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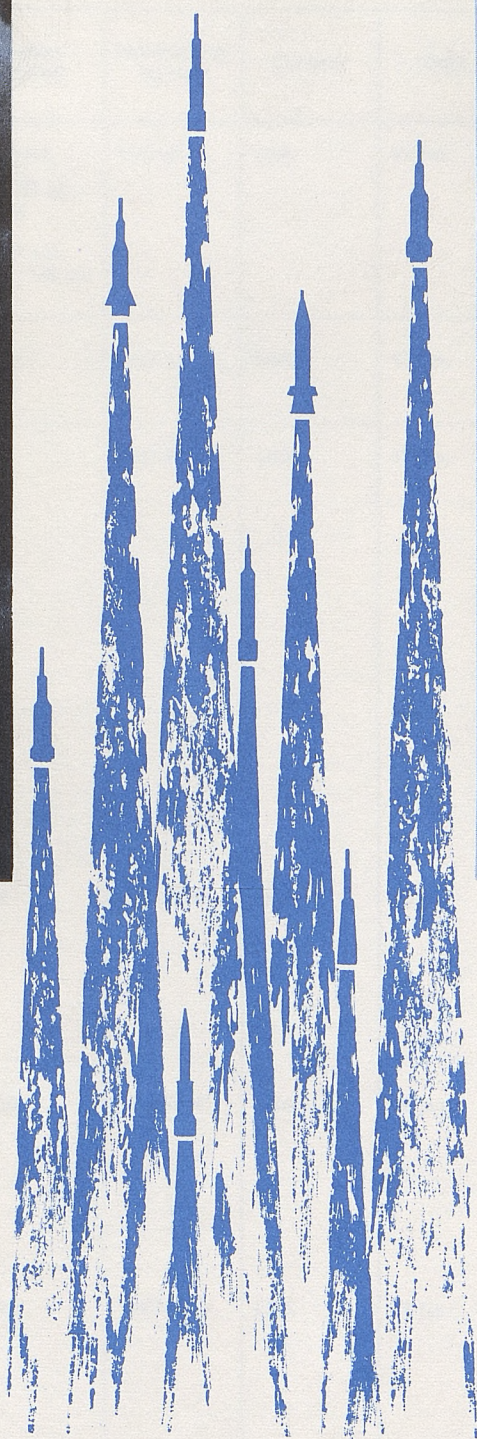
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(ITU) للاتصالات الدولي الاتحاد في والمحفوظات المكتبة قسم أجراه الضوئي بالمسح تصوير نتاج (PDF) الإلكترونية النسخة هذه والمحفوظات المكتبة قسم في المتوفرة الوثائق ضمن أصلية ورقية وثيقة من نقلًا.

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Настоящий электронный вариант (PDF) был подготовлен в библиотечно-архивной службе Международного союза электросвязи путем сканирования исходного документа в бумажной форме из библиотечно-архивной службы МСЭ.



THIS list of artificial satellites launched in 1967 was prepared from information provided by Telecommunication Administrations, the Committee on Space Research (COSPAR), the Goddard Space Flight Center (GSFC), the United States National Aeronautics and Space Administration (NASA), the International Frequency Registration Board (IFRB), one of the four permanent organs of the ITU, and from details published in the specialized press. For decayed satellites the data concerning the orbit parameters are those immediately after launching. For the others, still in orbit, the orbit parameters are those reported on 31 December 1967 by GSFC. Fragments or stages of rockets left over from launching operations and placed in orbit with the various spacecraft have not been included.

