

MULTILATERAL

Partial Revision of Radio Regulations, Geneva, 1959, and Additional Protocol [1]

Signed at Geneva November 8, 1963;

*Ratification advised by the Senate of the United States of America
February 25, 1964;*

*Ratified by the President of the United States of America March 16,
1964;*

*Ratification of the United States of America deposited with the Sec-
retary General of the International Telecommunication Union
April 3, 1964;*

*Proclaimed by the President of the United States of America July
7, 1964;*

*Date of entry into force with respect to the United States of America
January 1, 1965.*

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

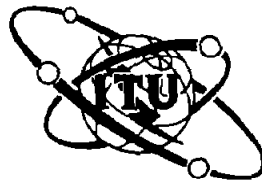
WHEREAS a partial revision of the Radio Regulations, Geneva, 1959, with annexes, and an additional protocol were signed at Geneva on November 8, 1963 by the respective Plenipotentiaries of the Government of the United States of America and the Governments of certain other countries;

AND WHEREAS the text of the said partial revision, with annexes and additional protocol, in the English, French, and Spanish languages, as certified by the Secretary General of the International Telecommunication Union, is word for word as follows

¹ All footnotes herein giving citations were added by the Department of State. Other footnotes are as in the certified text.

FINAL ACTS

OF THE
EXTRAORDINARY ADMINISTRATIVE RADIO CON-
FERENCE TO ALLOCATE FREQUENCY BANDS
FOR SPACE RADIOCOMMUNICATION PURPOSES



GENEVA, 1963

TIAS 5063

INTERNATIONAL TELECOMMUNICATION UNION

ABBREVIATIONS

The following abbreviations are used in the Annexes, to indicate the nature of amendments made in the partial revision of the Radio Regulations

Symbol	Meaning
MOD	Modification
SUP	Suppression
ADD	Addition
NOC	No change

Note If a modification affects only the drafting of a number, without changing the substance the following symbol is used

(MOD)

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**PARTIAL REVISION OF THE RADIO REGULATIONS,
GENEVA, 1959 [1]**

Recommendation No 36 of the Ordinary Administrative Radio Conference, Geneva, 1959, recommended that the Administrative Council of the Union should consider the convening, in the latter part of 1963, of an Extraordinary Administrative Radio Conference to allocate frequency bands for Space Radiocommunication Purposes

The Administrative Council considered this question during its annual session, in 1962, and, at its session in 1963, adopted Resolution No 524 which, with the prior concurrence of a majority of the Members of the Union, determined the Agenda of the Conference and decided that it should be convened in Geneva on 7th October 1963

The Extraordinary Administrative Radio Conference accordingly convened on the appointed date, and in accordance with the provisions of Nos 60 and 61 of the Convention, revised the relevant portions of the Radio Regulations, Geneva, 1959. Particulars of these revisions are given in the attached Annexes

The revised provisions of the Radio Regulations, Geneva, 1959, shall form an integral part of the Radio Regulations, which are annexed to the International Telecommunication Convention [2]. They shall come into force on the first of January, 1965, upon which date the provisions of the Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions, shall be abrogated

The delegates signing this revision of the Radio Regulations, Geneva, 1959, hereby declare that should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration

In witness whereof the delegates of the Members and Associate Member of the Union represented at the Extraordinary Administrative Radio

¹ TIAS 4893, 12 UST 2377

² TIAS 4892, 12 UST 1761

Conference, Geneva, 1963, have signed in the names of their respective countries this revision of the Radio Regulations, Geneva, 1959, in a single copy which will remain in the archives of the International Telecommunication Union and of which a certified copy will be delivered to each Member and Associate Members of the Union

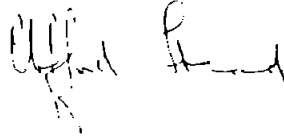
Members and Associate Members of the Union shall inform the Secretary-General of their approval of the revision of the Radio Regulations, Geneva, 1959, by the Extraordinary Administrative Radio Conference, Geneva, 1963. The Secretary-General will inform Members and Associate Members of the Union promptly regarding receipt of such notifications of approval

Done at Geneva, the 8 of November, 1963

COPIE

certifiée conforme à l'original
Geneve, le 26 Novembre 1963

Pour le Secrétaire général
de l'Union internationale des
télécommunications



ANNEX 1

Revision of Article 1 of the Radio Regulations

Article 1 of the Radio Regulations shall be amended as follows

For Regulation Nos 34 and 35 there shall be substituted the following Regulations

Section II Radio Systems, Services and Stations

- MOD 34 *Aeronautical Station*
A land station in the aeronautical mobile service. In certain instances an aeronautical station may be placed on board a ship or an earth satellite
- MOD 35 *Aircraft Station*
A mobile station in the aeronautical mobile service on board an aircraft or an air-space vehicle
- Regulation Nos 70 71 72 and 73 shall be repealed*
After Regulation No 75 there shall be inserted the following Regulation
- ADD 75A *Radio Astronomy Station*
A station in the radio astronomy service
- After Regulation No 84, there shall be inserted the following Regulations*
- ADD 84AA *Terrestrial Service*
Any radio service defined in these Regulations, other than a space service or the radio astronomy service
- ADD 84AB *Terrestrial Station*
A station in a terrestrial service

1-01

ADD Title	Section IIA Space Systems, Services and Stations
ADD	<p>84AC Space Service</p> <p>A radiocommunication service</p> <ul style="list-style-type: none"> — between earth stations and space stations, — or between space stations, — or between earth stations when the signals are re-transmitted by space stations, or transmitted by reflection from objects in space excluding reflection or scattering by the ionosphere or within the earth's atmosphere
ADD	<p>84AD Earth Station</p> <p>A station in the space service located either on the earth's surface, including on board a ship or on board an aircraft</p>
ADD	<p>84AE Space Station</p> <p>A station in the space service located on an object which is beyond is intended to go beyond, or has been beyond the major portion of the earth's atmosphere</p>
ADD	<p>84AF Space System</p> <p>Any group of co-operating earth and space stations providing a given space service and which in certain cases may use objects in space for the reflection of the radiocommunication signals</p>
ADD	<p>84AG Communication Satellite Service</p> <p>A space service</p> <ul style="list-style-type: none"> — between earth stations when using active or passive satellites for the exchange of communications of the fixed or mobile service or — between an earth station and stations on active satellites for the exchange of communications of the mobile service, with a view to their re-transmission to or from stations in the mobile service

- ADD **84AH** *Communication-Satellite Earth Station*
An earth station in the communication-satellite service
- ADD **84AI** *Communication-Satellite Space Station*
A space station in the communication-satellite service, on an earth satellite
- ADD **84AJ** *Active Satellite*
An earth satellite carrying a station intended to transmit or re-transmit radiocommunication signals
- ADD **84AK** *Passive Satellite*
An earth satellite intended to transmit radiocommunication signals by reflection
- ADD **84AL** *Satellite System*
Any group of co-operating stations providing a given space service and including one or more active or passive satellites
- ADD **84AM** *Space Research Service*
A space service in which spacecraft or other objects in space are used for scientific or technological research purposes
- ADD **84AN** *Space Research Earth Station*
An earth station in the space research service
- ADD **84AO** *Space Research Space Station*
A space station in the space research service
- ADD **84AP** *Broadcasting-Satellite Service*
A space service in which signals transmitted or re-transmitted by space stations, or transmitted by reflection from objects in orbit around the Earth, are intended for direct reception by the general public

- ADD **84AQ** *Radionavigation-Satellite Service*
A service using space stations on earth satellites for the purpose of radionavigation, including, in certain cases, transmission or re-transmission of supplementary information necessary for the operation of the radionavigation system
- ADD **84AR** *Radionavigation-Satellite Earth Station*
An earth station in the radionavigation-satellite service
- ADD **84AS** *Radionavigation-Satellite Space Station*
A space station in the radionavigation-satellite service, on an earth satellite
- ADD **84AT** *Meteorological-Satellite Service*
A space service in which the results of meteorological observations made by instruments on earth satellites are transmitted to earth stations by space stations on these satellites
- ADD **84AL** *Meteorological-Satellite Earth Station*
An earth station in the meteorological-satellite service
- ADD **84AV** *Meteorological-Satellite Space Station*
A space station in the meteorological-satellite service, on an earth satellite
- ADD **84AW** *Space Telemetry*
The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft
- ADD **84AX** *Maintenance Space Telemetry*
Space telemetry relating exclusively to the electrical and mechanical condition of a spacecraft and its equipment together with the condition of the environment of the spacecraft

- ADD** **84AY** *Space Telecommand*
The use of radiocommunication for the transmission of signals to a space station to initiate, modify or terminate functions of the equipment on a space object, including the space station
- ADD** **84AZ** *Space Tracking*
Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object
- ADD Title** **Section IIB** *Space, Orbits and Types of Objects in Space*
- ADD** **84BA** *Deep Space*
Space at distances from the Earth equal to or greater than the distance between the Earth and the Moon
- ADD** **84BB** *Orbit*
The path in space described by the centre of mass of a satellite or other object in space
- ADD** **84BC** *Angle of Inclination of an Orbit*
The acute angle between the plane containing an orbit and the plane of the earth's equator
- ADD** **84BD** *Period of an Object in Space*
The time elapsing between two consecutive passages of an object in space through the same point on its closed orbit
- ADD** **84BE** *Altitude of the Apogee*
Altitude above the surface of the Earth of the point on a closed orbit where a satellite is at its maximum distance from the centre of the Earth

- ADD **84BF** *Altitude of the Perigee*
- Altitude above the surface of the Earth of the point on a closed orbit where a satellite is at its minimum distance from the centre of the Earth
- ADD **84BG** *Stationary Satellite*
- A satellite, the circular orbit of which lies in the plane of the earth's equator and which turns about the polar axis of the Earth in the same direction and with the same period as those of the earth's rotation
- ADD **84BH** *Spacecraft*
- Any type of space vehicle, including an earth satellite or a deep space probe, whether manned or unmanned

ANNEX 2

Revision of Article 3 of the Radio Regulations

Article 3 of the Radio Regulations shall be amended as follows

For Regulation No 114, there shall be substituted the following

- MOD 114 § 2 Any new assignment or any change of frequency or other basic characteristic of an existing assignment (see Appendix I or Appendix 1A) shall be made in such a way as to avoid causing harmful interference to services rendered by stations using frequencies assigned in accordance with the Table of Frequency Allocations in this Chapter and the other provisions of these Regulations, the characteristics of which assignments are recorded in the Master International Frequency Register

After Regulation No 116 there shall be inserted the following new Regulation

- ADD 116A § 4A For the purpose of resolving cases of harmful interference the radio astronomy service shall be treated as a radiocommunication service. However, protection from services in other bands shall be afforded the radio astronomy service only to the extent that such services are afforded protection from each other

2—01

ANNEX 3

Revision of Article 5 of the Radio Regulations

Article 5 of the Radio Regulations shall be amended as follows

In the Table of Frequency Allocations for the band 9 995-10 005 kc/s there shall be substituted the following

kc/s

Allocation to Services		
Region 1	Region 2	Region 3
9 995—10 005		
STANDARD FREQUENCY		
204 214 215		

NOC
MOD

204 214

215 The band 10 003 10 005 kc/s is also allocated on a secondary basis to the space research service

03—01

In the Table of Frequency Allocations for the band 15 450-16 460 kc/s there shall be substituted the following

kc/s

Allocation to Services		
Region 1	Region 2	Region 3
15 450—15 762	FIXED	
15 762—15 768	FIXED <i>Space Research 215A</i>	
15 768—16 460	FIXED	

ADD

215A In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R. the space research service is a primary service in the bands 15 762-15 768 kc/s and 18 030-18 036 kc/s.

03—02

In the Table of Frequency Allocations for the band 18 030-20 010 kc/s there shall be substituted the following

Allocation to Services		
Region 1	Region 2	Region 3
18 030—18 036	FIXED Space Research 215A	
18 036—19 990	FIXED	
19 990—20 010	STANDARD FREQUENCY 204 220 221 221A	

NOC

220

MOD

221

The band 19 990-20 010 kc/s is also allocated, on a secondary basis, to the space research service

ADD

221A

The frequency 20 007 kc/s may also be used, in emergency, in the search for, and rescue of, astronauts and space vehicles. Emissions must be confined in a band of ± 3 kc/s about this frequency

In the Table of Frequency Allocations for the band
29 7-41 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
29 7—30 005	FIXED 228 229 231 232 MOBILE 233	
30 005—30 010	FIXED 228 229 231 MOBILE SPACE RESEARCH SATELLITE IDENTIFICATION 233	
30 010—37 750	FIXED 228 229 230 231 MOBILE 233	
37 75—38 25	FIXED 228 229 231 MOBILE Radio Astronomy 233	
38 25—41	FIXED 228 229 230 231 MOBILE 233 235 236	

NOC

228 229 230 231 232 233 236

SUP

234

MOD

235 The band 39 986 40 062 Mc/s is also allocated on a secondary basis to the space research service

03—04

In the Table of Frequency Allocations for Region 2 and for the band 68-74.6 Mc/s there shall be substituted the following

Mc/s		
Allocation to Services		
Region 1	Region 2	Region 3
68-74.6	68-73 FIXED MOBILE BROADCASTING	68-70
	73-74.6 RADIO ASTRONOMY 253A 253B	70-74.6

- SLP 253
- ADD 253A 1- Region 2 fixed mobile and broadcasting service operations previously authorized in the band 73-74.6 Mc/s may continue to operate on a non-interference basis to the radio astronomy service.
- ADD 253B In Cuba, the band 73-74.6 Mc/s is also allocated to the fixed, mobile and broadcasting service.

In the Table of Frequency Allocations for the band 117 975-144 Mc's there shall be substituted the following

Mc's

Allocation to Services		
Region 1	Region 2	Region 3
117-975—132 AERONAUTICAL MOBILE (R) 273 273A		
132—136 AERONAUTICAL MOBILE (R) 273A 274 275	132—136 FIXED MOBILE 273A 276 277 278 279	
136—137 FIXED MOBILE SPACE RESEARCH (Telemetering and tracking) 281A	136—137 SPACE RESEARCH (Telemetering and tracking) 281A 281B	136—137 FIXED MOBILE SPACE RESEARCH (Telemetering and tracking) 281A
137—138 METEOROLOGICAL SATELLITE SPACE RESEARCH (Telemetering and tracking) 2811 SPACE (Telemetering and tracking) 275A 279A 281C 281D 281E		
138—143.6 AERONAUTICAL MOBILE (OR) 275 282 283	138—143.6 FIXED MOBILE Radiolocation	138 143.6 FIXED MOBILE 278 279A 284

03—06

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
143 6—143 65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (Telemetering and tracking) 275 282 283	143 6—143 65 FIXED MOBILE SPACE RESEARCH (Telemetering and tracking) Radiolocation	143 6—143 65 FIXED MOBILE SPACE RESEARCH (Telemetering and tracking) 278 279A 284
143 65—144 AERONAUTICAL MOBILE (OR) 275 282 283	143 65—144 FIXED MOBILE Rad olocation	143 65—144 FIXED MOBILE 278 279A 284

NOC

273

ADD

273A In the band 117-975-132 Mc/s and in the band 132-136 Mc/s where the aeronautical mobile (R) service is authorized, the use and development, for this service of systems using space communication techniques may be authorized but limited initially to satellite relay stations of the aeronautical mobile (R) service. Such use and development shall be subject to co-ordination between administrations concerned and those having services operating in accordance with the Table which may be affected.

NOC

274

MOD

275 In Burundi, Ethiopia, Nigeria, Sierra Leone, Gambia, Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia and Nyasaland, Rwanda and the R. of South Africa and Territory of South West Africa, the bands 132-136 Mc/s and 138-144 Mc/s are allocated to the fixed and mobile services.

ADD

275A In Burundi, Nigeria, Sierra Leone, Gambia, Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia and Nyasaland, and Rwanda, the band 137-138 Mc/s is also allocated to the fixed and mobile services.

