern Ireland	30
93. Rwanda (Republic of)	$\frac{1}{2}$
94. Senegal (Republic of the)	1
95. Sierra Leone	$\frac{1}{2}$
96. Singapore (Republic of)	1
97. Somali Democratic Republic	$\frac{1}{2}$
98. Sudan (Democratic Republic of the)	1
99. Sri Lanka (Ceylon) (Republic of)	$\frac{1}{2}$
100. Sweden	10
101. Switzerland (Confederation of)	10
102. Swaziland (Kingdom of)	$\frac{1}{2}$
103. Tanzania (United Republic of)	$\frac{1}{2}$
104. Chad (Republic of the)	$\frac{1}{2}$
105. Czechoslovak Socialist Republic	3
106. Thailand	$1\frac{1}{2}$
107. Togolese Republic	$\frac{1}{2}$
108. Tonga (Kingdom of)	$\frac{1}{2}$
109. Tunisia	2
110. Turkey	2
111. Union of Soviet Socialist Republics	30
112. Viet-Nam (Republic of)	$\frac{1}{2}$
113. Yemen Arab Republic	$\frac{1}{2}$
114. Yemen (People's Democratic Republic of)	$\frac{1}{2}$
115. Yugoslavia (Socialist Federal Republic of)	1
116. Zaire (Republic of)	1
117. Zambia (Republic of)	$\frac{1}{2}$

B. Members in Region 2 participating in the conference

NONE

 330 $\frac{1}{2}$

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A N N E X 3

PARTICIPATION OF INTERNATIONAL ORGANIZATIONS AND RECOGNIZED
PRIVATE OPERATING AGENCIES IN THE WORK OF THE FIRST SESSION
OF THE BROADCASTING CONFERENCE

	<u>Class of contribution</u>
I. <u>INTERNATIONAL ORGANIZATIONS</u>	
a) <u>Specialized agencies</u>	
- International Civil Aviation Organization (ICAO)	exempt
b) <u>Other international organizations</u>	
- International Air Transport Association (IATA)	exempt
- International Special Committee on Radio Interference (C.I.S.P.R.)	exempt
- International Radio and Television Organization (O.I.R.T.)	exempt
- Arab Telecommunication Union (ATU)	exempt
- Asian Broadcasting Union (ABU)	exempt
- Arab States Broadcasting Union (ASBU)	exempt
- Union of National Radio and Television Organizations of Africa (U.R.T.N.A.)	exempt
- European Broadcasting Union (E.B.U.)	exempt
II. <u>RECOGNIZED PRIVATE OPERATING AGENCIES</u>	
NONE	

INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 197-E

18 November 1975

Original : English

PLENARY MEETING

Note by the Chairman of the Conference

The attached letter from the Head of the Delegation of the German Democratic Republic is published for the information of the Conference.

Derek C. ROSE
Chairman of the
Conference

Annex : 1



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A N N E X

To the
Chairman of the Second Session
of the Broadcasting Conference
Mr. Derek C. Rose
Geneva

Geneva, 18 November 1975

Sir,

The delegation of the German Democratic Republic to the Second Session of the Broadcasting Conference has the honour to bring to your notice that it shares the point of view of the delegation of the U.S.S.R. explained in Document No. 186 and that it also takes note of the statements, conference documents and results of the Conference referring to Berlin (West) only to the extent as they are in accordance with the Quadripartite Agreement of 3 September 1971.

I should ask you to circulate this statement as a conference document.

Accept, Sir, the assurances of my high consideration,

B. CZERWINSKI
Head of the delegation of the
German Democratic Republic

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 198-E

18 November 1975

Original : English

PLENARY MEETING

FINAL PROTOCOL

For the Federal Republic of Nigeria :

The delegation of the Federal Republic of Nigeria notes that as a result of a proposed increase in power to 1 000 kW by the Administration of Greece of their assignment on 729 KHz contained in the Copenhagen Plan for 150 kW our assignment in the same frequency in the African Plan (Geneva) 1966 will suffer harmful interference at a level of 88 dB.

It is recalled that this interference has been brought to the attention of the Greek delegation and that of the I.F.R.B. and appeals made to Greece to take measures to reduce it:

Since the level of interference to our assignment on this frequency has remained the same, the Federal Republic of Nigeria wishes to reserve her right to increase power and direct the beam of her transmission on this frequency anywhere in order to overcome this interference without any further consultation with Greece.



INTERNATIONAL TELECOMMUNICATION UNION

BROADCASTING CONFERENCE

(SECOND SESSION)

GENEVA, 1975

Document No. 199-E

18 November 1975

Original : English

PLENARY MEETING

Note by the Chairman of the Conference

The attached text is published for the information of the Conference.

Derek C. ROSE
Chairman of the Conference

Annex : 1



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A N N E X

To the
Chairman of the Second Session
of the Broadcasting Conference
Mr. Derek C. Rose
Geneva

Geneva, 18 November 1975

Sir,

I hereby request you to have circulated as an official Conference document our statement that we share the views of the delegation of the Union of Soviet Socialist Republics which are expressed in Document No. 186.

Delegation of the

(Signature)	Ukrainian Soviet Socialist Republic
(Signature)	Byelorussian Soviet Socialist Republic
(Signature)	People's Republic of Bulgaria
(Signature)	Hungarian People's Republic
(Signature)	Mongolian People's Republic
(Signature)	Polish People's Republic
(Signature)	Socialist Republic of Roumania
(Signature)	Czechoslovak Socialist Republic

UNION INTERNATIONALE DES TELECOMMUNICATIONS

CONFERENCE DE RADIODIFFUSION

(DEUXIEME SESSION)

GENEVE, 1975

Document N° 200-F/E/S
23 février 1976

Le numéro de document 200 n'a pas été
utilisé.

Document No. 200 has not been used.

El número de documento 200 no ha
sido utilizado.