table of artificial satellites launched between 1 january and 31 december 1967



Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Intelsat-II F-2 weight: 162 kg; cylindrical satellite; height: 67 cm; diameter: 142 cm	1967-01-A	USA	11 Jan.	35 784 km 35 798 km	1436.3 min 1.5°	Transmission: 4121 Mc/s 24 W Reception: 6346 Mc/s	First Intelsat telecommunica- tion satellite in synchronous equatorial orbit over the Pacific Ocean at approxima- tely 180 East longitude. 240 high-grade two-way voice channels. Solar cells
No name	1967-02-A	USA	14 Jan.	180 km 365 km	90 min 80.1°		Decayed on 2 February 1967
IDCSP-8	1967-03-A	USA	18 Jan.	33 528 km 33 822 km	1329.6 min 0.6°	Transmission: 401.1875 Mc/s 0.25 W 401.2125, 401.2375 Mc/s 0.25 W 7267.025, 7271.7125 7277.9625, 7285.775 Mc/s 2 W 7299.5 Mc/s 0.2 W Reception: 7985.745; 7990.4325, 7996.6825, 8004.495 Mc/s	Initial Defense Communica- tion Satellite Project. Satel- lite No. 8
IDCSP-9	1967-03-B	USA	18 Jan.	33 539 km 33 830 km	1330.0 min 0.6°	Same frequen- cies as IDCSP-8 except for 401.0125 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 9
IDCSP-10	1967-03-C	USA	18 Jan.	33 514 km 33 884 km	1330.8 min 0.5°	Same frequen- cies as IDCSP-8 except for 401.0375 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 10
IDCSP-11	1967-03-D	USA	18 Jan.	33 593 km 33 863 km	1332.2 min 0.6°	Same frequen- cies as IDCSP-8 except for 401.0625 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 11
IDCSP-12	1967-03-E	USA	18 Jan.	33 603 km 33 934 km	1334.2 min 0.6°	Same frequen- cies as IDCSP-8 except for 401.0875 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 12
IDCSP-13	1967-03-F	USA	18 Jan.	33 641 km 33 993 km	1336.6 min 0.8°	Same frequen- cies as IDCSP-8 except for 401.1125 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 13

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
IDCSP-14	1967-03-G	USA	18 Jan.	33 630 km 34 121 km	1339.6 min 0.8°	Same frequen- cies as IDCSP-8 except for 401.1375 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 14
IDCSP-15	1967-03-H	USA	18 Jan.	33 705 km 34 185 km	1343.0 min 0.7°	Same frequen- cies as IDCSP-8 except for 401.1625 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 15
Cosmos-138	1967-04-A	USSR	19 Jan.	193 km 293 km	89.2 min 65°	19.995 Mc/s	Decayed on 27 January 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-139	1967-05-A	USSR	25 Jan.	144 km 210 km	87.5 min 50°		Decayed on 25 January 1967
ESSA-4 132 kg cartwheel satellite, height: 56 cm, diameter: 107 cm	1967-06-A	USA	26 Jan.	1328 km 1441 km	113.4 min 101.9°	136.770 Mc/s 260 mW 137.500 Mc/s 5 W	Environmental Survey SAatel- lite. Two Automatic Picture Transmission (APT) sys- tems. Solar cells
No name	1967-07-A	USA	2 Feb.	154 km 294 km	88.8 min 102.4°		Decayed on 12 February 1967
Lunar Orbiter-3 385 kg. truncated cone-shaped spacecraft, height: 1.7 m, diameter: 3.7 m	1967-08-A	USA	4 Feb.	selenocentric orbit 199 km 1850 km	218.6 min 21°	2298.3 Mc/s 0.5 W.	Placed into orbit around the moon to obtain medium and high resolution photogra- phy of lunar surface for assessment of possible <i>Apollo</i> landing sites and informa- tion on moon's environ- ment. Four solar panels. Impacted on moon on 9 October 1967
Cosmos-140	1967-09-A	USSR	7 Feb.	170 km 241 km	88.48 min 51.7°	20.008 Mc/s	Decayed on 9 February 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-10-A	USA	8 Feb.	790 km 870 km	101.4 min 98.8°		
Diadème-I D1-C 22.7 kg cylinder, height: 50 cm, diameter: 20 cm	1967-11-A	France	8 Feb.	567 km 1342 km	104.1 min 39.9°	136.980 Mc/s 250 mW 149.70 Mc/s 150 mW 399.920 Mc/s 100 mW	Geodetic satellite. Four panels carrying solar cells and honeycomb re- flectors
Cosmos-141	1967-12-A	USSR	8 Feb.	210 km 345 km	89.8 min. 72.9°	19.995 Mc/s	Decayed on 16 February 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Cosmos-142	1967-13-A	USSR	14 Feb.	214 km 1362 km	100.3 min 48.4°		Decayed on 6 July 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Diadème-II D1-D 22.7 kg cylinder, height: 50 cm, diameter: 20 cm	1967-14-A	France	15 Feb.	589 km 1876 km	110.1 min 39.4°	136.980 Mc/s 250 mW 149.70 Mc/s 150 mW 399.920 Mc/s 100 mW	Geodetic satellite transmit- ted until 5 April 1967. Four panels carrying solar cells and honeycomb reflectors
No name	1967-15-A	USA	22 Feb.	178 km 378 km	90.1 min 80.0°		Decayed on 11 March 1967
No name	1967-16-A	USA	24 Feb.	136 km 352 km	89.8 min 107.0°		Decayed on 6 March 1967
Cosmos-143	1967-17-A	USSR	27 Feb.	204 km 302 km	89.5 min 65°	19.995 Mc/s	Decayed on 7 March 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-144	1967-18-A	USSR	28 Feb.	579 km 631 km	96.7 min 81.2°	461.5 Mc/s	Meteorological satellite known also as active meteorological space sta- tion No. 1. For use in USSR Meteor system. Two solar panels
Cosmos-145	1967-19-A	USSR	3 March	199 km 1049 km	97.2 min 48.3°		Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
OSO-3 281 kg, height: 97 cm, diameter: 234 cm	1967-20-A	USA	8 March	533 km 560 km	95.6 min 32.8°	136.290 Mc/s 6 mW 149.52 Mc/s	Orbiting Solar Observatory. Nine experiments—solar cells
Cosmos-146	1967-21-A	USSR	10 March	190 km 310 km	89.2 min 51.5°		Decayed on 18 March 1967. Earth-oriented meteoro- logical research satellite.