03—07

NOC	276	277
MOD	278	In New Zealand the bands 132-137 Mc/s and 138-144 Mc/s are allocated to the aeronautical mobile (OR) service.
MOD	279	In Australia the band 132-137 Mc/s is allocated to the aeronautical mobile service.
ADD	279A	In Australia the band 137-144 Mc/s is also allocated to the broadcasting service for television.
SUP	280	
SUP	281	
ADD	281A	For the use of the band 136-137 Mc/s see Recommendation No. 7A
ADD	281B	In Region 2 the band 136-137 Mc/s is also allocated to the fixed and mobile services until 1 January 1969. Thereafter in Cuba the band will continue to be allocated also to the fixed and mobile services.
ADD	281C	In Algeria, Bulgaria, Hungary, Kuwait, Lebanon, Morocco, Poland, the United Arab Republic, Yugoslavia, Rumania, Czechoslovakia and the U.S.S.R. the band 137-138 Mc/s is also allocated to the aeronautical mobile (OR) service. In the remaining countries of Region 2 the band 137-138 Mc/s is also allocated to the aeronautical mobile (OR) service until 1 January 1969.
ADD	281D	In Norway, Switzerland and Turkey the band 137-138 Mc/s is also allocated to the fixed service and mobile, except aeronautical mobile, service until 1 January 1969.
ADD	281E	In Regions 2 and 3 the band 137-138 Mc/s is also allocated to the fixed and mobile services until 1 January 1969. Thereafter in Cuba, Malaysia, Pakistan and the Philippines the band 137-138 Mc/s will continue to be allocated also to the fixed and mobile services.
ADD	281F	The band 137-138 Mc/s will be used mainly for research concerning the establishment, technical improvement and maintenance of operational space systems.
MOD	282	In Austria, the Netherlands and the United Kingdom the band 138-144 Mc/s will at some future date be allocated to the fixed service and mobile, except aeronautical mobile, service.
MOD	283	In Denmark, Greece, Norway, Portugal, F.R. of Germany, Sweden, Switzerland and Turkey the band 138-144 Mc/s is also allocated to the fixed service and mobile, except aeronautical mobile (R) service.
MOD	284	In China the band 138-144 Mc/s is also allocated to the radiolocation service.

In the Table of Frequency Allocations for the band 144-150.05 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
144-146		
AMATEUR 284A		
146-149.9	146-148	AMATEUR 289
FIXED MOBILE except aeronautical mobile (R)	148-149.9	FIXED MOBILE 285A 290
274 285 285A		
149.9-150.05		
RADIONAVIGATION SATELLITE 285B		

ADD
MOD

284A In the band 144-146 Mc/s, artificial satellites may be used by the amateur service

ADD

285 In Rhodesia and Nyasaland and the R. of South Africa and Territory of South West Africa, the bands 146-149.9 Mc/s and 150.05-174 Mc/s are also allocated to the aeronautical mobile service

ADD

285A The frequencies 148.25 Mc/s \pm 15 kc/s and 154.2 Mc/s \pm 15 kc/s may be used for space telecommand, subject to agreement among the administrations concerned and those having services operating in accordance with the Table, which may be affected

285B Stations operating in the fixed and mobile services may continue to use this band until 1 January, 1969. This cessation date shall not apply in Austria.

03-09

Bulgaria, Cuba, Hungary, Iran, Kuwait, Morocco, Pakistan, the Netherlands, Poland, the United Arab Republic, Yugoslavia and Roumania where the fixed and mobile services will continue to have equal primary status with the radionavigation satellite service. (See Recommendation No. 8A)

NOC 289

MOD 290 In New Zealand the bands 148 149.9 Mc/s and 150.05 156 Mc/s are allocated to the aeronautical mobile (OR) service

In the Table of Frequency Allocations for the bands
150 05-174 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
150 05—151 FIXED MOBILE except aeronautical mobile (R) 274 285 286 286A	150 05—174 FIXED MOBILE	150 05—170 FIXED MOBILE
151—154 FIXED MOBILE except aeronautical mobile (R) Meteorological aids 285 286 286A		170—174 FIXED MOBILE BROADCASTING
154—156 FIXED MOBILE except aeronautical mobile (R) 285 285A		285A 287 290
156—174 FIXED MOBILE except aeronautical mobile 285 287 288		285A 287

03—11

MOD	285	
MOD	286	In Region 1, the band 150.05-153 Mc/s is also allocated to the radio astronomy service. In making assignments to new stations of other services to which this band is allocated, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference.
ADD	286A	In the United Kingdom, the band 150.05-151 Mc/s is allocated to the radio astronomy service and the band 151-153 Mc/s is allocated to the radio astronomy service on a primary basis and to the meteorological aids service on a secondary basis; however, in this band the provisions of No. 274 apply.
NOC	287	
NOC	288	
MOD	290	

*In the Table of Frequency Allocations for the band
174-216 Mc/s there shall be substituted the following*

Mc/s

Allocation to Services						
Region 1		Region 2		Region 3		
174-216		174-216		FIXED		
BROADCASTING				MOBILE		
				BROADCASTING		
291	292	293	294	294	295	296

NOC

291 292 293 295 296

MOD

294 The band 183 | 184 | Mc/s is also allocated, on a secondary basis, to the space
research service

In the Table of Frequency Allocations for the band 235-328.6 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
235—267	FIXED MOBILE 305 309	
267—272	FIXED MOBILE Space (Telemetry)	309A 309B
272—273	FIXED MOBILE SPACE (Telemetry)	309A
273—328.6	FIXED MOBILE 310	

NOC

305 309 310

ADD

309A Space stations employing frequencies in the band 267-273 Mc/s for telemetry purposes may also transmit tracking signals in the band

ADD

309B In the band 267-272 Mc/s individual administrations may use space telemetry in their countries on a primary basis, subject to the agreement of the administrations concerned and those having services operating in accordance with the Table, which may be affected

03—14

In the Table of Frequency Allocations for the band 335.4-401 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
335.4-399.9		
FIXED		
MOBILE		
399.9-400.05		
RADIONAVIGATION-SATELLITE		
311A		
400.05-401		
METEOROLOGICAL AIDS		
METEOROLOGICAL-SATELLITE (Maintenance telemetering)		
SPACE RESEARCH (Telemetering and tracking)		
312A 313 314		

- ADD 311A Stations operating in the fixed and mobile services may continue to use this band until 1 January, 1969. This cessation date shall not apply in Bulgaria, Cuba, Greece, Hungary, Iran, Kuwait, Lebanon, Morocco, the United Arab Republic and Yugoslavia where the fixed and mobile services will continue to have equal status with the radionavigation-satellite service. (See Recommendation No. 8A)
- SUP 312
- ADD 312A In Sweden, the band 400.05-401 Mc/s is also allocated to the fixed and mobile services until 1 January, 1966.
- MOD 313 In Albania, Bulgaria, Greece, Hungary, Poland and the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 400.05-401 Mc/s is also allocated to the fixed and mobile services.
- MOD 314 In the United Kingdom, the band 400.05-410 Mc/s is also allocated to the radiolocation service; however, between 400.05 and 410 Mc/s the allocation to the radiolocation service is on a secondary basis.

03-15

In the Table of Frequency Allocations for the band 401-406 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
401—402	METEOROLOGICAL AIDS SPACE (Telemetry) 315A <i>Fixed</i> <i>Mobile except aeronautical mobile</i> 314 315 315B 316	
402—406	METEOROLOGICAL AIDS <i>Fixed</i> <i>Mobile except aeronautical mobile</i> 314 315 316 317	

MOD	314	
NOC	315	
ADD	315A	Space stations employing frequencies between 401-402 Mc/s for telemetry purposes may also transmit tracking signals in this band
ADD	315B	In Australia, the space (telemetry) service in the band 401-402 Mc/s is a secondary service
NOC	316	
MOD	317	The band 404-410 Mc/s in Region 2 and the band 406-410 Mc/s in Regions 1 and 3 are also allocated to the radio astronomy service. An appropriate continuous band within these limits shall be designated on a national or area basis. In making assignments to stations of other services to which these bands are allocated administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference

03—16

In the Table of Frequency Allocations for the band
420-470 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
420—430 FIXED MOBILE except aeronautical mobile <i>Radiolocation</i> 318 319	420—450	
430—440 AMATEUR RADIOLOCATION 318 319 320 321 322	RADIOLOCATION <i>Amateur</i>	
440—450 FIXED MOBILE except aeronautical mobile <i>Radiolocation</i> 318 319 319A	318 319A 323 324	
450—460	FIXED MOBILE 318 319A	
460—470	FIXED MOBILE <i>Meteorological Satellite</i> 318A	

03—17

- NOC 318 319 320 321 322 323 324
- ADD 318A In Bulgaria, Cuba, Hungary, Poland Roumania Czechoslovakia and the U S S R , the band 460-470 Mc's may be used, on a primary basis, by the meteorological-satellite service subject to agreement among administrations concerned and those having services or intending to introduce services operating in accordance with the Table which may be affected
- ADD 319A The band 449.75-450.25 Mc's may be used for space telecommand, subject to agreement among the administrations concerned and those having services operating in accordance with the Table which may be affected

In the Table of Frequency Allocations for the bands 470-890 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
470-582	470-890	470-585
	BROADCASTING	
582-606		585-610
		RADIONAVIGATION
606-790		336-337
BROADCASTING		610-890
326 329 330 330A		FIXED
331 332		MOBILE
790-890		BROADCASTING
	332	332 338 339

NOC

326 329

MOD

330 In Region 1 except the African Broadcasting Area* the radionavigation service may continue to operate in the band 606-610 Mc/s until the band is required for the broadcasting service.

330 I* For the purposes of this Regulation the term "African Broadcasting Area" means

- a) African countries, parts of countries, territories and groups of territories situated between the parallels 40° South and 30° North
- b) Islands in the Indian Ocean west of meridian 60° East situated between the parallel 40° South and the great circle arc joining the points 45° East, 11° 30' North and 60° East, 15° North
- c) Islands in the Atlantic Ocean east of Line B defined in No. 131 of these Regulations situated between the parallels 40° South and 30° North

03-19

- ADD 330A In the African Broadcasting Area*, the band 606-614 Mc/s is allocated to the radio astronomy service
- NOC 331
- MOD 332 In Region 1, except the African Broadcasting Area*, the band 606-614 Mc/s and in Region 3, the band 610-614 Mc/s may be used by the radio astronomy service. Administrations shall avoid using the band concerned for the broadcasting service as long as possible, and thereafter, as far as practicable, shall avoid the use of such effective radiated powers as will cause harmful interference to radio astronomy observations.
 In Region 2 the band 608-614 Mc/s is reserved exclusively for the radio astronomy service until the first Administrative Radio Conference after 1 January 1974 which is competent to review this provision; however, this provision does not apply to Cuba.
- NOC 336 337 338 339

* See 330 I

In the Table of Frequency Allocations for the band 890-1215 Mc/s there shall be substituted the following.

Mc/s

Allocation to Services								
Region 1			Region 2			Region 3		
890—942 FIXED BROADCASTING <i>Radiolocation</i>			890—942 FIXED RADIOLOCATION			890—942 FIXED MOBILE BROADCASTING <i>Radiolocation</i>		
329	331	333 339A	339A	340		339	339A	
942—960 FIXED BROADCASTING			942—960 FIXED			942—960 FIXED MOBILE BROADCASTING		
329	331	333 339A	339A			338	339 339A	
960—1 215 AERONAUTICAL RADIONAVIGATION 341								

NOC

333 340

ADD

339A Specific portions of the frequency band 900-960 Mc/s may also be used, on a secondary basis for experimental purposes in connection with space research

MOD

341 The band 960-1 215 Mc/s is reserved on a world-wide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based facilities

03-21

In the Table of Frequency Allocations for the band 1 400-1 660 Mc's there shall be substituted the following the allocations in the Radio Regulations Geneva 1959, being retained for the band 1 429-1 525 Mc's

Mc's

Allocation to Services		
Region 1	Region 2	Region 3
1 400—1 427		
RADIO ASTRONOMY		
1 427—1 429		
FIXED		
MOBILE except aeronautical mobile		
SPACE (Telecommand)		
1 429—1 525		
1 429—1 435 ; 1 429—1 525		
1 435—1 525		
1 525—1 535		
FIXED 350B	SPACE (Telemetry) 350A	FIXED 350B
SPACE (Telemetry) 350A	Fixed	SPACE (Telemetry) 350A
Mobile except aeronautical mobile 350C	Mobile 350D	Mobile 350E
1 535—1 540		
SPACE (Telemetry)		
350A 351 352 352C		
1 540-1 660		
AERONAUTICAL RADIONAVIGATION		
351 352 352A 352B 352D		

SUP
ADD

350

350A Space stations employing frequencies in the band 1 525-1 540 Mc's for tele metering purposes may also transmit tracking signals in the band

03—22

- ADD 350B As regards the category of the fixed service see Resolution No. 3A
- ADD 350C In Albania, Bulgaria, France, Hungary, Kuwait, Lebanon, Morocco, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U. S. S. R., the band 1 525-1 535 Mc/s is also allocated, on a primary basis, to the mobile except aeronautical mobile service. As regards the category of this service see Resolution No. 3A
- ADD 350D In Cuba, the band 1 525-1 535 Mc/s is also allocated, on a primary basis, to the mobile service
- ADD 350E In Japan, the band 1 525-1 535 Mc/s is also allocated to the mobile service on a primary basis, until 1 January, 1969
- MOD 351 In Italy, the band 1 535-1 600 Mc/s is also allocated to the fixed service until 1 January, 1970
- MOD 352 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U. S. S. R., the band 1 535-1 660 Mc/s is also allocated to the fixed service. As regards the category of the fixed service in the band 1 535-1 540 Mc/s see Resolution No. 3A
- ADD 352A The bands 1 540-1 660 Mc/s, 4 200-4 400 Mc/s, 5 000-5 250 Mc/s and 15 4-15 7 Gc/s are reserved, on a world-wide basis, for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite borne facilities
- ADD 352B The bands 1 540-1 660 Mc/s, 5 000-5 250 Mc/s and 15 4-15 7 Gc/s are also allocated to the aeronautical mobile (R) service for the use and development of systems using space communication techniques. Such use and development is subject to agreement and co-ordination between administrations concerned and those having services operating in accordance with the Table, which may be affected
- ADD 352C In Morocco and Yugoslavia, the band 1 535-1 540 Mc/s is also allocated to the aeronautical radionavigation service
- ADD 352D In Austria, Indonesia and the F. R. of Germany, the band 1540-1660 Mc/s is also allocated to the fixed service

In the Table of Frequency Allocations for the bands 1 660-1 710 Mc/s there shall be substituted the following the allocations in the Radio Regulations Geneva 1959 being retained for the band 1 670-1 690 Mc/s

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
1 660—1 664 4		
METEOROLOGICAL AIDS		
METEOROLOGICAL-SATELLITE 324A		
353 354 354A 354B		
1 664 4—1 668 4		
METEOROLOGICAL AIDS		
METEOROLOGICAL SATELLITE 324A		
Radio Astronomy		
353 353A 354 354A 354B		
1 668 4—1 670		
METEOROLOGICAL AIDS		
METEOROLOGICAL-SATELLITE 324A		
353 354 354A 354B		
1 670—1 690		
1 690—1 700		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
METEOROLOGICAL SATELLITE 324A	METEOROLOGICAL-SATELLITE 324A	
<i>Fixed</i>		
<i>Mobile except aeronautical mobile</i>		
353 354A	354A 354C	

03—24

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
1 700—1 710	1 700—1 710	1 700—1 710
FIXED	SPACE RESEARCH (Telemetering and tracking)	FIXED
SPACE RESEARCH (Telemetering and tracking)		MOBILE
Mobile	355A	SPACE RESEARCH (Telemetering and tracking)

- ADD 354A It is intended that meteorological-satellite space stations operating in this band shall transmit to selected earth stations. The location of such earth stations is subject to agreement among administrations concerned and those having services operating in accordance with the Table, which may be affected.
- NOC 353
- ADD 353A In view of the successful detection of two spectral lines in the region of 1 665 Mc/s and 1 667 Mc/s by astronomers, administrations are urged to give all practicable protection in the band 1 664.4-1 668.4 Mc/s for future research in radio astronomy.
- NOC 354
- ADD 354A In Algeria, Bulgaria, Cuba, Hungary, Kuwait, Lebanon, Morocco, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U. S. S. R., the bands 1 660-1 670 Mc/s and 1 690-1 700 Mc/s are also allocated to the fixed service and the mobile, except aeronautical mobile, service.
- ADD 354B In Australia, Cyprus, Spain, Ethiopia, Indonesia, Israel, New Zealand, Portugal, the Spanish Provinces in Africa, the United Kingdom, Sweden and Switzerland, the band 1 660-1 670 Mc/s is also allocated, on a secondary basis, to the fixed service, and the mobile, except aeronautical mobile, service.
- ADD 354C In Australia, Indonesia and New Zealand, the band 1 690-1 700 Mc/s is also allocated, on a secondary basis, to the fixed service and the mobile, except aeronautical mobile service.
- SUP 355
- ADD 355A In Cuba, the band 1 700-1 710 Mc/s is also allocated to the fixed and mobile services.