Cosmos-147	1967-22-A	USSR	13 March	198 km 317 km	89.5 min 65°	19.995 Mc/s	Decayed on 21 March 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-148	1967-23-A	USSR	18 March	275 km 436 km	91.3 min 71°		Decayed on 7 May 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-149	1967-24-A	USSR	22 March	248 km 297 km	89.8 min 48.4°		Decayed on 7 April 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Cosmos-150	1967-25-A	USSR	22 March	206 km 373 km	90.1 min 65.7°	19.995 Mc/s	Decayed on 30 March 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Intelsat-II F-3 162 kg cylinder, height: 67 cm, diameter: 142 cm	1967-26-A	USA	22 March	35 774 km 35 801 km	1436.1 min 1.0°	Transmission: 4121 Mc/s 24 W Reception: 6346 Mc/s	Intelsat telecommunication satellite in synchronous equatorial orbit over the Atlantic Ocean at approxi- mately 6° West longitude, 240 high-grade two-way voice channels—solar cells
Cosmos-151	1967-27-A	USSR	24 March	597 km 642 km	97.1 min 56.0°		Meteorological satellite
Cosmos-152	1967-28-A	USSR	25 March	283 km 512 km	92.2 min 71°		Decayed on 5 August 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-29-A	USA	30 March	186 km 388 km	90.0 min 85.0°		Decayed on 17 April 1967
Cosmos-153	1967-30-A	USSR	4 April	202 km 291 km	89.3 min 64.6°	19.995 Mc/s	Decayed on 12 April 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
ATS-2 cylindrical satellite 324 kg, height: 1.8 m, diameter: 1.4 m	1967-31-A	USA	5 April	183 km 8808 km	188.1 min 28.3°	136.47 137.35 Mc/s 2.1 W 4120, 4179 Mc/s 4 or 8 W	Application Technology Satellite-2. Failed to reach synchronous equatorial orbit. Elliptical orbit pre- vented gravity gradient test. Communications ex- periments
Cosmos-154	1967-32-A	USSR	8 April	186 km 232 km	88.5 min 51.6°		Decayed on 10 April 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-155	1967-33-A	USSR	12 April	203 km 286 km	89.2 min 51.8°	19.995 Mc/s	Decayed on 20 April 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-34-A	USA	13 April	1051 km 1080 km	106.5 min 90.2°		
Surveyor-3 1005 kg tetra- hedral framed spacecraft, height: 3 m, diameter of tripod landing about 4.3 m	1967-35-A	USA	17 April	lunar intercept trajectory		2295 Mc/s 10W	Landed on moon on 19 April 1967 to take photographs of lunar surface and to study lunar soil characteristics— solar panels

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
ESSA-5 145 kg cartwheel satellite, height: 56 cm, diameter: 107 cm	1967-36-A	USA	20 April	1356 km 1424 km	113.5 min 101.9°	235 Mc/s 5 W 136.77 Mc/s 250 mW	Environmental Survey SATellite for transmission of meteorological data— solar cells
Soyuz-1	1967-37-A	USSR	23 April	201 km 224 km	88.6 min 51.7°	15.008, 18.035, 20.008 Mc/s	Manned spacecraft. Re-entered 24 April 1967 after 17 orbits. Failed to land. Pilot, V. Komarov, killed
San Marco-2 129 kg spheric satellite diameter: 66 cm	1967-38-A	Italy	26 April	218 km 748 km	94.9 min 2.9°	136.740 Mc/s 20.005 Mc/s	Decayed on 14 October 1967. Measurements of atmo- spheric density and study of radio propagation. Chemical battery
Cosmos-156	1967-39-A	USSR	27 April	584 km 637 km	96.8 min 81.1°	464 Mc/s	Meteorological satellite known also as active meteo- rological space station No. 2 for use in Meteor system. Two solar panels
Vela-7 230 kg, 26-sided spacecraft diameter: 1.4 m	1967-40-A	USA	28 April	109 057 km 113 448 km	6681.9 min 32.6°		Nuclear Detection Satellite (NDS or Vela). Solar cells
Vela-8 230 kg, 26-sided spacecraft, diameter: 1.4 m	1967-40-B	USA	28 April	107 155 km 115 227 km	6672.7 min 32.5°		Nuclear Detection Satellite (NDS or Vela). Solar cells