In the Table of Frequency Allocations for the bands
1 710-2 290 Mc/s there shall be substituted the follow-
ing

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
1 710—1 770 FIXED Mobile 356	1 710—1770	FIXED MOBILE
1 770—1 790 FIXED Meteorological Satellite 356AA Mobile 356	1 770—1 790	FIXED MOBILE Meteorological Satellite 356AA
1 790—2 290 FIXED Mobile 356 356A	1 790—2 290	FIXED MOBILE 356A

NOC

356

ADD

356AA In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the meteorological-satellite service in the band 1 770-1 790 Mc/s, shall be on a primary basis, subject to co-ordination with the administrations concerned and those having services operating in accordance with the Table, which may be affected by the siting of earth stations.

ADD

356A The band 2 110-2 120 Mc/s may be used for telecommand in conjunction with spacecraft engaged in deep space research, subject to agreement between the administrations concerned and those having services operating in accordance with the Table, which may be affected.

03—26

In the Table of Frequency Allocations for the band 2 290-2 300 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
2 290—2 300 FIXED SPACE RESEARCH 356C (Telemetering and tracking in deep space) <i>Mobile</i>	2 290—2 300 SPACE RESEARCH (Telemetering and tracking in deep space) 356B	2 290—2 300 FIXED MOBILE SPACE RESEARCH (Telemetering and tracking in deep space)

- ADD 356B In Cuba, the band 2 290-2 300 Mc/s is also allocated to the fixed and mobile services
- ADD 356C In Austria, the space research service in the band 2 290-2 300 Mc/s is a secondary service

In the Table of Frequency Allocations for the band 2 550-2 700 Mc's there shall be substituted the following

Mc's

Allocation to Services		
Region 1	Region 2	Region 3
2 550—2 690	FIXED	
	MOBILE	
	362	363 364
2 690—2 700	RADIO ASTRONOMY	
	363	364A 364B 365

- NOC 362
- MOD 363 In the F R of Germany, the band 2 550-2 690 Mc's is allocated to the fixed service, and the band 2 690-2 700 Mc's is also allocated to the fixed service
- MOD 364 In Region 1, tropospheric scatter systems may operate in the band 2 550-2 690 Mc's under agreements concluded between administrations concerned and those having services operating in accordance with the Table, which may be affected
- ADD 364A In Algeria Bulgaria Cuba Hungary, India, Israel Kuwait Lebanon Morocco Pakistan the Philippines Poland the United Arab Republic Yugoslavia Roumania, Czechoslovakia and the U S S R the band 2 690-2 700 Mc's is also allocated to the fixed and mobile services
- ADD 364B In Algeria, Bulgaria, Hungary, Poland, the United Arab Republic Yugoslavia Roumania Czechoslovakia and the U S S R, tropospheric scatter systems may operate in the band 2 690-2 700 Mc's under agreements concluded between administrations concerned and those having services operating in accordance with the Table, which may be affected
- MOD 365 In making assignments to stations in the fixed and mobile services, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference

03—28

In the Table of Frequency Allocations for the bands 3 300-4 200 Mc/s there shall be substituted the following

Allocation to Services		
Region 1	Region 2	Region 3
<p>3 300—3 400</p> <p>RADIOLOCATION</p> <p>370 371</p>	<p>3 300—3 400</p> <p>RADIOLOCATION</p> <p><i>Amateur</i></p> <p>376</p>	
<p>3 400—3 600</p> <p>FIXED</p> <p>MOBILE</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p> <p><i>Radiolocation</i></p> <p>372 373 374 375</p>	<p>3 400—3 500</p> <p>RADIOLOCATION</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p> <p><i>Amateur</i></p> <p>376</p>	
<p>3 600—4 200</p> <p>FIXED</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p> <p><i>Mobile</i></p>	<p>3 500—3 700</p> <p>FIXED</p> <p>MOBILE</p> <p>RADIOLOCATION</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p>	<p>3 500—3 700</p> <p>RADIOLOCATION</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p> <p><i>Fixed</i></p> <p><i>Mobile</i></p> <p>377 378</p>
<p>374</p>	<p>3 700—4 200</p> <p>FIXED</p> <p>MOBILE</p> <p>COMMUNICATION-SATELLITE 374A (Satellite-to-earth)</p> <p>379</p>	

NOC	370 371 372 374 375 376 377 378
MOD	373 In Denmark, Norway, Sweden, and Switzerland, the fixed mobile radio location and communication-satellite services operate on a basis of equality in the band 3 400-3 600 Mc/s.
ADD	374A This band may also be used for the transmission of tracking and telemetering signals associated with communication-satellite space stations operating in the same band.
MOD	379 In Australia, the band 3 700-3 770 Mc/s is allocated to the radiolocation and communication-satellite services.
SUP	380

In the Table of Frequency Allocations for the bands
4 200-5 000 Mc/s there shall be substituted the follow-
ing

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
4 200—4 400	AERONAUTICAL RADIONAVIGATION 352A 381 382 383	
4 400—4 700	FIXED MOBILE COMMUNICATION-SATELLITE 392A (Earth-to-satellite)	
4 700—4 990	FIXED MOBILE 354 365	
4 990—5 000 FIXED MOBILE RADIO ASTRONOMY 365	4 990—5 000 RADIO ASTRONOMY 383A	4 990—5 000 FIXED MOBILE RADIO ASTRONOMY 365

03—31

MOD	365	
NOC	381	
NOC	382	
NOC	383	
ADD	383A	In Cuba, the band 4 990-5 000 Mc/s is also allocated to the fixed and mobile services, and the provisions of No. 365 apply
ADD	392A	This band may also be used for the transmission of telecommand signals associated with communication-satellite earth stations operating in the same band

03—32

In the Table of Frequency Allocations for the bands 5 000-5 350 Mc/s there shall be substituted the following

Mc/s		
Allocation to Services		
Region 1	Region 2	Region 3
5 000—5 250	AERONAUTICAL RADIONAVIGATION 352A 352B	
5 250—5 255	RADFLOATION <i>Space Research</i> 384	
5 255—5 350	RADFLOATION 384 384A	

MOD

384 In Albania, Austria, Bulgaria, Hungary, Poland, Roumania, Switzerland, Czechoslovakia and the U.S.S.R. the band 5 250-5 350 Mc/s is also allocated to the radionavigation service.

ADD

384A In Sweden the band 5 255-5 350 Mc/s is also allocated to the radionavigation service.

In the Table of Frequency Allocations for the bands 5 650-6 425 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
5 650—5 670	RADIOLOCATION <i>Amateur</i> 388 389	
5 670—5 725	RADIOLOCATION <i>Amateur</i> <i>Space Research (Deep Space)</i> 388 389 389A	
5 725—5 850 RADIOLOCATION COMMUNICATION- SATELLITE 392A (Earth-to-satellite) <i>Amateur</i> 354 388 390 391	5 725—5 850 RADIOLOCATION <i>Amateur</i> 389 391	
5 850—5 925 FIXED MOBILE COMMUNICATION- SATELLITE 392A (Earth-to-satellite) 391	5 850—5 925 RADIOLOCATION <i>Amateur</i> 391	5 850—5 925 FIXED MOBILE COMMUNICATION SATELLITE 392A (Earth-to-satellite) <i>Radiolocation</i> 391
5 925—6 425	FIXED MOBILE COMMUNICATION-SATELLITE 392A (Earth-to-satellite)	

03—34

NOC	354 388 389 391
ADD	389A In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U S S R , the space research service is a primary service in the band 5 670-5 725 Mc/s
MOD	390 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U S S R , the band 5 800-5 850 Mc/s is allocated to the fixed, mobile and communication satellite services
SUP	392

In the Table of Frequency Allocations for the band 6 425-7 750 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
6 425—7 250	FIXED MOBILE 392F 393 393A	
7 250—7 300	COMMUNICATION-SATELLITE (Satellite-to-earth) 374A 392C 392D 392G	
7 300—7 750	FIXED MOBILE COMMUNICATION-SATELLITE (Satellite-to-earth) 392F	374A 392D

- ADD 392C Stations of the fixed and mobile services, previously authorized in the bands 7 250-7 300 Mc/s and 7 975-8 025 Mc/s may continue to operate until 1 January 1969. This provision does not apply to the countries listed in 392G and 392H.
- ADD 392D As an exception, passive communication satellite systems also may be accommodated in the band 7 250-7 750 Mc/s, subject to
- a. agreement between administrations concerned and those whose services, operating in accordance with the Table, may be affected
 - b. the co-ordination procedure laid down in Articles 9 and 9A

03—36

Such systems shall not cause any more interference at active earth station receivers than would be caused by fixed or mobile services. Power-flux density limitations at the earth's surface after reflection from the passive communication-satellites shall not exceed those prescribed in these Regulations for active communication satellite systems.

The maximum effective power radiated in any direction in the horizontal plane by earth stations of passive satellite systems shall not exceed - 55 dbW, not taking the site shielding factor into account. If the distance between a transmitting station of a passive system and the territory of another administration exceeds 400 km, this limitation may be increased in that direction by 2 db for each 100 km in excess of 400 km up to a maximum of 65 dbW.

- ADD 392F In the bands 7 200-7 250 Mc/s and 7 300-7 750 Mc/s the meteorological satellite service may use a band up to 100 Mc/s in width on a primary basis. These bands may also be used for the transmission of tracking and telemetering signals associated with meteorological-satellite space stations operating in the same band.
- ADD 392G In Algeria, Austria, Bulgaria, Cyprus, Cuba, Ethiopia, Finland, Hungary, Japan, Kuwait, Lebanon, Liberia, Malaysia, Morocco, the Philippines, Poland, the United Arab Republic, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia and the U.S.S.R., the band 7 250-7 700 Mc/s is also allocated to the fixed and mobile services.
- MOD 393 In Italy, the band 6 450-6 575 Mc/s is also allocated to the radiolocation service.
- ADD 393A The band 7 120-7 130 Mc/s may be used for telecommunication in association with space services, subject to agreement between the administrations concerned and those having services operating in accordance with the Table, which may be affected.

In the Table of Frequency Allocations for the band 7 750-8 500 Mc/s there shall be substituted the following

Mc/s

Allocation to Services		
Region 1	Region 2	Region 3
7 750—7 900		
FIXED		
MOBILE		
7 900—7 975		
FIXED		
MOBILE		
COMMUNICATION SATELLITE 392A (Earth-to-satellite)		
7 975—8 025		
COMMUNICATION SATELLITE (Earth-to-satellite)		
392A 392C 392H		
8 025—8 400		
FIXED		
MOBILE		
COMMUNICATION-SATELLITE 392A (Earth-to-satellite)		
394 394B		
8 400—8 500	8 400—8 500	8 400—8 500
FIXED	SPACE RESEARCH	FIXED
MOBILE		MOBILE
SPACE RESEARCH		SPACE RESEARCH
394A 394D	394C	394A 394D

03—38

TIAS 5903

- ADD 392H In Algeria, Bulgaria, Cuba, Ethiopia, Finland, Hungary, Japan, Kuwait, Lebanon, Morocco, Poland, the United Arab Republic, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia and the U S S R , the band 7 975-8 025Mc/s is also allocated to the fixed and mobile services
- MOD 394 In Australia and the United Kingdom the band 8 250-8 400 Mc/s is allocated to the radiolocation and communication-satellite services
- ADD 394A In Australia and the United Kingdom, the band 8 400-8 500 Mc/s is allocated to the radiolocation and space research services
- ADD 394B In Israel, the band 8 025-8 400 Mc/s is allocated, on a primary basis, to the fixed and mobile services and on a secondary basis, to the communication-satellite service
- ADD 394C In Cuba, the band 8 400-8 500 Mc/s is also allocated to the fixed and mobile services
- ADD 394D In Austria, Belgium, France, Israel, Luxembourg and Malaysia, the allocation to the space research service in the band 8 400-8 500 Mc/s is on a secondary basis

In the Table of Frequency Allocations for the bands 9800-10500 Mc's there shall be substituted the following

Mc's

Allocation to Services		
Region 1	Region 2	Region 3
9800-10000	RADIOGRAPHY <i>F-1 d</i> 401 401 401A	
10000-10500	RADIOGRAPHY <i>G-11 e</i> 401A 402 403	

NOC

400 401 402 403

ADD

401A The band 9975-10025 Mc's shall be used by weather radar on meteorological satellites

In the Table of Frequency Allocations for the bands
10 55-10 7 Gc/s there shall be substituted the following

Gc/s		
Allocation to Services		
Region 1	Region 2	Region 3
10 55—10 68	FIXED MOBILE <i>Radiolocation</i>	
10 68—10 7	RADIO ASTRONOMY 405A 405B	

SUP

405

ADD

405A In Australia and the United Kingdom the band 10 68-10 7 Gc/s is also allocated on a secondary basis to the radiolocation service

ADD

405B In Algeria, Bulgaria, Cuba, Hungary, Japan, Kuwait, Lebanon, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U. S. S. R. the band 10 68-10 7 Gc/s is also allocated to the fixed and mobile services

01-41

*In the Table of Frequency Allocations for the bands
14-15.7 Gc/s there shall be substituted the following*

Gc/s

Allocation to Services		
Region 1	Region 2	Region 3
14—14.3	RADIONAVIGATION 407	
14.3—14.4	RADIONAVIGATION SATELLITE	
14.4—15.25	FIXED MOBILE	
15.25—15.35	SPACE RESEARCH 409A 409B	
15.35—15.4	RADIO ASTRONOMY 409C	
15.4—15.7	AERONAUTICAL RADIONAVIGATION 352A 352B 407	

MOD

407 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R. the bands 13.25-13.5 Gc/s, 14.175-14.3 Gc/s, 15.4-17.7 Gc/s, 21-22 Gc/s, 23-24.25 Gc/s and 33.4-36 Gc/s are also allocated to the fixed and mobile services.

03—42

- ADD 409A In Algeria, Bulgaria, Cuba, Hungary, Kuwait, Lebanon, Morocco, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U S S R , the band 15 25-15 35 Gc/s is also allocated to the fixed and mobile services
- ADD 409B In Austria, Belgium, Japan, the Netherlands, Portugal, the F R. of Germany, the United Kingdom and Switzerland, the band 15 25-15 35 Gc/s is also allocated, on a secondary basis to the fixed and mobile services
- ADD 409C In Algeria, Bulgaria, Cuba, Hungary, Kuwait, Lebanon, Morocco, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U S S R the band 15 35-15 4 Gc/s is also allocated to the fixed and mobile services

*In the Table of Frequency Allocations for the bands
17.7-21 Gc/s there shall be substituted the following*

Gc/s

Allocation to Services		
Region 1	Region 2	Region 3
17.7—19.3	FIXED	
	MOBILE	
19.3—19.4	RADIO ASTRONOMY	
	409D	
19.4—21	FIXED	
	MOBILE	

ADD

409D In Bulgaria, Cuba, Hungary, Kuwait, Lebanon, Poland, the United Arab Republic, Roumania, Czechoslovakia and the U.S.S.R. the band 19.3-19.4 Gc/s is also allocated to the fixed and mobile services.