ERS-18 9 kg octahedral satellite, 28 cm on each side	1967-40-C	USA	28 April	9 133 km 110 683 km	2830.6 min 34.1°	136.530 Mc/s	Environmental Research Satellite. Solar cells
ERS-20 9 kg octahedral satellite, 28 cm on each side	1967-40-D	USA	28 April	9 211 km 110 625 km	2831.2 min 34.4°	136.260 Mc/s	Environmental Research Satellite (or OV5-3—Orb- ital Vehicle). Solar cells
ERS-27 9 kg octahedral satellite 28 cm on each side	1967-40-E	USA	28 April	9 484 km 110 350 km	2831.1 min 34.5°	136.380 Mc/s	Environmental Research Satellite (or OV5-1—Orb- ital Vehicle). Solar cells
Lunar Orbiter-4 385 kg truncated cone shaped spacecraft, height: 1.7 m, diameter: 1.5 m	1967-41-A	USA	4 May	selenocentric orbit 2 705 km 721 min 6 035 km 85.5°		2298.3 Mc/s 0.5 W	Placed into orbit around the moon to obtain medium and high resolution photo- graphs of lunar surface for assessment of possible Apollo landing sites and information on moon's en- vironment. Four solar panels. Impacted the moon on 6 October 1967
Ariel-3 90 kg cylindrical satellite, height: 120 cm, diameter: 58.4 cm	1967-42-A	United Kingdom	5 May	489 km 589 km	95.4 min 80.1°	136.560 Mc/s 200 mW	Experiments to measure galactic and terrestrial radio noise, vertical dis- tribution of ozone, electron density and temperature and intensity of VLF radia- tion. Three solar panels.

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
No name	1967-43-A	USA	9 May	183 km 785 km	94.3 min 85.1°		Decayed on 13 July 1967
Cosmos-157	1967-44-A	USSR	12 May	202 km 296 km	89.4 min 51.3°	19.994 Mc/s	Decayed on 20 May 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-158	1967-45-A	USSR	15 May	737 km 823 km	100.4 min 74.0°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-159	1967-46-A	USSR	17 May	824 km 60 141 km	1173.8 min 51.9°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-160	1967-47-A	USSR	17 May	142 km 205 km	88.4 min 49.6°		Decayed on 18 May 1967. Carried scientific apparatus
No name	1967-48-A	USA	18 May	1 073 km 1 103 km	106.9 min 89.5°		
Cosmos-161	1967-49-A	USSR	22 May	205 km 343 km	89.8 min 65.7°	19.995 Mc/s	Decayed 30 May 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-50-A	USA	22 May	141 km 312 km	89.1 min 91.5°		Decayed on 30 May 1967
Explorer-34 75 kg nearly cylindrical satellite, height: 25 cm, diameter: 71 cm	1967-51-A	USA	24 May	242 km 214 382 km	6358.3 min 67.1°	136.140 Mc/s 4 W	Interplanetary Monitoring Platform (IMP-5). Measure- ment of solar plasma mag- netic fields and energetic particles in interplanetary space. Four solar panels
5th Molnya-1	1967-52-A	USSR	25 May	744 km 39 265 km	710.7 min 64.8°		Telecommunication satellite. Four solar panels
No name	1967-53-A	USA	31 May	915 km 926 km	103.4 min 69.9°		
Surcal	1967-53-B	USA	31 May	915 km 935 km	103.5 min 69.9°		Calibration sphere
Gravity Gradient-4	1967-53-C	USA	31 May	916 km 927 km	103.4 min 69.9°	137.740 Mc/s	Gravity gradient stabiliza- tion experiment satellite
Gravity Gradient-5	1967-53-D	USA	31 May	915 km 926 km	103.4 min 69.9°	137.980 Mc/s	Gravity gradient stabiliza- tion experiment satellite
No name	1967-53-E	USA	31 May	916 km 925 km	103.4 min 69.9°		
Surcal	1967-53-F	USA	31 May	915 km 926 km	103.4 min 69.9°		Calibration sphere
No name	1967-53-G	USA	31 May	915 km 927 km	103.4 min 69.9°		

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
No name	1967-53-H	USA	31 May	915 km 926 km	103.4 min 69.9°		
Surcal	1967-53-I	USA	31 May	915 km 924 km	103.3 min 69.9°		Calibration sphere