03—44

In the Table of Frequency Allocations for the bands 25-40 Gc/s there shall be substituted the following

Gc/s

Allocation to Services		
Region 1	Region 2	Region 3
25-31	FIXED MOBILE	
31-33	FIXED MOBILE <i>Space Research</i> 412H	
31.3-31.5	RADIO ASTRONOMY 412A	
31.5-31.8 SPACE RESEARCH <i>Fixed</i> <i>Mobile</i>	31.5-31.8 SPACE RESEARCH 405C	31.5-31.8 SPACE RESEARCH <i>Fixed</i> <i>Mobile</i>
31.8-32.3	RADIONAVIGATION <i>Space Research</i> 412B	
32.3-33	RADIONAVIGATION	

03-45

Gc/s

Allocation to Services		
Region 1	Region 2	Region 3
33—33 4	33— 33 4	
RADIO ASTRONOMY		RADIONAVIGATION
RADIONAVIGATION		412F
33 4—34 2		
	RADIOLOCATION	
	407 408 412 412G	
34 2—35 2		
	RADIOLOCATION	
	<i>Space Research</i>	
	407 408 412 412C 412D	
35 2—36		
	RADIOLOCATION	
	407 408 412	
36—40		
	FIXED	
	MOBILE	
	412E	

- ADD 405C In Cuba, the band 31 5 31 8 Gc/s is also allocated, on a secondary basis to the fixed and mobile services
- MOD 407
- NOC 408 412
- ADD 412A In Bulgaria, Cuba, Hungary, Poland the United Arab Republic, Roumania, Czechoslovakia and the U S S R , the band 31 3 31 5 Gc/s is also allocated to the fixed and mobile services
- ADD 412B In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U S S R , the space research service is a primary service in the band 31 8-32 3 Gc/s

03—46

- ADD 412C In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U S S R , the space research service is a primary service in the band 34 2-35 2 Gc/s
- ADD 412D The band 34 4-34 5 Gc/s may be used by weather radar devices on meteorological-satellites for the detection of cloud
- ADD 412E In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U S S R , the band 36 5-37 5 Gc/s is also allocated to the radio astronomy service
- ADD 412F In Cuba and India, the band 33-33 4 Gc/s is also allocated to the radio astronomy service
- ADD 412G In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U S S R , the band 33 4-34 Gc/s is also allocated to the radio astronomy service
- ADD 412H In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U S S R , the space research service is a primary service in the band 31-31 3 Gc/s

ANNEX 4

Revision of Article 7 of the Radio Regulations

Article 7 of the Radio Regulations shall be amended as follows

After Section 11 there shall be inserted the following new Sections VII VIII and IX

ADD

Section VII Terrestrial Services sharing Frequency Bands with Space Services between 1 Gc/s and 10 Gc/s

Choice of Sites and Frequencies

ADD

470A § 18 Sites and frequencies for terrestrial stations operating in frequency bands shared with equal rights between terrestrial and space services shall be selected having regard to the relevant recommendations of the C C I R with respect to geographical separation from earth stations

Power Limits

ADD

470B § 19 (1) The maximum effective radiated power of the transmitter and associated antenna, of a station in the fixed or mobile service shall not exceed -55 dbW

ADD

470C (2) The power delivered by a transmitter to the antenna of a station in the fixed or mobile service shall not exceed -13 dbW

ADD

470D (3) The limits given in **470B** and **470C** apply in the following frequency bands allocated to reception by space stations in the communication-satellite service, where these are shared with equal rights with the fixed or mobile service

5800-5850 Mc/s (for the countries mentioned in **390**)
5850-5925 Mc/s (Regions 1 and 3)
5925-6425 Mc/s
7900-8100 Mc/s

4-01

ADD Section VIII Space Services sharing Frequency Bands with
Terrestrial Services between 1 Gc/s and 10 Gc/s

Choice of Sites and Frequencies

ADD 470E § 20 Sites and frequencies for earth stations, operating in frequency bands shared with equal rights between terrestrial and space services, shall be selected having regard to the relevant recommendations of the C C I R with respect to geographical separation from terrestrial stations

Power Limits

ADD 470F § 21 (1) Earth Stations in the Communication-Satellite Service

ADD 470G (2) The mean effective radiated power transmitted by an earth station in any direction in the horizontal plane¹ shall not exceed + 55 dbW in any 4 kc/s band, except that it may be increased subject to the provisions of 470H or 470I. However, in no case shall it exceed a value of - 65 dbW in any 4 kc/s band

ADD 470H (3) In any direction where the distance from an earth station to the boundary of the territory of another administration exceeds 400 km, the limit of - 55 dbW in any 4 kc/s band may be increased in that direction by 2 db for each 100 km in excess of 400 km

ADD 470I (4) The limit of + 55 dbW in any 4 kc/s band may be exceeded by agreement between the administrations concerned or affected

ADD 470J (5) The limits given in 470G apply in the following frequency bands allocated to transmission by earth stations in the communica-

¹ For the purpose of this Regulation, the effective radiated power transmitted in the horizontal plane shall be taken to mean the effective radiated power actually transmitted towards the horizon reduced by the site shielding factor that may be applicable. The value of this site shielding factor shall be determined as indicated in Section 5 of the Annex to Recommendation No. 1A.

tion-satellite service, where these are shared with equal rights with the fixed or mobile service

4400-4700 Mc s

5800-5850 Mc s (for the countries mentioned in 390)

5850-5925 Mc s (Regions 1 and 3)

5925-6425 Mc s

7900-8400 Mc s

Minimum Angle of Elevation

ADD 470K § 22 (1) Earth Stations in the Communication-Satellite Service

ADD 470L (2) Earth station antennas shall not be employed for transmission at elevation angles less than 3 degrees, measured from the horizontal plane to the central axis of the main lobe except when agreed to by the administrations concerned or affected

ADD 470M (3) The limit given in 470L applies in the following frequency bands allocated to transmission by earth stations in the communication-satellite service where these are shared with equal rights with the fixed or mobile service

4400-4700 Mc s

5800-5850 Mc s (for the countries mentioned in 390)

5850-5925 Mc s (Regions 1 and 3)

5925-6425 Mc s

7250-7750 Mc s

7900-8400 Mc s

Power Flux Density Limits

ADD 470N § 23 (1) Communication-Satellite Space Stations

ADD 470O a) The total power flux density at the earth's surface, produced by an emission from a communication-satellite space station, or reflected from a passive communica-

- tion satellite, where wide-deviation frequency (or phase) modulation is used, shall in no case exceed -130 dbW/m² for all angles of arrival. In addition, such signals shall if necessary be continuously modulated by a suitable waveform, so that the power flux density shall in no case exceed -149 dbW/m² in any 4 kc/s band for all angles of arrival
- ADD 470P b) The power flux density at the earth's surface, produced by an emission from a communication-satellite space station, or reflected from a passive communication satellite, where modulation other than wide-deviation frequency (or phase) modulation is used, shall in no case exceed -152 dbW/m² in any 4 kc/s band for all angles of arrival
- ADD 470Q c) The limits given in 470O and 470P apply in the following frequency bands allocated to transmission by space stations in the communication-satellite service, where these are shared with equal rights with the fixed or mobile services
- 3400-4200 Mc/s
7250-7750 Mc/s
- ADD 470R (2) Meteorological-Satellite Space Stations¹
- ADD 470S a) The power flux density at the earth's surface, produced by an emission from a meteorological-satellite space station, where wide-deviation frequency (or phase) modulation is used, shall in no case exceed -130 dbW/m² for all angles of arrival. In addition, such signals shall if necessary be continuously modulated by a suitable waveform, so that the power flux density shall in no case exceed -149 dbW/m² in any 4 kc/s band for all angles of arrival

¹ In view of the absence of any C C I R Recommendations relative to sharing between the meteorological-satellite service and other services, power flux density levels applicable to communication-satellite space stations are extended to meteorological-satellite space stations

ADD 470T b) The power flux density at the earth's surface, produced by an emission from a meteorological-satellite space station, where modulation other than wide-deviation frequency (or phase) modulation is used, shall in no case exceed -152 dBW/m² in any 4 kc/s band for all angles of arrival

ADD 470U c) The limits given in 470S and 470T apply in the following frequency bands allocated to transmissions by space stations in the meteorological-satellite service, shared with equal rights with the fixed or mobile service

1660-1670 Mc/s

1690-1700 Mc/s

7200-7250 Mc/s

7300-7750 Mc/s

The limits given in 470S and 470T also apply in the band 1770-1790 Mc/s although the meteorological-satellite service is a secondary service in this band

ADD Section IX Space Services

Cessation of Emissions

ADD 470V § 24 Space stations shall be made capable of ceasing radio emissions by the use of appropriate devices¹ that will ensure definite cessation of emissions

¹ Battery life, timing devices, ground command, etc

ANNEX 5

Revision of Article 9 of the Radio Regulations

Article 9 of the Radio Regulations shall be amended as follows

The title of the Article, the title of Section 1 and numbers 486, 487 and 491 shall be substituted by the following

- MOD **Notification and Recording in the Master International Frequency Register of Frequency Assignments to Stations in Terrestrial Services**^a
- MOD **Section I. Notification of Frequency Assignments and Co-ordination Procedure to be Applied in appropriate Cases**
- MOD **486 § 1 (1) Any frequency assignment**^{1 2} **to a fixed, land, broadcasting**³, **radionavigation land, radiolocation land or standard frequency station, or to a ground-based station in the meteorological aids service, shall be notified to the International Frequency Registration Board,**
- a) if the use of the frequency concerned is capable of causing harmful interference to any service of another administration*⁴, *or*
- b) if the frequency is to be used for international radio-communication, or*
- c) if it is desired to obtain international recognition of the use of the frequency*⁴
- ADD ^a For the notification and recording in the Master International Frequency Register of frequency assignments to stations in the space and radio astronomy services, see Article 9A
- ADD **486 4** ⁴ The attention of administrations is specifically drawn to the application of the provisions of Nos **486 a)** and **486 c)** in those cases where they make a frequency assignment to a station in the fixed or mobile service, located within co-ordination distance of an earth station (see No **492A**), in a band which these services share with equal rights with the space service in the frequency spectrum between one and ten Gc/s

- MOD 487 (2) Similar notice shall be given for any frequency to be used for the reception of mobile stations by a particular land station in each case where one or more of the conditions specified in No 486 are applicable
- MOD 491 § 3 (1) Whenever practicable each notice should reach the Board before the date on which the assignment is brought into use. It must reach the Board not earlier than ninety days before the date on which it is to be brought into use, but in any case not later than thirty days after the date it is actually brought into use. However, for a frequency assignment to a station in the fixed or mobile service mentioned in No 492A, the notice must reach the Board not earlier than two years before the date on which the assignment is to be brought into use.

After Regulation No 492, there shall be inserted the following new Regulations

- ADD 492A § 3A (1) Before an administration notifies to the Board, or brings into use any frequency assignment to a station in the fixed or mobile service, whether for transmitting or receiving, in a particular band allocated with equal rights to the space service and the fixed or mobile service in the frequency spectrum between one and ten Gc/s, it shall effect co-ordination of the assignment with any other administration which has previously effected co-ordination under the provisions of No 639AD, for the establishment of an earth station, if the proposed station in the fixed or mobile service is to be located within the co-ordination distance¹ of the earth station, and the necessary bandwidths of emission of the station concerned in the space service on the one hand, and of the station concerned in the fixed or mobile service on the

- ADD 492A.1 ¹For the purposes of this Article the expression "co-ordination distance" means the distance from an earth station calculated along the lines of the procedures shown in Recommendation No 1A within which there is a possibility of the use of a given transmitting frequency at this earth station causing harmful interference to stations in the fixed or mobile service in the frequency spectrum between one and ten Gc/s, sharing the same frequency band, or, as the case may be, of the use of a given frequency for reception at this earth station receiving harmful interference caused by such stations in the fixed or mobile service

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other, are separated by less than six Mc/s. For this purpose it shall send to any other such administration a copy of a diagram drawn to an appropriate scale indicating the location of the station in the fixed or mobile service and all other pertinent details of the proposed frequency assignment, and the approximate date on which it is planned to begin operations.

ADD

492B (2) An administration with which co-ordination is sought under No **492A** shall acknowledge receipt of the co-ordination data within thirty days and shall promptly examine the matter to establish.

- a) in the case of a frequency assignment to be used for transmitting by the station in the fixed or mobile service, whether the use would cause harmful interference to the service rendered by its earth stations operating in accordance with the Convention and these Regulations, or to be so operated within the next two years, with the provision that in this latter case co-ordination specified in No **639AD** has been effected or the co-ordination procedure has already begun.
- b) in the case of a frequency assignment to be used for reception by the station in the fixed or mobile service, whether harmful interference would be caused to reception at the station in the fixed or mobile service by the service rendered by its earth stations operating in accordance with the Convention and these Regulations, or to be so operated within the next two years, with the provision that in this latter case co-ordination specified in No **639AD** has been effected or the co-ordination procedure has already begun.

and shall, within a further period of thirty days either notify the administration requesting co-ordination of its agreement to the proposals or, if this is not possible, indicate the reasons therefore and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

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ADD 492C (3) No co-ordination under No 492A is required when an administration proposes

- a) to bring into use a station in the fixed or mobile service which is not located, in relation to an earth station, within the co-ordination distance defined in No 492A 1, or
- b) to change characteristics of an existing assignment in such a way as not to increase the probability of harmful interference to the earth stations of other administrations

ADD 492D (4) An administration seeking co-ordination may request the Board to endeavour to effect co-ordination, in those cases where

- a) an administration with which co-ordination is sought under No 492A fails to reply within a period of ninety days,
- b) there is a disagreement between the administration seeking co-ordination and an administration with which co-ordination is sought as to the probability of harmful interference, or
- c) co-ordination between administrations is not possible for any other reason

In so doing, it shall furnish the Board with the necessary information to enable it to effect such co-ordination

ADD 492E (5) Either the administration seeking co-ordination or an administration with which co-ordination is sought, or the Board, may request additional information which they may require to assess the probability of harmful interference to the services concerned

ADD 492F (6) Where the Board receives a request under No 492D a), or where the Board receives no reply within ninety days to its request for co-ordination in the case foreseen in No 492D c), it shall immediately send a telegram to the administration with which co-ordination is sought. If no reply has been received from that administration within a period of sixty days from the date of despatch of the telegram, it shall be deemed that the administration with which co-ordination was sought shall have undertaken that no complaint will

be made in respect of any harmful interference which may be caused by the station in the fixed or mobile service to the services rendered by its earth station

- ADD 492G (7) Where necessary, as part of the procedure under No. 492D, the Board shall assess the probability of harmful interference. In any case, the Board shall inform the administrations concerned of the results obtained

For Regulations Nos 493 and 494, there shall be substituted the following Regulations

- MOD 493 § 3B (1) Whatever the means of communication, including telegraph, by which a notice is transmitted to the Board, it shall be considered complete if it contains at least those appropriate basic characteristics specified in Appendix 1

- MOD 494 (2) Complete notices shall be considered by the Board in the order of their receipt

The following new title is added after No 499

- ADD 499A Sub-Section IIA. Procedure to be followed in the case where the provisions of No 492A are not applicable

For Regulation No 535, there shall be substituted the following Regulation

- MOD 535 § 17 *In applying the provisions of the whole of this Sub-Section, any resubmitted notice which is received by the Board more than one hundred and eighty days after the date of its return by the Board shall be considered as a new notice*

After Regulation No 570, there shall be inserted the following new Regulations

- ADD 570AA Sub-Section IIB. Procedure to be followed in the case where the provisions of No. 492A are applicable
- ADD 570AB § 23A The Board shall examine each notice
- ADD 570AC a) with respect to its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations (with the exception of those relating to the co-ordination procedure and the probability of harmful interference),
- ADD 570AD b) with respect to its conformity with the provisions of No 492A relating to the co-ordination of the use of the frequency assignment with the other administrations concerned,
- ADD 570AE c) where appropriate, with respect to the probability of harmful interference to the service rendered by an earth receiving station for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No 639AS, and if the corresponding frequency assignment to the space transmitting station has not, in fact, caused harmful interference to any frequency assignment in conformity with No 501 or 570AC, as appropriate, previously recorded in the Master Register
- ADD 570AF§23B Depending upon the findings of the Board subsequent to the examination prescribed in Nos 570AC, 570AD and 570AE, further action shall be as follows
- ADD 570AG§23C(1) *Finding unfavourable with respect to No 570AC.*
- ADD 570AH (2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No 115, the assignment shall be recorded in the Master Register The date of receipt by the Board of the notice shall be entered in Column 2d

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- ADD 570AI (3) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No 115, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem
- ADD 570AJ (4) If the notifying administration resubmits the notice unchanged, it shall be treated in accordance with the provisions of No 570AI.
- ADD 570AK (5) If it is resubmitted with a specific reference to the fact that the station will be operated in accordance with the provisions of No. 115, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the resubmitted notice shall be entered in Column 2d.
- ADD 570AL (6) If the notifying administration resubmits the notice with modifications which, after re-examination, result in a favourable finding by the Board with respect to No 570AC, the notice shall be treated under the provisions of Nos 570AM to 570AZ. However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in Column 2d
- ADD 570AM § 23D (1) *Finding favourable with respect to No 570AC.*
- ADD 570AN (2) Where the Board finds that the co-ordination procedure mentioned in No 570AD has been successfully completed with all administrations whose earth stations may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d
- ADD 570AO (3) Where the Board finds that the co-ordination procedure mentioned in No 570AD has not been applied, and the notifying administration requests the Board to effect the required co-ordination, the Board shall take the appropriate action necessary and shall inform the administrations concerned of the results obtained. If the

Board's efforts are successful, the notice shall be treated in accordance with No 570AN. If the Board's efforts are unsuccessful, the notice shall be examined by the Board with respect to the provisions of No 570AE.

- ADD 570AP (4) Where the Board finds that the co-ordination procedure mentioned in No 570AD has not been applied, and the notifying administration does not request the Board to effect the required co-ordination, the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this action and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem
- ADD 570AQ (5) Where the notifying administration resubmits the notice and the Board finds that the co-ordination procedure mentioned in No 570AD has been successfully completed with all administrations whose earth stations may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 570AR (6) Where the notifying administration resubmits the notice with a request that the Board effect the required co-ordination, it shall be treated in accordance with the provisions of No 570AO. However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 570AS (7) Where the notifying administration resubmits the notice and states it has been unsuccessful in effecting the co-ordination, it shall be examined by the Board with respect to the provisions of No 570AE. However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 570AT§23E(1) *Finding favourable with respect to Nos 570AC and 570AE.*

5—08

- ADD **570AU** (2) The assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d.
- ADD **570AV§23F** (1) *Finding favourable with respect to No 570AC but unfavourable with respect to No 570AE*
- ADD **570AW** (2) The notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.
- ADD **570AX** (3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to No 570AE, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the re-submitted notice shall be indicated in the Remarks Column.
- ADD **570AY** (4) Should the notifying administration re-submit the notice, either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the provisions of No 570AX to be applied, and should that administration insist upon reconsideration of the notice, but should the Board's finding remain unchanged, the assignment shall be recorded in the Master Register. However this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least one hundred and twenty days without any complaint of harmful interference having been received. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column.
- ADD **570AZ** (5) The period of one hundred and twenty days mentioned in No 570AY shall count from
— the date when the assignment to the station in the fixed or mobile service which received an unfavourable finding

is brought into use, if the assignment to the earth station is then in use.

— otherwise, from the date when the assignment to the earth station is brought into use

But if the assignment to the earth station has not been brought into use by the notified date, the period of one hundred and twenty days shall be counted from this date. Allowance may be made for the additional period mentioned in No 570BG.

- ADD 570BA§23G (1) *Change in the Basic Characteristics of Assignments already recorded in the Master Register*
- ADD 570BB (2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1 (except those entered in Columns 3 and 4a of the Master Register), shall be examined by the Board according to Nos 570AC and 570AD and, where appropriate, No 570AE, and the provisions of Nos 570AG to 570AZ inclusive applied. Where the change should be recorded, the assignment shall be amended according to the notice.
- ADD 570BC (3) However, in the case of a change in the basic characteristics of an assignment which is in conformity with No 570AC, should the Board reach a favourable finding with respect to No 570AD, and, where its provisions are applicable, with respect to No 570AE, or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in Column 2d. In addition, the date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.
- ADD 570BD§23H *In applying the provisions of the whole of this Sub-Section, any resubmitted notice which is received by the Board more than two years after the date of its return by the Board, shall be considered as a new notice.*
- ADD 570BE§23I (1) *Recording of Frequency Assignments notified before being brought into use*

- ADD 570BF (2) If a frequency assignment notified in advance of bringing into use has received a favourable finding by the Board with respect to Nos 570AC and 570AD and, where appropriate, with respect to No 570AE, it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry
- ADD 570BG (3) If, within the period of thirty days after the projected date of bringing into use, the Board receives confirmation from the notifying administration of the date of putting into use, the special symbol shall be deleted from the Remarks Column. In the case where the Board, in the light of a request from the notifying administration received before the end of the thirty-day period, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed one hundred and fifty days
- ADD 570BH (4) In the circumstances described in No 570AY, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No 570AZ, the notifying administration may ask the Board to enter the assignment provisionally in the Master Register, in which event a special symbol to denote the provisional nature of the entry shall be entered in the Remarks Column. The Board shall delete this symbol when it receives from the notifying administration, at the end of the period specified in No 570AY, the information relating to the absence of complaint of harmful interference
- ADD 570BI (5) If the Board does not receive this confirmation within the period referred to in No 570BG or at the end of the period referred to in No 570BH, as appropriate, the entry concerned shall be cancelled
- For Regulation No 572, there shall be substituted the following Regulation*
- MOD 572 § 25 The procedure for recording dates in the appropriate part of Column 2 of the Master Register which shall be applied according to the frequency bands and services concerned is described in the following Nos 573 to 604 for frequency assignments referred to in Sub-Section IIA

*After Regulation No 611, there shall be inserted
the following new Regulation*

- ADD **611A** (6) If harmful interference to the reception of any station whose assignment is in accordance with No 639AS is actually caused by the use of a frequency assignment which is not in conformity with No 501 or 570AC, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference

*For Regulations Nos 613 and 615, there shall be
substituted the following Regulations*

- MOD **613** (2) The Board, in the light of all the data at its disposal, shall review the matter, taking into account No 501 or 570AC and No 502, 503, 570AD or 570AE, as appropriate, and shall render an appropriate finding, informing the notifying administration prior either to the promulgation of its finding or to any recording action
- MOD **615** § 38 (1) After actual use for a reasonable period of an assignment which has been entered in the Master Register on the insistence of the notifying administration, following an unfavourable finding with respect to No 502, 503 or 570AE, as appropriate, this administration may request the Board to review the finding. Thereupon the Board shall review the matter, first having consulted the administrations concerned

ANNEX 6

Addition of a new Article (Article 9A) to the Radio Regulations

The following new Article 9A shall be added to the Radio Regulations after Article 9

ARTICLE 9A

Notification and Recording in the Master International Frequency Register of Frequency Assignments to Stations in the Space and Radio Astronomy Services

Section 1. Notification of Frequency Assignments and Co-ordination Procedure to be Applied in appropriate Cases

- ADD 639A.4 § 1 (1) Any frequency assignment¹ to an earth or space station shall be notified to the International Frequency Registration Board
- a) if the use of the frequency concerned is capable of causing harmful interference to any service of another administration; or
 - b) if the frequency is to be used for international radio-communication; or
 - c) if it is desired to obtain international recognition of the use of the frequency.

- ADD 639A.4.1 The expression "frequency assignment" wherever it appears in this Article shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master International Frequency Register (hereinafter called *Master Register*).

6-01

- ADD **639AB** (2) Similar notice shall be given for any frequency to be used for the reception of transmissions from earth or space stations by a particular space or earth station in each case where one or more of the conditions specified in No 639AA are applicable
- ADD **639AC** (3) Similar notice may be given for any frequency or frequency band to be used for reception by a particular radio astronomy station, if it is desired that such data should be included in the Master Register
- ADD **639AD § 2** (1) Before an administration notifies to the Board or brings into use any frequency assignment to an earth station, whether for transmitting or receiving, in a particular band allocated with equal rights to the space service and the fixed or the mobile service in the frequency spectrum between one and ten Gc's, it shall effect co ordination of the assignment with any other administration whose territory lies wholly or partly within co-ordination distance¹, but only in respect of the fixed or the mobile service For this purpose it shall send to any other such administration a copy of a diagram drawn to an appropriate scale indicating the location of the earth station and showing the co-ordination distance from the earth station, for the cases of transmission and reception by the earth station, as a function of azimuth and the data on which it is based, including all pertinent details of the proposed frequency assignment, as listed in Appendix 1A, and an indication of the approximate date on which it is planned to begin operations

- ADD **639AD 1¹** For the purposes of this Article the expression co-ordination distance means the distance from an earth station calculated along the lines of the procedures shown in Recommendation No 1A within which there is a possibility of the use of a given transmitting frequency at this earth station causing harmful interference to stations in the fixed or the mobile service in the frequency spectrum between one and ten Gc's, sharing the same frequency band, or, as the case may be, of the use of a given frequency for reception at this earth station receiving harmful interference caused by such stations in the fixed or the mobile service

6-02

ADD **639AE** (2) An administration with which co-ordination is sought under No. **639AD** shall acknowledge receipt of the co-ordination data within thirty days and shall promptly examine the matter to establish

a) in the case of a frequency assignment to be used for transmitting by the earth station, whether the use would cause harmful interference to the service rendered by its stations in the fixed or the mobile service operating in accordance with the Convention and these Regulations, or to be so operated within the next two years,

b) in the case of a frequency assignment to be used for reception by the earth station, whether harmful interference would be caused to reception at the earth station by the service rendered by its stations in the fixed or the mobile service operating in accordance with the Convention and these Regulations, or to be so operated within the next two years.

and shall, within a further period of thirty days, notify the administration requesting co-ordination of its agreement. If the administration with which co-ordination is sought does not agree it shall, within the same period, send to the administration seeking co-ordination a copy of a diagram drawn to an appropriate scale showing the location of its stations in the fixed or the mobile service which are within the co-ordination distance of the earth transmitting or receiving station, as appropriate, together with all other relevant basic characteristics, and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem. A copy of these data shall be sent to the Board as notification within the period specified for such a case in No. **491**.

ADD **639AF** (3) No co-ordination under No. **639AD** is required when an administration proposes

a. to bring into use an earth station which is located in relation to the territory of any other country, outside the co-ordination distance defined in **639AD.1**,

- b*) to change the characteristics of an existing assignment in such a way as not to increase the probability of harmful interference to the stations in the fixed or the mobile service of other administrations
- c*) to bring into use an earth station in the band 4 400-4 700 Mc/s or the band 8 100-8 400 Mc/s, or
- d*) to operate an earth station located on board a ship or aircraft, however, in such a case the operation of this station in a band referred to in No 639AD, if the ship or aircraft is within the co-ordination distance with respect to the boundaries of another country shall be subject to prior agreement between the administrations concerned, in order to avoid harmful interference to the established fixed and mobile services of that country.

ADD

639AG (4) An administration seeking co-ordination may request the Board to endeavour to effect co-ordination in those cases where

- a*) an administration with which co-ordination is sought under No 639AD fails to reply within a period of ninety days,
- b*) there is a disagreement between the administration seeking co-ordination and an administration with which co-ordination is sought as to the probability of harmful interference, or
- c*) co-ordination between administrations is not possible for any other reason

In so doing, it shall furnish the Board with the necessary information to enable it to effect such co-ordination

ADD

639AH (5) Either the administration seeking co-ordination or an administration with which co-ordination is sought or the Board may

request additional information which they may require to assess the probability of harmful interference to the services concerned

- ADD 639AI (6) Where the Board receives a request under No 639AG a), or where the Board receives no reply within ninety days to its request for co-ordination in the case foreseen in No 639AG c), it shall immediately send a telegram to the administration with which co-ordination is sought. If no reply has been received from that administration within a period of sixty days from the date of despatch of the telegram, it shall be deemed that the administration with which co-ordination was sought shall have undertaken that no complaint will be made in respect of any harmful interference which may be caused by the earth station to the services rendered by its stations in the fixed or the mobile service
- ADD 639AJ (7) Where necessary, as part of the procedure under No 639AG, the Board shall assess the probability of harmful interference. In any case, the Board shall inform the administrations concerned of the results obtained
- ADD 639AK § 3 For any notification under No 639AA, 639AB, or 639AC, an individual notice for each frequency assignment shall be drawn up as prescribed in Appendix IA, which specifies in Sections B, C, D, E or F the basic characteristics to be furnished, according to the case. It is recommended that the notifying administration should also supply the additional data called for in Section A of that Appendix, together with such further data as it may consider appropriate
- ADD 639AL § 4 (1) For a frequency assignment to an earth or space station, each notice must reach the Board not earlier than two years before the date on which the assignment is to be brought into use. It must reach the Board in any case not later than one hundred and eighty days before this date, except in the case of assignments in the space research service in bands allocated exclusively to this service or in shared bands in which this service is the sole primary service. In the case of such an assignment in the space research service the notice should, whenever practicable, reach the Board before the date on which the assignment is brought into use, but in any case must reach

the Board not later than thirty days after the date it is actually brought into use

- ADD 639AM (2) Any frequency assignment to an earth or space station, the notice of which reaches the Board after the applicable period specified in No 639AL, shall, where it is to be recorded, bear a remark in the Master Register to indicate that it is not in conformity with No 639AL

Section II Procedure for the Examination of Notices and the Recording of Frequency Assignments in the Master Register

- ADD 639AN § 5 Any notice which does not contain at least those characteristics specified in Appendix 1A (Sections B, C, D, E or F, as appropriate) shall be returned by the Board immediately, by airmail to the notifying administration with the reasons therefor
- ADD 639AO § 6 Upon receipt of a complete notice the Board shall include the particulars thereof, with the date of receipt in the weekly circular referred to in No 497, which shall contain the particulars of all such notices received since the publication of the previous circular
- ADD 639AP § 7 The circular shall constitute the acknowledgment to the notifying administration of the receipt of a complete notice
- ADD 639AQ § 8 Complete notices shall be considered by the Board in the order of their receipt The Board shall not postpone the formulation of a finding unless it lacks sufficient data to render a decision in connection therewith, moreover, the Board shall not act upon any notice which has a technical bearing on an earlier notice still under consideration by the Board, until it has reached a finding with respect to such earlier notice
- ADD 639AR § 9 The Board shall examine each notice
- ADD 639AS a) with respect to its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations (with the exception of those

- relating to the co-ordination procedure and the probability of harmful interference),
- ADD 639AT b) where appropriate, with respect to its conformity with the provisions of No 639AD relating to the co-ordination of the use of the frequency assignment with the other administrations concerned,
- ADD 639AU c) where appropriate, with respect to the probability of harmful interference to the service rendered by a station in the fixed or the mobile service for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No 501 or 570AC, as appropriate if this frequency assignment has not, in fact, caused harmful interference to any frequency assignment in conformity with No 639AS previously recorded in the Master Register
- ADD 639AV § 10 Depending upon the findings of the Board subsequent to the examination prescribed in Nos 639AS, 639AT and 639AU further action shall be as follows
- ADD 639AW § 11 (1) *Finding favourable with respect to No 639AS in cases where the provisions of No 639AT are not applicable*
- ADD 639AX (2) The assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d
- ADD 639AY § 12 (1) *Finding unfavourable with respect to No 639AS.*
- ADD 639AZ (2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No 115, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d
- ADD 639BA (3) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No 115 it shall be returned immediately by airmail to the

notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem

- ADD **639BB** (4) If the notifying administration resubmits the notice unchanged it shall be treated in accordance with the provisions of No 639BA. If it is resubmitted with a specific reference to the fact that the station will be operated in accordance with the provisions of No 115, or with modifications which after re-examination, result in a favourable finding by the Board with respect to No 639AS, and the provisions of No 639AT are not applicable the assignment shall be recorded in the Master Register. The date of receipt by the Board of the resubmitted notice shall be entered in Column 2d.
- ADD **639BC** § 13 (1) *Finding favourable with respect to No 639AS in cases where the provisions of No 639AT are applicable*
- ADD **639BD** (2) Where the Board finds that the co-ordination procedure mentioned in No 639AT has been successfully completed with all administrations whose fixed or mobile services may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d.
- ADD **639BE** (3) Where the Board finds that the co-ordination procedure mentioned in No 639AT has not been applied, and the notifying administration requests the Board to effect the required co-ordination the Board shall take the appropriate action necessary and shall inform the administrations concerned of the results obtained. If the Board's efforts are successful, the notice shall be treated in accordance with No 639BD. If the Board's efforts are unsuccessful, the notice shall be examined by the Board with respect to the provisions of No 639AU.
- ADD **639BF** (4) Where the Board finds that the co-ordination procedure mentioned in No 639AT has not been applied, and the notifying administration does not request the Board to effect the required co-ordination, the notice shall be returned immediately by airmail to the

notifying administration with the reasons of the Board for this action and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem

- ADD 639BG (5) Where the notifying administration resubmits the notice and the Board finds that the co-ordination procedure mentioned in No 639AT has been successfully completed with all administrations whose fixed or mobile services may be affected, the assignment shall be recorded in the Master Register The date of receipt by the Board of the original notice shall be entered in Column 2d The date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 639BH (6) Where the notifying administration resubmits the notice with a request that the Board effect the required co-ordination, it shall be treated in accordance with the provisions of No 639BE However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 639BI (7) Where the notifying administration resubmits the notice and states it has been unsuccessful in effecting the co-ordination, it shall be examined by the Board with respect to the provisions of No 639AU However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column
- ADD 639BJ§ 14 (1) *Finding favourable with respect to Nos 639AS and 639AU*
- ADD 639BK (2) The assignment shall be recorded in the Master Register The date of receipt by the Board of the notice shall be entered in Column 2d
- ADD 639BL§ 15 (1) *Finding favourable with respect to No 639AS but unfavourable with respect to No 639AU*
- ADD 639BM (2) The notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem

ADD 639BN (3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to No 639AU, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be indicated in the Remarks Column.

ADD 639BO (4) Should the notifying administration resubmit the notice either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the provisions of No 639BN to be applied, and should that administration insist upon reconsideration of the notice, but should the Board's finding remain unchanged, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least one hundred and twenty days without any complaint of harmful interference having been received. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column.

ADD 639BP (5) The period of one hundred and twenty days mentioned in No 639BO shall count from

- the date when the assignment to the earth station which received an unfavourable finding is brought into use, if the assignment to the station in the fixed or the mobile service is then in use,
- otherwise, from the date when the assignment to the station in the fixed or the mobile service is brought into use.

But if the assignment to the station in the fixed or mobile service has not been brought into use by the notified date, the period of one hundred and twenty days shall be counted from this date. Allowance may be made for the additional period mentioned in No 639BY.