Cosmos-162	1967-54-A	USSR	1 June	201 km 280 km	89.2 min 51.8°	19.994 Mc/s	Decayed on 9 June 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-55-A	USA	4 June	238 km 252 km	89.3 min 104.8°		Decayed on 12 June 1967
Cosmos-163	1967-56-A	USSR	5 June	261 km 616 km	93.1 min 48.4°		Decayed on 11 October 1967. Carried scientific apparatus
Cosmos-164	1967-57-A	USSR	8 June	202 km 320 km	89.5 min 65.7°		Decayed on 14 June 1967. Carried scientific apparatus
Venera-4 1106 kg	1967-58-A	USSR	12 June	heliocentric orbit			Decayed on 18 October 1967. Automatic interplanetary station. Ejected a capsule for Venus soft landing. Two solar panels
Cosmos-165	1967-59-A	USSR	12 June	178 km 636 km	92.6 min 81.8°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Mariner-V 245 kg octagonal base; diameter: 127 cm; height: 290 cm to top of antenna	1967-60-A	USA	14 June	heliocentric orbit		2298 Mc/s 10 W	Measurements of radiation, solar wind and magnetic fields in interplanetary space and near Venus and of characteristics of Venu- sian atmosphere. 3991 km Venus flyby on 19 October. Four solar panels
Cosmos-166	1967-61-A	USSR	16 June	283 km 578 km	92.9 min 48.4°		Decayed on 25 October 1967. Carried scientific apparatus radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-62-A	USA	16 June	180 km 357 km	89.9 min 80.1°		Decayed on 20 July 1967
No name	1967-62-B	USA	16 June	480 km 484 km	94.2 min 80.2°		
Cosmos-167	1967-63-A	USSR	17 June	201 km 286 km	89.2 min 51.8°		Decayed on 25 June 1967. Carried scientific apparatus
No name	1967-64-A	USA	20 June	142 km 282 km	89.8 min 111.5°		Decayed on 30 June 1967
EGRS-9	1967-65-A	USA	29 June	3 796 km 3 949 km	172.1 min 89.8°	136.840 Mc/s	Experimental Geodesic Research Satellite known also as Secor-9 for SEquen- tial Collation Of Range)

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Aurora-1	1967-65-B	USA	29 June	3 797 km 3 948 km	172.1 min 89.8°	137.140 Mc/s	
IDCSP-16	1967-66-B	USA	1 July	33 025 km 33 555 km	1310.4 min 6.7°	Transmission: 401.1875 Mc/s 0.25 W 401.2125, 401.2375 Mc/s 0.25 W 7267.025, 7271.7125, 7277.9625, 7285.775 Mc/s 2 W Reception: 7985.745, 7990.4325, 7996.6825, 8004.495 Mc/s	Initial Defense Communica- tion Satellite Project. Satel- lite No. 16
IDCSP-17	1967-66-C	USA	1 July	33 071 km 33 563 km	1311.8 min 6.7°	Same frequen- cies as IDCSP-16 except for 401.0125 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 17
IDCSP-18	1967-66-D	USA	1 July	33 130 km 33 582 km	1313.7 min 6.7°	Same frequen- cies as IDCSP-16 except for 401.375 Mc/s 0.25 W instead of 401.1875 Mc/s 0.25 W	Initial Defense Communica- tion Satellite Project. Satel- lite No. 18
DATS-1	1967-66-E	USA	1 July	33 178 km 33 636 km	1316.2 min 6.8°		Mechanically De-spun An- tenna Test Satellite
Dodge	1967-66-F	USA	1 July	33 270 km 33 659 km	1361.1 min 6.2°	136.800 Mc/s	Department of Defense gravity-gradient exper- iment satellite
LES-5	1967-66-G	USA	1 July				Lincoln Experimental Satel- lite No. 5. Telecommunica- tions experiments
Cosmos-168	1967-67-A	USSR	4 July	199 km 268 km	89.1 min 51.8°	19.995 Mc/s	Decayed on 12 July 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Surveyor-4 1002 kg; tetra- hedral framed spacecraft; height: 3 m; diameter of tripod landing about 4.3 m	1967-68-A	USA	14 July	lunar intercept trajectory		2295 Mc/s 10 W	Impacted on moon on 17 July 1967. Contact radio lost before landing. Two solar panels
Cosmos-169	1967-69-A	USSR	17 July	144 km 208 km	87.6 min 50°		Decayed on 17 July 1967. Carried scientific apparatus
Explorer-35 104.5 kg; nearly cylindrical satellite; height: 86 cm; diameter: 139 cm	1967-70-A	USA	19 July	selenocentric orbit 800 km 7 692 km	690 min 147.3°	136.110 Mc/s 6 W	Interplanetary Monitoring Platform (IMP-6). Measure- ments of solar plasma mag- netic fields and energetic particles in interplanetary space. Four solar panels

Code name	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
No name	1967-71-A	USA	25 July	447 km 499 km	94.0 min 75.0°		
OV1-86 118 kg	1967-72-A	USA	27 July	472 km 595 km	95.2 min 101.7°		Orbital vehicle
OV1-12 141 kg	1967-72-D	USA	27 July	537 km 553 km	95.5 min 101.6°		Orbital vehicle
OGO-4 562.4 kg; main body about 1.83 m long; 0.91 m deep and 0.91 wide	1967-73-A	USA	28 July	415 km 877 km	97.6 min 86.0°	136.200, 400.250, 400.850 Mc/s 4 W back-up 0.5 W	Orbiting Geophysical Observ- atory to study relation ship sun/earth's environ- ment. Two solar panels
Cosmos-170	1967-74-A	USSR	31 July	145 km 208 km	50°		Decayed on 31 July 1967. Carried scientific apparatus
Lunar Orbiter-5 390 kg truncated cone shaped spacecraft; height: 1.7 m; diameter: 1.5 m	1967-75-A	USA	1 August	selenocentric orbit 194.5 km 6023 km	510 min 85°	2295 Mc/s 0.5 W	Placed into orbit around the moon to obtain medium and high resolution photo- graphs of lunar surface for assessment of possible <i>Apollo</i> landing sites and in- formation on moon's environ- ment. Four solar panels
No name	1967-76-A	USA	7 August	187 km 354 km	89.9 min 80°		Decayed on 1 September 1967
Cosmos-171	1967-77-A	USSR	8 August	145 km 220 km	50°		Decayed on 8 August 1967. Carried scientific apparatus
Cosmos-172	1967-78-A	USSR	9 August	202 km 301 km	89.4 min 51.8°	19.995 Mc/s	Decayed on 17 August 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-79-A	USA	16 August	124 km 323 km	89.4 min 111.6°		Decayed on 29 August 1967
No name	1967-80-A	USA	22 August	833 km 891 km	102.1 min 98.9°		
Cosmos-173	1967-81-A	USSR	24 August	280 km 528 km	92.3 min 71.0°		Decayed on 17 December 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-174	1967-82-A	USSR	31 August	410 km 29 817 km	715.1 min 64.8°		Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Biosatellite-2 382 kg; adapter 1.2 m long; diameter: 102 to 145 cm; capsule, blunt cone base; diameter: 102 cm	1967-83-A	USA	7 Sept.	300 km 313 km	90.7 min 33.49°	Data trans- mission: adapter: 136.68 Mc/s 2 W Capsule: 240.2 Mc/s 2 W Tracking beacon: 136.05 Mc/s 0.1 W	Experimental capsule re- turned to earth on 9 Sep- tember. Adapter section remaining in orbit. 13 bio- logical experiments to study effects of space en- vironment on various life processes. Solar cells

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Surveyor-5 1065 kg-tetra- hedral framed spacecraft; height 3 m; diameter of tripod landing: about 4.3 m	1967-84-A	USA	8 Sept.	lunar intercept trajectory		2295 Mc/s 10 W	Landed on moon on 11 Sep- tember to take photo- graphs of lunar surface and to study chemical characteristics of lunar soil. Two solar panels
Cosmos-175	1967-85-A	USSR	11 Sept.	210 km 386 km	92.2 min 72.9°	19.995 Mc/s	Decayed 19 September 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-176	1967-86-A	USSR	12 Sept.	185 km 1 001 km	96.5 min 81.8°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
No name	1967-87-A	USA	15 Sept.	164 km 314 km	89.8 min 80.1°		Decayed on 4 October 1967
Cosmos-177	1967-88-A	USSR	16 Sept.	202 km 292 km	89.3 min 51.8°	19.990 Mc/s	Decayed on 24 September 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Cosmos-178	1967-89-A	USSR	19 Sept.	145 km 205 km	50°		Decayed on 19 September 1967. Carried scientific apparatus