- ADD 639BQ§16 (1) *Notices relating to radio astronomy stations*
- ADD 639BR (2) A notice relating to a radio astronomy station shall not be examined by the Board with respect to No 639AT or 639AU. Whatever the finding, the assignment shall be recorded in the Master Register with a date in Column 2c. The date of receipt by the Board of the notice shall be recorded in the Remarks Column.
- ADD 639BS §17 (1) *Change in the basic characteristics of assignments already recorded in the Master Register*
- ADD 639BT (2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix IA (except the call sign, the name of the station or the name of the locality in which it is situated) shall be examined by the Board according to No 639AS, and, where appropriate, No 639AT or 639AU, and the provisions of No 639AW to 639BR inclusive applied. Where the change should be recorded, the assignment shall be amended according to the notice.
- ADD 639BU (3) However, in the case of a change in the characteristics of an assignment which is in conformity with No 639AS, should the Board reach a favourable finding with respect to No 639AT or 639AU, where these provisions apply or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in Column 2d. The date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.
- ADD 639BV §18 *In applying the provisions of the whole of this Section, any resubmitted notice which is received by the Board more than two years after the date of its return by the Board, shall be considered as a new notice.*

- ADD 639BW § 19 (1)** *Recording of Frequency Assignments notified before being brought into use*
- ADD 639BX (2)** If a frequency assignment notified in advance of bringing into use has received a favourable finding by the Board with respect to No 639AS and, where appropriate, No 639AT or 639AU, it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.
- ADD 639BY (3)** If, within the period of thirty days after the projected date of bringing into use, the Board receives confirmation from the notifying administration of the date of putting into use the special symbol shall be deleted from the Remarks Column. In the case where the Board, in the light of a request from the notifying administration received before the end of the thirty-day period, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed one hundred and fifty days.
- ADD 639BZ (4)** In the circumstances described in No 639BO, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No 639BP, the notifying administration may ask the Board to enter the assignment provisionally in the Master Register in which event a special symbol to denote the provisional nature of the entry shall be entered in the Remarks Column. The Board shall delete this symbol when it receives from the notifying administration at the end of the period specified in No 639BO the information relating to the absence of complaint of harmful interference.
- ADD 639CA (5)** If the Board does not receive this confirmation within the period referred to in No 639BY or at the end of the period referred to in No 639BZ, as appropriate, the entry concerned shall be cancelled.

Section III. Recording of Findings in the Master Register

- ADD 639CB § 20** In any case where a frequency assignment is recorded in the Master Register, the finding reached by the Board shall be indicated by a symbol in Column 13a. In addition, a remark indicating the reasons for any finding shall be inserted in the Remarks Column.

Section IV. Categories of Frequency Assignments

- ADD 639CC § 21 (1) The date in Column 2c shall be the date of putting into use notified by the administration concerned. It is given for information only.
- ADD 639CD (2) If harmful interference to the reception of any station whose assignment is in accordance with No. 501, 570AC or 639AS as appropriate, is actually caused by the use of a frequency assignment which is not in conformity with No. 639AS, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

Section V. Reviews of Findings

- ADD 639CE § 22 (1) The review of a finding by the Board may be undertaken
- at the request of the notifying administration,
 - at the request of any other administration interested in the question, but only on the grounds of actual harmful interference,
 - on the initiative of the Board itself when it considers this is justified.
- ADD 639CF (2) The Board, in the light of all the data at its disposal, shall review the matter taking into account No. 639AS and No. 639AT or 639AU, where these latter provisions apply, and shall render an appropriate finding, informing the notifying administration prior either to the promulgation of its finding or to any recording action.
- ADD 639CG § 23 (1) After actual use for a reasonable period of an assignment which has been entered in the Master Register on the insistence of the notifying administration, following an unfavourable finding with respect to No. 639AU, this administration may request the Board to review the finding. Thereupon the Board shall review the matter, having first consulted the administrations concerned.

- ADD 639CH (2) If the finding of the Board is then favourable, it shall enter in the Master Register the changes that are required so that the entry shall appear in the future as if the original finding had been favourable
- ADD 639CI (3) If the finding with regard to the probability of harmful interference remains unfavourable, no change shall be made in the original entry

**Section VI Modification, Cancellation and Review
of Entries in the Master Register**

- ADD 639CJ § 24 In case of permanent discontinuance of the use of any recorded frequency assignment, the notifying administration shall inform the Board within ninety days of such discontinuance, whereupon the entry shall be removed from the Master Register
- ADD 639CK § 25 Whenever it appears to the Board from the information available that a recorded assignment has not been brought into regular operation in accordance with the notified basic characteristics, or is not being used in accordance with those basic characteristics, the Board shall consult the notifying administration and, subject to its agreement, shall either cancel or suitably modify the entry
- ADD 639CL § 26 If, in connection with an enquiry by the Board under No 639CK, the notifying administration has failed to supply the Board within ninety days with the necessary or pertinent information, the Board shall make suitable entries in the Remarks Column of the Master Register to indicate the situation

Section VII Studies and Recommendations

- ADD 639CM § 27 (1) If it is requested by any administration, and if the circumstances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall conduct a study of cases of alleged contravention or non-observance of these Regulations, or of harmful interference

- ADD 639CN (2) The Board shall thereupon prepare and forward to the administration concerned a report containing its finding and recommendations for the solution of the problem
- ADD 639CO § 28 In a case where, as a result of a study, the Board submits to one or more administrations suggestions or recommendations for the solution of a problem, and where no answer has been received from one or more of these administrations within a period of ninety days, the Board shall consider that the suggestions or recommendations concerned are unacceptable to the administrations which did not answer. If it was the requesting administration which failed to answer within this period, the Board shall close the study.

Section VIII Miscellaneous Provisions

- ADD 639CP § 29 The technical standards of the Board shall be based upon the relevant provisions of these Regulations and the Appendices thereto, the decisions of Administrative Conferences of the Union as appropriate, and the Recommendations of the C C I R.
- ADD 639CQ § 30 The Board shall promulgate to administrations its findings and reasons therefor, together with all changes made to the Master Register, through the weekly circular referred to in No. 497.
- ADD 639CR § 31 In case a Member or Associate Member of the Union avails itself of the provisions of Article 27 of the Convention, the Board shall upon request, make its records available for such proceedings as are prescribed in the Convention for the settlement of international disputes.

ANNEX 7

Revision of Article 14 of the Radio Regulations

Article 14 of the Radio Regulations shall be amended as follows

For Regulation No. 695 there shall be substituted the following Regulation

- MOD 695 § 3 In order to avoid interference
- locations of transmitting stations and, where the nature of the service permits, locations of receiving stations shall be selected with particular care.
 - radiation in and reception from unnecessary directions shall be minimized where the nature of the service permits, by taking the maximum practical advantage of the properties of directional antennae.
 - the choice and use of transmitters and receivers shall be in accordance with the provisions of Article 12.
 - space stations shall be fitted with appropriate devices to quickly terminate their radio emissions whenever required to do so under the provisions of these Regulations.

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ANNEX 8

Revision of Article 15 of the Radio Regulations

Article 15 of the Radio Regulations shall be amended as follows

After Regulation No 711, there shall be inserted the following new Regulations

- ADD 711A § 8A When the service rendered by an earth station suffers interference, the administration having jurisdiction of the receiving station experiencing the interference may also approach directly the administration having jurisdiction over the interfering station
- ADD 711B § 8B When cases of harmful interference occur as a result of emissions from space stations, the administrations concerned shall, upon request from the administration having jurisdiction over the station experiencing the interference, furnish current ephemeris data necessary to allow calculation of the positions of the space station

ANNEX 9

Revision of Article 19 of the Radio Regulations

Article 19 of the Radio Regulations shall be amended as follows

For Regulation No 735 1 there shall be substituted the following Regulation

MOD 735 1 1 In the present state of the technique it is recognized nevertheless that the transmission of identifying signals for certain radio systems (e.g. radio determination, radio-relay systems and space systems) is not always possible.

After Regulation No 737, there shall be inserted the following new Regulation

ADD 737A § 2A In the event that the transmission of identification signals by a space station is not possible, that station shall be identified by specifying the angle of inclination of the orbit, the period of the object in space and the altitudes of apogee and perigee of the space station in kilometres. In the case of a space station on board a stationary satellite, the mean geographical longitude of the projection of the satellite's position on the surface of the Earth shall be specified (See Appendix 1A.)

After Regulation No 773 there shall be inserted the following new Regulation

ADD *Stations in the Space Service*

ADD 773A § 21A When call signs for stations in the space service are employed, it is recommended that they consist of

- two letters followed by two or three digits (other than the digits 0 and 1 in cases where they immediately follow a letter) (See also No 737A.)

ANNEX 10

Revision of Article 20 of the Radio Regulations

Article 20 of the Radio Regulations shall be amended as follows

For Regulation No 808 there shall be substituted the following Regulation

MOD 808 (VII) *List VII Alphabetical List of Call Signs Assigned from the International Series to Stations Included in Lists I to VI and VIII A*

After Regulation No 811 there shall be inserted the following new Regulation

ADD 811A (VIII A) *List VIII A List of Stations in the Space Service and in the Radio Astronomy Service*

This list shall contain particulars of earth and space stations and of radio astronomy stations. In this list, each class of station shall occupy a special section

For Regulation No 815 there be substituted the following Regulation

MOD 815 § 2 (1) *The Secretary-General shall publish the amendments to be made in the documents listed in Nos 790 to 814 inclusive. Once a month administrations shall inform him in the form shown for the lists themselves in Appendix 9, of the additions, modifications or deletions to be made in Lists IV, V and VI using for this purpose the appropriate symbols shown in Appendix 10. Furthermore, in order to make the necessary additions, modifications and deletions to Lists I, II, III and VIII A, he shall use the data provided by the International Frequency Registration Board obtained from the information received in application of the provisions of Articles 9, 9A and 10. He shall make the requisite amendments to List VII by using the data he has received for Lists I to VI and VIII A.*

After Regulation No 829, there shall be inserted the following new Regulation

- ADD** **829A § 10A** The List of Stations in the Space Service and in the Radio Astronomy Service (List VIII A) shall be republished at intervals to be determined by the Secretary-General. Recapitulative supplements shall be published every six months.

For Regulation No 831, there shall be substituted the following Regulation

- MOD** **831 § 12 (1)** The forms in which the Lists I to VI inclusive, the Lists VIII and VIII A and the Radiocommunication Statistics are to be prepared are given in Appendix 9. Information concerning the use of these documents shall be given in the Prefaces thereto. Each entry shall include the appropriate symbol as shown in Appendix 10, to designate the category of station concerned. Additional symbols where necessary may be selected by the Secretary-General and such new symbols being notified by the Secretary-General to administrations.

ANNEX 11

Revision of Appendix 1 of the Radio Regulations

Appendix 1 of the Radio Regulations shall be amended as follows

NOC	Section A Basic Characteristics to be Furnished for Notification under No. 486 of the Regulations
MOD	<i>Column 5a</i> Locality(ies) or area(s) with which communication is established <i>This is not a basic characteristic for land, radionavigation land, radiolocation land or standard frequency stations, or for ground-based stations in the meteorological aids service</i>
MOD	<i>Column 5b</i> Length of circuit (km) <i>This is a basic characteristic only for land, radionavigation land, radiolocation land and standard frequency stations</i>
MOD	Supplementary information reference frequency or frequencies, if any, and any co-ordination required by No. 492A.
NOC	Section B Basic Characteristics to be Furnished for Notification under No. 487 of the Regulations
MOD	<i>Column 4b</i> Country in which the receiving land station is located
MOD	<i>Column 4c</i> Longitude and latitude of the site of the receiving land station
MOD	<i>Column 5a</i> Name of the receiving land station
MOD	<i>Column 5b</i> Maximum distance in km between mobile stations and the receiving land station

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MOD	<i>Column 6</i>	Class of mobile stations and nature of service
MOD	<i>Column 7</i>	Class of emission of mobile stations and necessary bandwidth
MOD	<i>Column 8</i>	Highest power used by the mobile stations
MOD	<i>Column 10</i>	Maximum hours of operation of the mobile stations (G M T)
ADD		Supplementary information any co-ordination required by No 492A
Title not modified	Section C	
ADD		Supplementary information any co-ordination required by No 492A
Title not modified	Section E II	
MOD	<i>Column 4b (reception)</i>	The country in which the receiving land station is located
MOD	<i>Column 4c (reception)</i>	The geographical co-ordinates (in degrees and minutes) of the site of the receiving land station
MOD	<i>Column 5a (para 3)</i>	For land, radionavigation land, radiolocation land and standard frequency stations, and ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column
MOD	<i>Column 5a para 5</i>	For reception in the circumstances described in No 487, the name of the locality by which the receiving land station is known or in which it is situated should be indicated
MOD	<i>Column 5b para 2</i>	For reception in the circumstances described in No 487, the maximum distance between the mobile stations and the receiving land station should be indicated

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MOD	<i>Column 5b para 3</i>	This information is not a basic characteristic <i>except in the case of paragraph 2 above, and in the case of land, radio-navigation land, radiolocation land and standard frequency stations. In these latter cases, the distances shown shall represent the service ranges.</i>
MOD	<i>Column 6 para 2</i>	When the frequency assignment is used for reception in the circumstances described in No 487, the class of station and nature of service applicable to the mobile stations should be indicated.
MOD	<i>Column 7 para 2</i>	When the frequency assignment is used for reception in the circumstances described in No 487, the particulars to be indicated are those applicable to the mobile stations.
MOD	<i>Column 8 para 5</i>	When the frequency assignment is used for reception in the circumstances described in No 487, the power of the mobile stations should be indicated. If not all of the stations use the same power, the highest power should be indicated.
MOD	<i>Column 10 para 1</i>	When the frequency assignment is used for reception in the circumstances described in No 487, the maximum hours of operation are those relating to the mobile stations.
Title not modified		<i>Supplementary information</i>
MOD	<i>para 5</i>	<i>Only the information specified in paragraph 3 above is a basic characteristic. It is recommended however, that the information under paragraphs 1 and 2 above be supplied. However in the case of stations in the fixed or mobile service referred to in No 492A, the name of any administration with which co-ordination of the use of the frequency has been sought and the name of any administration with which such co-ordination has been effected are basic characteristics.</i>

ANNEX 12

Addition of a new Appendix to the Radio Regulations

The following new Appendix 1A shall be added to the Radio Regulations following Appendix 1

APPENDIX 1A

Notices Relating to Stations in the Space and Radio Astronomy Services

(See Article 9 A)

Section A. General Instructions

1 A separate notice in a form convenient to the notifying administration shall be sent to the International Frequency Registration Board for notifying

- each new frequency assignment,
- any change in the characteristics of a frequency assignment recorded in the Master International Frequency Register (hereinafter called the Master Register),
- any total deletion of a frequency assignment recorded in the Master Register.

2 When submitting notices under No. 639AA for earth and space transmitting assignments and under No. 639AB for space and earth receiving assignments, separate notices shall be submitted to the Board. In the case of a passive satellite system, only earth transmitting and receiving assignments shall be notified.

3 In the case of a satellite system employing multiple space stations with the same general characteristics:

- for stationary satellites, a separate notice shall be submitted for each space station; and
- for non-stationary satellites, one notice covering all the space stations may be submitted.

- 4 The following information should be shown on the notice:
- a) the serial number of the notice and the date on which the notice is sent to the Board,
 - b) the name of the notifying administration;
 - c) sufficient data to identify the particular satellite system in which the earth or space station will operate,
 - d) whether the notice reflects
 - 1) the first use of a frequency by a station,
 - 2) the first use of an additional frequency by a station,
 - 3) a change in the characteristics of a frequency assignment recorded in the Master Register (indicate whether the change is a replacement, addition or deletion of existing characteristics) or
 - 4) a deletion of an assignment in all of its notified characteristics,
 - e) any other information which the administration considers to be relevant, e.g. any special channelling arrangements or methods of modulation, the degree of terrain shielding throughout all azimuthal angles for the earth stations, an indication that the assignment concerned would be operating in accordance with No 115, information concerning the use of the notified frequency if such use is restricted, or, in the case of notices pertaining to space stations, if the transmissions of the station are to be permanently switched off after a certain period

Section B. Basic Characteristics to be furnished in Notices relating to Frequencies used by Earth Stations for transmitting

Item 1 Assigned frequency

Indicate the assigned frequency as defined in Article 1, in kc/s up to 30 000 kc/s inclusive, and in Mc/s above 30 000 kc/s

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Item 2 Date of putting into use

a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of putting the frequency assignment into use

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in *Items 3 or 4a*), the date to be given shall be that of the latest change (actual or foreseen, as appropriate)

Item 3 Call sign (Identification)

Indicate the call sign or other identification used in accordance with Article 19

Item 4 Identity and location of the earth station

a) Indicate the name by which the station is known or the name of the locality in which it is situated.

b) Indicate the country in which the station is located. Symbols from the Preface to the International Frequency List should be used

c) Indicate the geographical co-ordinates (in degrees and minutes) of the transmitter site

Item 5 Station(s) with which communication is to be established

Identify the associated receiving space station(s) by reference to the notification thereof or in any other appropriate manner, or, in the case of a passive satellite, the identity of the satellite and the location of the receiving earth station(s).