No name	1967-90-A	USA	19 Sept.	126 km 357 km	89.9 min 106.1°		Decayed on 30 September 1967
Cosmos-179	1967-91-A	USSR	22 Sept.	145 km 208 km	50°		Decayed on 22 September 1967. Carried scientific apparatus
No name	1967-92-A	USA	25 Sept.	1 039 km 1 118 km	106.7 min 82.2°		
Cosmos-180	1967-93-A	USSR	26 Sept.	212 km 370 km	90.1 min 72.9°	19.995 Mc/s	Decayed on 4 October 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radioteleme- try system
Intelsat-II-F-4 162 kg cylindrical satellite; height: 67 cm; diameter: 142 cm	1967-94-A	USA	27 Sept.	35 747 km 35 912 km	1438.3 min 0.8°	Transmission: 4121 Mc/s 24 W Reception: 6346 Mc/s	Second <i>Intelsat</i> telecommu- nication satellite in syn- chronous equatorial orbit over the Pacific Ocean at approximately 176° East longitude 240 high-grade two-way voice channels. Solar cells
6th Molnya-1	1967-95-A	USSR	3 Oct.	415 km 39 913 km	717.2 min 64.9°	Transmission: 3725, 3800, 3875 Mc/s 20 and 40 W Reception: 6050, 6125, 6200 Mc/s	Telecommunication satellite for use in the <i>Orbit</i> net- work. Four solar panels

Code name	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
No name	1967-96-A	USA	11 Oct.	668 km 862 km	100.1 min 99.1°		
Cosmos-181	1967-97-A	USSR	11 Oct.	200 km 344 km	89.7 min 65.6°	19.995 Mc/s	Decayed on 18 October 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-182	1967-98-A	USSR	16 Oct.	210 km 355 km	89.9 min 65°	19.995 Mc/s	Decayed 24 October 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-183	1967-99-A	USSR	18 Oct.	145 km 212 km	50°		Decayed on 18 October 1967. Carried scientific apparatus
OGO-4 272 kg; height: 94 cm; diameter: 234 cm	1967-100-A	USA	18 Oct.	536 km 570 km	95.7 min 32.9°	136.71 Mc/s 500 W 136.71 Mc/s 500 mW	Measures the frequency and energy of solar emissions, proton-electron environment of spacecraft and celestial X-rays
7th Molnya-1	1967-101-A	USSR	22 Oct.	949 km 40 261 km	735.1 min 64.1°	Transmission: 3725, 3800, 3875 Mc/s 20, and 40 W Reception: 6050, 6125, 6200 Mc/s	Telecommunication satellite for use in the <i>Orbit</i> network. Four solar panels
Cosmos-184	1967-102-A	USSR	25 Oct.	600 km 639 km	97.0 min 81.1°	466.5 Mc/s	Meteorological satellite. Known also as active meteorological space station No. 3 for use in the <i>Meteor</i> system. Two solar panels
No name	1967-103-A	USA	25 Oct.	125 km 379 km	89.5 min 111.4°		Decayed on 5 November 1967
Cosmos-185	1967-104-A	USSR	27 Oct.	512 km 837 km	98.2 min 64.0°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-186	1967-105-A	USSR	27 Oct.	209 km 235 km	88.7 min 51.7°	20.008 Mc/s	Decayed on 31 October 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-187	1967-106-A	USSR	28 Oct.	145 km 210 km	50°		Decayed on 28 October 1967. Carried scientific apparatus
Cosmos-188	1967-107-A	USSR	30 Oct.	200 km 276 km	88.9 min 51.68°		Decayed on 2 November 1967. Automatic docking with Cosmos-186
Cosmos-189	1967-108-A	USSR	30 Oct.	528 km 573 km	95.6 min 74.0°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
No name	1967-109-A	USA	2 Nov.	187 km 437 km	90.7 min 81.5°		Decayed on 2 December 1967

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
Cosmos-190	1967-110-A	USSR	3 Nov.	201 km 347 km	89.8 min 65.7°	19.995 Mc/s	Decayed on 11 November 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