Item 6 Class of station and nature of service

Indicate the class of station and nature of service performed, using the symbols shown in Appendix 10

Item 7 Class of emission, necessary bandwidth and description of transmission

a) Indicate the class of emission, necessary bandwidth and description of transmission, in accordance with Article 2 and Appendix 5

b) In any case where there are one or more reference frequencies in a particular emission, indicate such frequencies.

Item 8 Power (kW)

The power supplied to the antenna shall be notified as follows, according to the class of emission:

- Mean power (Pm) for amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions (see No 96),
- Peak envelope power (Pp) for all classes of emission other than those referred to above (See No. 95.)

Item 9 Transmitting antenna characteristics

a) Indicate in degrees from the horizontal plane the planned minimum operating angle of elevation of the antenna

b) Indicate in degrees, clockwise from True North, the planned range of azimuthal angles

c) Indicate the beamwidth, in degrees, between the half power points (describe in detail if not symmetrical)

d) Indicate the isotropic gain (db) of the antenna in the direction of maximum radiation (see No 100).

e) Indicate the maximum isotropic gain (db) of the antenna in the horizontal plane with the antenna at any angle of elevation above the minimum angle of elevation (see No. 100)

f) Indicate the height (metres) of the antenna above mean sea level.

Item 10 Maximum hours of operation

Indicate in G.M.T. the maximum hours of operation on the frequency shown in *Item 1*

Item 11 Co-ordination

Indicate the name of any administration with which co-ordination has been effected for the use of this frequency, and, if appropriate, the name of any administration with which co-ordination has been sought but not effected

Item 12 Operating Administration or Company

Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of stations (see Article 15)

Section C. Basic Characteristics to be furnished in Notices relating to Frequencies to be received by Earth Stations

Item 1 Assigned frequency

Indicate the assigned frequency of the emission to be received, as defined in Article 1, in kc/s up to 30 000 kc/s inclusive, and in Mc/s above 30 000 kc/s

Item 2 Date of putting into use

a) In the case of a new assignment indicate the date (actual or foreseen, as appropriate) when reception of the assigned frequency begins

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in *Item 3a*), the date to be given shall be that of the latest change (actual or foreseen, as appropriate)

Item 3 Identity and location of the receiving earth station

- a)* Indicate the name by which the receiving earth station is known or the name of the locality in which it is situated.
- b)* Indicate the country in which the receiving earth station is located. Symbols from the Preface to the International Frequency List should be used
- c)* Indicate the geographical co-ordinates (in degrees and minutes) of the receiver site

Item 4 Associated transmitting station(s)

Identify the associated transmitting space station(s) by reference to the notification thereof or in any other appropriate manner, or, in the case of a passive satellite, the identity of the satellite(s) and the associated transmitting earth station(s).

Item 5 Class of station and nature of service

Indicate the class of station and nature of service performed using the symbols shown in Appendix 10

Item 6 Class of emission, necessary bandwidth and description of the transmission to be received

- a)* Indicate the class of emission, necessary bandwidth and description of the transmission to be received, in accordance with Article 2 and Appendix 5. Indicate also the over-all receiver bandwidth at which the receiver response is 6 db below maximum
- b)* In any case where there are one or more reference frequencies in a particular received emission, indicate such frequencies

Item 7 Earth station receiving antenna characteristics

- a)* Indicate in degrees from the horizontal plane the planned minimum operating angle of elevation of the antenna

- b)* Indicate in degrees, clockwise from True North, the planned range of azimuthal angles.
- c)* Indicate the beamwidth, in degrees, between the half power points (describe in detail if not symmetrical)
- d)* Indicate the isotropic gain (db) of the antenna in the direction of the main lobe (see No 100)
- e)* Indicate the maximum isotropic gain (db) of the antenna in the horizontal plane with the antenna at any angle of elevation above the minimum angle of elevation (see No. 100)
- f)* Indicate the height (metres) of the antenna above mean sea level

Item 8 Maximum hours of reception

Indicate in G M T the maximum hours of reception of the frequency shown in *Item 1*

Item 9 Co-ordination

Indicate the name of any administration with which co-ordination has been effected for the use of the frequency, and, if appropriate, the name of any administration with which co-ordination has been sought but not effected

Item 10 Noise temperature

Indicate the over-all receiving system operating noise temperature (°K) under "quiet sky" conditions at the planned minimum operating angle of elevation of the antenna

Item 11 Operating Administration or Company

Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article 15)

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Section D. Basic Characteristics to be furnished in Notices relating to Frequencies used by Space Stations for transmitting

Item 1 Assigned frequency

Indicate the assigned frequency as defined in Article 1, in kc/s up to 30 000 kc/s inclusive, and in Mc/s above 30 000 kc/s

Item 2 Date of putting into use

a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of putting the frequency assignment into use.

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in *Item 3* or *4*), the date to be given shall be that of the latest change (actual or foreseen, as appropriate).

Item 3 Call sign (Identification)

Indicate the call sign or other identification used in accordance with Article 19

Item 4 Identity of the space station(s)

Indicate the identity of the space station(s).

Item 5 Area of coverage

Indicate the area of intended coverage or the name of the locality and country in which the associated receiving station(s) is located

Item 6 Orbital information

Indicate, where applicable, the angle of inclination of the orbit, the period of the object in space and the altitudes of apogee and perigee of the space station(s) in kilometres. In the case of a space station aboard a stationary satellite, indicate the

mean geographical longitude of the projection of the satellite position on the surface of the Earth

Item 7 Class of station and nature of service

Indicate the class of station and nature of service performed using the symbols shown in Appendix 10

Item 8 Class of emission, necessary bandwidth and description of transmission

a) Indicate the class of emission, necessary bandwidth and description of transmission, in accordance with Article 2 and Appendix 5

b) In any case where there are one or more reference frequencies in a particular emission, indicate such frequencies

Item 9 Power (Watts)

The power supplied to the antenna shall be notified as follows according to the class of emission

— Mean power (Pm) for amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions (see No 96)

— Peak envelope power (Pp) for all classes of emission other than those referred to above (see No 95)

Item 10 Transmitting antenna characteristics

a) Indicate the beamwidth, in degrees, between the half power points (describe in detail if not symmetrical).

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b) Indicate the isotropic gain (db) of the antenna in the direction of maximum radiation (see No 100)

c) For a stationary satellite employing directional antennas, indicate the point on the Earth's surface towards which the antenna is directed and the accuracy of maintaining this direction

Item 11 Maximum hours of operation

Indicate in G M T the maximum hours of operation on the frequency shown in *Item 1*

Item 12 Number of space stations

In the case of non-stationary satellites, indicate the number of space stations covered by the notice

Item 13 Operating Administration or Company

Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of stations (see Article 15)

Section E. Basic characteristics to be furnished in Notices relating to Frequencies to be received by Space Stations

Item 1 Assigned frequency

Indicate the assigned frequency of the emission to be received, as defined in Article 1, in kc's up to 30 000 kc's inclusive, and in Mc's above 30 000 kc's

Item 2 Date of putting into use

a) In the case of a new assignment indicate the date (actual or foreseen, as appropriate) when reception of the assigned frequency begins

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in *Item 3*), the date to be given shall be that of the latest change (actual or foreseen, as appropriate)

Item 3 Identity of the receiving space station(s)

Indicate the identity of the receiving space station(s)

Item 4 Orbital information

Indicate, where applicable, the angle of inclination of the orbit, the period of the object in space and the altitudes of apogee and perigee of the space station(s) in kilometres. In the case of a space station on board a stationary satellite indicate the mean geographical longitude of the projection of the satellite's position on the surface of the Earth

Item 5 Associated transmitting earth station(s)

Identify the associated transmitting earth station(s) by reference to the notification thereof or in any other appropriate manner

Item 6 Class of station and nature of service

Indicate the class of station and nature of service performed, using the symbols shown in Appendix 10

Item 7 Class of emission, necessary bandwidth and description of the transmission(s) to be received

a) Indicate the class of emission, necessary bandwidth and description of the transmission(s) to be received, in accordance with Article 2 and Appendix 5. Indicate also the over-all receiver bandwidth at which the receiver response is 6 db below maximum. In the case of a communication-satellite space station, designed

to receive as a composite signal two or more emissions in contiguous channels and transmitted from one or more earth stations. the description should state the number of such emissions, the spacing between their assigned frequencies and the total bandwidth collectively encompassed by them.

b) In any case where there are one or more reference frequencies in a particular received emission, indicate such frequencies.

Item 8 Space station receiving antenna characteristics

a) Indicate the beamwidth in degrees, between the half power points (describe in detail if not symmetrical)

b) Indicate the isotropic gain (db) of the antenna in the direction of the main lobe (see No 100)

c) For a stationary satellite employing directional antennas, indicate the point on the Earth's surface towards which the antenna is directed and the accuracy of maintaining this direction.

Item 9 Maximum hours of reception

Indicate in G M T the maximum hours of reception of the frequency shown in *Item 1*

Item 10 Number of space stations

In the case of non-stationary satellites, indicate the number of space stations covered by the notice

Item 11 Noise temperature

Indicate the over-all receiving system operating noise temperature ($^{\circ}$ K)

Item 12 Operating Administration or Company

Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article 15)

**Section F Basic Characteristics to be furnished in Notices relating to
Frequencies to be received by Radio Astronomy Stations**

Item 1 Observed frequency

Indicate the centre of the frequency band observed, in kc/s up to 30 000 kc/s inclusive and in Mc/s above 30 000 kc/s

Item 2 Date of putting into use

a) Indicate the date (actual or foreseen, as appropriate) when reception of the frequency band begins

b) Whenever there is a change in any of the basic characteristics as shown in this Section (except in the case of a change in *Item 3b*) the date to be given shall be that of the latest change (actual or foreseen, as appropriate)

Item 3 Name and location of the station

a) Indicate the letters " RA "

b) Indicate the name by which the station is known or the name of the locality in which it is situated or both

c) Indicate the country in which the station is located. Symbols from the Preface to the International Frequency List should be used

d) Indicate the geographical co-ordinates (in degrees and minutes) of the station site

Item 4 Bandwidth

Indicate the width of the frequency band observed by the station

Item 5 Antenna characteristics

Indicate the antenna type and dimensions, effective area and angular coverage in azimuth and elevation

Item 6 Maximum hours of reception

Indicate in G M.T. the maximum hours of reception of the frequency band shown in *Item 1*

Item 7 Noise temperature

Indicate the over-all receiving system noise temperature (°K)

Item 8 Class of observations

Indicate the class of observations to be taken on the frequency band shown in *Item 1* Class A observations are those in which the sensitivity of the equipment is not a primary factor Class B observations are those of such a nature that they can be made only with advanced low-noise receivers using the best techniques.

Item 9 Operating Administration or Company

Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article 15)

ANNEX 13

Revision of Appendix 9 to the Radio Regulations

Appendix 9 to the Radio Regulations shall be modified as follows

After List VIII there shall be inserted the following new List

List VIII A — List of Stations in the Space Service and in the Radio Astronomy Service¹

1 — Communication-satellite earth stations
 Names of the countries notifying the stations in alphabetical order of country symbol
 Names of stations in alphabetical order

Name by which the station is known or the name of the locality in which it is situated	1	2	3	Transmission				Reception				Remarks					
				4a	4b	4c	5a	5b	5c	6a	6b		7a	7b	7c	8a	8b
Geographical co-ordinates (in degrees and minutes) of the transmitter site				Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth, and description of transmission	Power (kW)	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Identity of the stations) with which communication is to be established	Operating administration or country	
				Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Power (kW)	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission			11

¹ For the cases where these data must be supplied see Nos 639AA, 639AB and 639AC

2 — Communication-satellite space stations
 Names of the countries notifying the stations in alphabetical order of country symbols.
 Names of stations by alphabetical and/or numerical order of designation of station

Transmission		Reception		Area of coverage or name of the locality and country in which the associated receiving station(s) is located	Operating administration or company	Remarks
Telemetering	Tracking	Communications	Telecommand where appropriate			
1a	4a	7a	6a	7a	7	1 Orbital information a) angle of inclination of the orbit b) period of the orbit c) altitude of apogee (km) d) altitude of perigee (km) e) in the case of a stationary satellite the mean geographical longitude of the projection of the satellite's position on the surface of the Earth 2 Special channelling arrangements for a) telegraphy b) telephony c) other types of communication as appropriate 3 Special methods of modulation
1b	4b	7b	6b	7b	8	
1c	4c	7c	6c	7c	9	
1d	4d	7d	6d	7d	10	
1e	4e	7e	6e	7e		
1f	4f	7f	6f	7f		
1g	4g	7g	6g	7g		
1h	4h	7h	6h	7h		
1i	4i	7i	6i	7i		
1j	4j	7j	6j	7j		
2						
1						

3 — Meteorological-satellite earth stations
 Names of the countries notifying the stations in alphabetical order of country symbols
 Names of stations in alphabetical order

Transmission		Reception		Remarks	
Telecommand where appropriate	Teletexting	Tracking	Reception of meteorological information		
1	Name by which the station is known or the name of the locality in which it is situated	2	Geographical co-ordinates (in degrees and minutes) of the transmitter site	Special methods of modulation	
3	Call sign (identification)	4	Frequency (Mc s or Gc s)		
4a	Class of emission necessary bandwidth and description of transmission	4b	Power (kW)		
5	Frequency (Mc s or Gc s)	5a	Class of emission, necessary bandwidth and description of transmission		
6	Frequency (Mc s or Gc s)	6a	Class of emission, necessary bandwidth and description of transmission		
7a	Frequency (Mc s or Gc s)	7b	Class of emission necessary bandwidth and description of transmission		
8	Identity of the station(s) with which communication is to be established		9		Operating administration or company
					10

4 Meteorological-satellite space station

Names of the countries notifying the stations in alphabetical order of country symbols
Names of stations by alphabetical and/or numerical order of designation of station

1 Identity of the Station	2 Call sign (identification)					3 Transmission					4 Reception					5 Area of coverage or the name of the locality and country in which the associated receiving stations) is located					6 Operating administration or company					7 Remarks				
	3a	3b	3c	3d	3e	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j	4k	4l													
	Frequency (Mc s or Gc s)	Class of emission necessary	description of transmission	Power (Watts)	Frequency (Mc s or Gc s)	Class of emission necessary	description of transmission	Power (Watts)	Frequency (Mc s or Gc s)	Class of emission necessary	description of transmission	Frequency (Mc s or Gc s)	Class of emission necessary	description of transmission	Area of coverage or the name of the locality and country in which the associated receiving stations) is located	Operating administration or company	Remarks													
	1	a)	angle of inclination of the orbit	b)	period of the object in space	c)	altitude of apogee (km)	d)	altitude of perigee (km)	e)	in the case of a stationary satellite, the mean geographical longitude of the projection of the satellite's position on the surface of the Earth	2	Special channelling arrangements for	a)	telegraphy	b)	telephony	c)	other types of communication, as appropriate	3	Special methods of modulation	9								

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5 — Radionavigation-satellite earth stations
 Names of the countries notifying the stations in alphabetical order of country symbols.
 Names of stations in alphabetical order

1	2	3	4a	4b	4c	5a	5b	5c	6a	6b	7a	7b	8	9	10
Name by which the station is known or the name of the locality in which it is situated	Geographical co-ordinates (in degrees and minutes) of the transmitter site	Call sign (identification)	Frequency (Mc/s or Gc/s)	Class of emission, necessary bandwidth and description of transmission	Power (kW)	Frequency (Mc/s or Gc/s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc/s or Gc/s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc/s or Gc/s)	Class of emission, necessary bandwidth and description of transmission	Supplementary information necessary for the operation of the system	Identity of the stations) with which communication is to be established	Operating administration or company	Remarks
							Telemetering			Tracking					Special methods of modulation

6. *Radiationavigation-satellite space stations*

Names of the countries notifying the stations in alphabetical order of country symbols
 Names of stations by alphabetical and/or numerical order of designation of stations

Identity of the station	Transmission				Reception			Remarks
	Teletexting	Telexing	Transmission of navigation information		Telecommand	Area of coverage or the name of the locality and country in which the associated receiving station(s) is located	Operating administration or company	
1	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	1	
2	Call sign (identification)						2	
3a	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	3	
3b	Class of emission necessary bandwidth and						3	
3c	Power (Watts)						3	
4a	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	4	
4b	Class of emission necessary bandwidth and						4	
4c	Power (Watts)						4	
5a	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	5	
5b	Class of emission necessary bandwidth and						5	
5c	Power (Watts)						5	
6a	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	Frequency (Mc/s or Gc/s)	Class of emission necessary bandwidth and	Power (Watts)	6	
6b	Class of emission necessary bandwidth and						6	
7	Area of coverage or the name of the locality and country in which the associated receiving station(s) is located						7	
8	Operating administration or company						8	
9							9	

- 1 Orbital information
 - a) angle of inclination of the orbit
 - b) period of the object in space
 - c) altitude of apogee (km)
 - d) altitude of perigee (km)
 - e) in the case of a stationary satellite, the mean geographical longitude of the projection of the satellite's position on the surface of the Earth
- 2 Special-channelling arrangements for
 - a) telegraphy
 - b) telephony
 - c) other types of communication, as appropriate
- 3 Special methods of modulation

7 — Space research earth stations
 Names of the countries notifying the stations in alphabetical order of country symbols
 Names of stations in alphabetical order

1	2	3	4a	4b	4c	5a	5b	6a	6b	7a	7b	8	9	10
Name by which the station is known or the name of the locality in which it is situated	Geographical co-ordinates (in degrees and minutes) of the transmitter site	Call sign (identification)	Frequency (Mc s or Gc s)	Class of emission necessary bandwidth and Telecommand where appropriate	Power (kW)	Frequency (Mc s or Gc s)	Class of emission necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission, necessary bandwidth and description of transmission	Frequency (Mc s or Gc s)	Class of emission necessary bandwidth and description of transmission	Identity of the station(s) with which communication is to be established	Operating administration or company	Remarks Any special characteristics of the station and scope of research

8 — Space research space stations

Names of the countries notifying the stations in alphabetical order of country symbols
 Names of stations by alphabetical and/or numerical order of designation of station

Identity of the station		Call sign (identification)		1a		3a		4a		5a		6a		7		8		9		
		Frequency (Mc's or Gc's)		Class of emission, necessary bandwidth and description of transmission		Power (Watts)		Frequency (Mc's or Gc's)		Class of emission, necessary bandwidth and description of transmission		Power (Watts)		Area of coverage or the name of the locality and country in which the associated receiving station(s) is located		Operating administration or company		Remarks		
		3b		4b		5b		6b		7a		8a								
		Description of transmission		Class of emission, necessary bandwidth and description of transmission		Frequency (Mc's or Gc's)		Class of emission, necessary bandwidth and description of transmission		Power (Watts)		Frequency (Mc's or Gc's)		Area of coverage or the name of the locality and country in which the associated receiving station(s) is located		Operating administration or company		Remarks		
1																				1 In the case of an earth satellite, orbital information a) angle of inclination of the orbit b) period of the object in space orbit c) altitude of apogee (km) d) altitude of perigee (km) e) in the case of a stationary satellite, the mean geographical longitude of the projection of the satellite's position on the surface of the Earth
2																				2 In the case of a space probe general indication of its trajectory 3 Special methods of modulation

9 — Radio astronomy stations

Names of the countries notifying the stations in alphabetical order of country symbols
 Names of stations in alphabetical order

1	Name by which the station is known or the name of the locality in which it is situated
2	Geographical co-ordinates (in degrees and minutes) of the station
3	Centre of the frequency band observed (Mc or Gc/s)
4	Width of the frequency band observed
5	Antenna characteristics
6	Maximum hours of reception (G M T)
7	Noise temperature (K)
8	Class of observation
9	Operating administration or company
10	Remarks Any special additional characteristics of the station including 1) altitude in metres above sea level 2) main particulars of antenna 3) scope of observations

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ANNEX 14

Revision of Appendix 10

In Appendix 10 of the Radio Regulations there shall be inserted in alphabetical order the following additional symbols

EC	Communication-satellite space station
ED	Space telecommand space station
EH	Space research space station
EK	Space tracking space station
EM	Meteorological-satellite space station
EN	Radionavigation-satellite space station
ER	Space telemetering space station
RA	Radio astronomy station
TC	Communication-satellite earth station
TD	Space telecommand earth station
TH	Space research earth station
TK	Space tracking earth station
TM	Meteorological-satellite earth station
TN	Radionavigation-satellite earth station
TR	Space telemetering earth station

ADDITIONAL PROTOCOL
TO THE
RADIO REGULATIONS

TIAS 5603

ADDITIONAL PROTOCOL

At the time of signing the Acts of the Extraordinary Administrative Radio Conference, Geneva, 1963, the undersigned delegates take note of the fact that the following reservations have been submitted by certain signatories

ARGENTINE REPUBLIC

The Argentine Delegation states that its country does not recognize any frequency assignments that may be made directly or indirectly on behalf of any other Power or Powers for any type of service, in any portion of the spectrum, for the Malvinas Islands, the South Georgian Islands or the South Sandwich Islands, over which territories the Argentine Republic exercises sovereign rights. The non-mention of other territories must not be taken to imply renunciation of the Argentine Republic's sovereignty over them. In any event, the Argentine Republic reserves the right to use as its own any radio frequencies that may be assigned under the above-mentioned conditions.

CUBA

In signing the Final Acts of the Extraordinary Administrative Conference on Space Radiocommunication, Geneva, 1963, on behalf of the Republic of Cuba, the Delegation of Cuba makes the following statement:

Considering

- a)* that a world-wide plan for the space radiocommunication service has not been established,
- b)* that principles guaranteeing equitable participation by all countries in the space radiocommunication service have not been adopted,
- c)* that some of the clauses contained in the procedure for frequency notification and co-ordination do not satisfy the interests of Cuba,

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dj that changes have been made in the Table of Frequency Allocations which might impair the normal operation of Cuban radiocommunications,

Cuba herewith formally reserves its complete freedom of action and the right to reject those provisions of the Extraordinary Administrative Conference on Space Radiocommunication Geneva, 1963 which would be prejudicial to the interests of Cuba

UNITED STATES OF AMERICA AND TERRITORIES
OF THE UNITED STATES OF AMERICA

The Delegations of the United States of America and the Territories of the United States of America, in signing the Final Acts of the Extraordinary Administrative Radio Conference Geneva 1963 declare that

1. There has heretofore always existed between all countries of Region 2 very close co-operation and agreement in the application of the Table of Frequency Allocations contained in the Radio Regulations of the Union,

2. this co-operation has in large measure been necessary since most countries in Region 2 are either in close geographical proximity to one another or are separated by relatively short distances over water, such over-water separation affording substantially less protection from harmful interference than does the same separation over land,

3. by virtue of the co-operation referred to in 1. above it has not in the past been necessary for any country of Region 2 to request the insertion of any footnotes in the Table of Frequency Allocations which constitute an exception, insofar as a particular country is concerned, to the international allocation of a particular frequency band or bands,

4. the Delegation of Cuba to the present Conference has decided to disassociate its country from the decisions of all other delegations from Region 2 with respect to certain provisions of the Table of Frequency Allocations as modified by this Conference.

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5. In light of the foregoing, the Delegations of the Territories of the United States of America, and the United States of America cannot accept on behalf of the Government of the United States of America any obligation to observe the exceptions claimed by Cuba in those footnotes to the Table of Frequency Allocations which were adopted by the present Conference and which specifically name Cuba

REPUBLIC OF INDONESIA

In the opinion of the Delegation of the Republic of Indonesia to the Extraordinary Administrative Radio Conference to allocate frequency bands for Space Radiocommunications, a country must first accede to the International Telecommunication Convention before it has the right to participate in the International Telecommunication Union Conferences. The Indonesian Delegation refers to the representation of Malaysia in which case the Indonesian Delegation could not have any other opinion than that it should be considered as a new country which is assumed to comprise the Member country Malaya (Federation of) and the Associate-Member Singapore-British North Borneo, and to which Article 18 of the Convention applies. As up to the Plenary Session of this Conference on 6 November, 1963, a notification by the Secretary-General concerning the accession of the above-mentioned new country has not been received by the Indonesian Administration, the Delegation of the Republic of Indonesia would like to reserve the right of its Government not to recognize the representation of Malaysia in the Extraordinary Administrative Radio Conference to allocate frequency bands for Space Radiocommunications, as such recognition would be in contradiction with the said Article 18 of the Convention.

MALAYSIA

The Delegation of Malaysia declares that it does not accept the statement of the Indonesian Delegation contained in its declaration regarding Malaysia. The original Constitution of the Federation of Malaya, which made provisions for amendments, was amended by an Act of the Malayan Parliament before Malaysia Day on 16th September, 1963. This Act took account of the incorporation of Singapore, Sarawak and Sabah

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(N. Borneo) with the former Federation of Malaya and brought about a change of name to Malaysia. This Agreement has been possible following an Agreement between Her Majesty's Government in the United Kingdom and the Government of the Federation of Malaya, and by giving the Royal Assent to the Act, Her Majesty relinquished sovereignty in Singapore, Sarawak and Sabah.

In effect, Malaysia is Malaya as it was before September 16, 1963, but with the addition of new territories. This principle was publicly stated in a broadcast by the Malaysian Permanent Secretary of External Affairs on September 16. There is thus complete legal continuity as a single entity between Malaya and Malaysia.

It is clear therefore that Malaya and Malaysia are one and the same state. It may be recalled that recently Malaysia was elected to the U.N. Security Council—to alternate with Czechoslovakia—without the identity of Malaysia being called into question.

MEXICO

While signing the Final Acts of the Extraordinary Administrative Radio Conference, Geneva, 1963, the Delegation of Mexico announces that its Administration intends to comply with the provisions resulting from the revised Radio Regulations. Nevertheless, the Delegation states that the Government of Mexico reserves the right to take any steps it may deem necessary to safeguard its interest in cases where any Member or Associate Member of the Union fails to comply with the provisions of the said Regulations or where a reservation made by another country has a harmful effect on the telecommunication services of Mexico.

PAKISTAN

While the Delegation of Pakistan is fully conscious of the desirability of early implementation of the decisions of the Extraordinary Administrative Radio Conference, Geneva, 1963, with a view to expediting the development and establishment of Space Radiocommunications on a world-wide basis, it cannot overlook the fact that the Space Radiocommunication techniques are still in a state of development and experimentation. The

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provisions regarding sharing criteria and the interference potentialities between Space Radiocommunications and Terrestrial systems are not based on practical experience between operational Space and Terrestrial systems and these problems are still under the study of the C.C.I.R., whose present Recommendations are provisional. No sharing criteria has been laid down for the sharing of the bands below 1 Gc/s. Pakistan being a new and developing country in two parts, whose internal communications are also dependent on Radio, the ability of Pakistan to follow in these circumstances, the new and amended provisions of the Radio Regulations agreed by this Conference will depend upon the freedom from any interference, which can be caused by the space services.

The Delegation of Pakistan therefore, reserves for its country the right to take, in the last resort, necessary measures for the fulfilment of its telecommunication need. In so doing, Pakistan will however, endeavour to avoid harmful interference to the Radio services of other administrations.

THE DEMOCRATIC AND POPULAR REPUBLIC OF ALGERIA

KUWAIT

THE UNITED ARAB REPUBLIC

considering

that the effective implementation of the United Nations Resolution on the International Co-operation on the peaceful uses of outer space (Resolution No. 1721 (XVI)) must eventually be based on the establishment by Members and Associate Members of the Union, of world-wide plans concerning all categories of space service which will provide for the equitable participation of all countries of the world in such service in the spirit of the above-mentioned Resolution.

considering

1. that no such world-wide plan reflecting the needs of all countries of the world for space services has yet been established,

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2. that, the frequency bands allocated for communication-satellite services, as contained in Article 5 of the revised Radio Regulations, are based on entirely empirical derivations and do not in any way correspond to the actual requirements of all countries,
3.
 - a) that, the frequency sharing between communication-satellite services, and terrestrial services as allocated in the frequency tables were based on provisional criteria, as provided by the C C I R ,
 - b) that, the same provisional sharing criteria for communication-satellite services, were applied to other services, where no sharing criteria were available, thus protection of terrestrial services from harmful interference is doubtful
 - c) that, the procedure of calculation of co-ordination distances is provisional, and, in no way provides assurance of interference-free operation of satellite communications.
4. that, the technical progress in all the development of the various categories of space services is not sufficiently advanced,
5. that, the economic considerations involved in the establishment and operation of such services, could not, so far, be assessed, thus placing small countries at a great disadvantage,
6. that, the said cost, the legal and other conditions that shall govern the use of such a system are not yet evident for consideration

The above-mentioned countries reserve the right

- a) to take all the necessary measures to protect their existing as well as planned services without placing any limitations whatsoever on the equipment in use or to be used in the future in all frequency bands,
- b) to adopt all measures necessary to protect their rights concerning frequency registration priority after the implementation of the revised Radio Regulations

However, the above-mentioned countries do contribute towards the advance of the new space telecommunication technique that was started

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by the pioneering countries and accept the frequency bands allocated for the safety of lives, space research and world-wide meteorological services.

DENMARK, NORWAY, SWEDEN AND SWITZERLAND

In signing the Final Acts of the Extraordinary Administrative Radio Conference, Geneva, 1963, the Delegations of the above-mentioned countries declare that, as Radiolocation Service on land, on board ships and in the air has been established, is being introduced or is planned in the frequency bands 3 400-3 600 Mc/s and 5 725-5 850 Mc/s in conformity with the Table of Frequency Allocations of the Radio Regulations, Geneva, 1959, the Administrations of the above-mentioned countries find difficulty in affording general protection to the Communication-Satellite Service in other countries, the Communication-Satellite Service having been authorized in these bands according to the new Radio Regulations, Geneva, 1963. However, the Administrations of the above-mentioned countries are willing to take all practicable steps in order to coordinate the two services after agreements with Administrations concerned.

I N T R O D U C T I O N

THE FINAL PROTOCOL

ARGENTINE REPUBLIC

The Argentine Delegation declares that its country reserves the right to take all necessary steps to protect its radio services in cases where any Member or Associate Member of the Union fails to comply with the provisions of the Radio Regulations as revised by the present Conference or where the reservations made by such Members have a harmful effect on the telecommunication services of the Argentine Republic.

CANADA

The Canadian Delegation wishes to record its concern at the appearance of footnotes in Region 1 concerning the use of frequencies for special purposes. The question of such footnotes breaks the long-established pattern to which all countries in this region have adhered, sometimes by sacrifices on their parts as for example we have seen to be the case at this conference.

Canada would view with grave concern any radio operations in Region 2 which would detract from the efficient and agreed use of the radio spectrum.

The Republic of Cuba, we note, formally reserves its complete freedom of action to reject those provisions of the Final Acts of the Extraordinary Administrative Radio Conference which she may feel are prejudicial to the interests of Cuba. Because all countries of Region 2 have hitherto displayed a continued desire to co-operate, we hope that this reservation by Cuba does not imply an intention not to co-operate fully with other Members of the Region in the rational use of the spectrum.

In these circumstances, Canada has no choice but to associate itself with the Protocol submitted by the United States of America and Territories of the United States of America, insofar as it concerns these footnotes subscribed to by Cuba which may be found now or in the future to be objectionable to Canada. It is understood, of course, that the same reservations apply to the Final Protocol submitted by the Republic of Cuba.

REPUBLIC OF COLOMBIA

The Republic of Colombia reserves the right to take all necessary steps to safeguard its services operating in conformity with the provisions of the Radio Regulations in all cases where such services are affected by those of other countries operating in contravention of the said Regulations and, in particular, of the Table of Frequency Allocations.

The Republic of Colombia will also take similar steps in cases where the rights recognized by the Convention are affected as a result of the application of the Radio Regulations.

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

The Delegation of the United Kingdom of Great Britain and Northern Ireland declares

that it does not accept the statement of the Argentine Delegation contained in its declaration insofar as this statement disputes the sovereignty of Her Majesty's Government in the United Kingdom over the Falkland Islands and the Falkland Islands Dependencies and it wishes formally to reserve the rights of Her Majesty's Government on this question. The Falkland Islands and the Falkland Islands Dependencies are and remain an integral part of the territories together making up the Member hitherto known as Colonies, Protectorates, Overseas Territories and Territories under Mandate or Trusteeship of the United Kingdom of Great Britain and Northern Ireland on behalf of which the United Kingdom of Great Britain and Northern Ireland acceded to the International Telecommunication Convention (Buenos Aires, 1952) on 15 October 1953, and which is described in the International Telecommunication Convention (Geneva, 1959) as Overseas Territories for the international relations of which the Government of the United Kingdom of Great Britain and Northern Ireland are responsible.

The statement of the Argentine Delegation that "non-mention of other territories must not be taken to imply recognition of the Argentine Republic's sovereignty over them" is noted. Insofar as this may be intended to refer to the British Antarctic Territory, Her Majesty's Government in the United Kingdom of Great Britain and Northern Ireland have no doubt as to their sovereignty over the British Antarctic Territory, and wish to bring to the attention of the Argentine Government article IV of the Antarctic Treaty to which both the Argentine Government and the United Kingdom Government are parties.

UNITED STATES DEPARTMENT OF COMMERCE

STATE DEPARTMENT, WASHINGTON, D. C. 20520

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