ATS-3 365 kg cylindrical satellite; height: 1.8 m; diameter: 1.5 m	1967-111-A	USA	5 Nov.	25 776 km 35 826 km	1436.8 min 0.4°	135.6 Mc/s 40 W 136.47; 137.35 Mc/s 16 W 4119.599; 4178.591 Mc/s 24 W 412.08 Mc/s 150 mW	Third Applications Technology Satellite, carries 3 meteorological, 2 communications and 4 technological experiments. Retransmits on command to APT stations weather pictures. Synchronous equatorial orbit over the Atlantic Ocean at approximately 47° West longitude. Solar cells
Surveyor-6 1008 kg tetrahedral framed spacecraft; height: 3 m; diameter of tripod landing: about 4.3 m	1967-112-A	USA	7 Nov.	lunar intercept trajectory		2295 Mc/s 10 W	Landed on moon on 10 November 1967 to take photographs of lunar surface and to study chemical characteristics of lunar soil. Two solar panels
Apollo-4 45 540 kg, conical command module, service module and boiler plate lunar module; diameter: 391 cm to 670 cm; total height: 18.89 m	1967-113-A	USA	9 Nov.	184 km 186 km	88 min 32°	228.5158 Mc/s 20 W 5 765 Mc/s 52 W	Re-entered on 9 November 1967. Tests on unmanned Apollo-4 spacecraft and launch vehicle. Manoeuvred into higher orbit. Fuel cells
ESSA-6 132 kg cartwheel satellite; height: 56 cm; diameter: 107 cm	1967-114-A	USA	10 Nov.	1410 km 1488 km	114.8 min 102.1°	137.500 Mc/s 5 W 136.770 Mc/s 250 mW	Environmental Survey Satellite. Two APT systems. Solar cells
Cosmos-191	1967-115-A	USSR	21 Nov.	259 km 447 km	91.5 min 70.9°		Carries scientific apparatus
Cosmos-192	1967-116-A	USSR	23 Nov.	744 km 756 km	99.8 min 74.0°		Carries scientific apparatus
Cosmos-193	1967-117-A	USSR	25 Nov.	203 km 354 km	89.9 min 65.7°	19.995 Mc/s	Decayed on 3 December 1967. Carried scientific apparatus
Wresat-1 71.2 kg conical satellite base; diameter: 76.2 cm; height: 152.4 cm	1967-118-A	Australia	29 Nov.	164 km 840 km	94.6 min 83.2°	136.34827 Mc/s 100 mW	Scientific experiment study of atmospheric absorption of solar radiation
Cosmos-194	1967-119-A	USSR	3 Dec.	205 km 333 km	89.7 min 65.7°	19.995 Mc/s	Decayed on 11 December 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system

Code name Description	International number	Country	Date	Perigee Apogee	Period Inclination	Frequencies Transmitter power	Observations
OV3-6	1967-120-A	USA	5 Dec.	407 km 438 km	92.9 min 90.6°		Orbital vehicle; Atmospheric Composition Satellite, known also as ATCOS-II
No name	1967-121-A	USA	5 Dec.	141 km 428 km	90.2 min 109.5°		Decayed on 16 December 1967
No name	1967-122-A	USA	9 Dec.	151 km 248 km	88.4 min 81.6°		Decayed on 25 December 1967
Pioneer-8 66 kg cylindrical spacecraft height: 89 cm; diameter: 94 cm	1967-123-A	USA	13 Dec.	heliocentric orbit outside earth's orbit		2292.037; 2292.047 Mc/s 7.5 W	Carries seven experiments to measure particles, solar wind, galactic and solar cosmic rays and electric and magnetic fields in space. Solar cells
TTS-1 18 kg octohedral satellite	1967-123-B	USA	13 Dec.	293 km 473 km	92.2 min 32.9°	2282.5 Mc/s 500 mW 136.32 Mc/s 100 mW	Test and Training Satellite used to test Apollo tracking and communications network. Solar cells
Cosmos-195	1967-124-A	USSR	16 Dec.	211 km 375 km	90.1 min 65.7°	19.995 Mc/s	Decayed on 23 December 1967. Carried scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-196	1967-125-A	USSR	19 Dec.	221 km 856 km	95.4 min 48.7°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-197	1967-126-A	USSR	26 Dec.	227 km 475 km	91.5 min 48.4°		Carries scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system
Cosmos-198	1967-127-A	USSR	27 Dec.	895 km 950 km	103.4 min 65.1°	19.365 Mc/s	Carries scientific apparatus, radio system for precise measurements of orbital elements and radiotelemetry system

