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| **World Radiocommunication Conference (WRC-15)Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
|  |  |
| PLENARY MEETING | **Addendum 19 toDocument 62-E** |
|  | **16 October 2015** |
|  | **Original: Chinese** |
|  |
| China (People's Republic of) |
| Proposals for the work of the conference |
|  |
| Agenda item 2 |

2 to examine the revised ITU‑R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC‑03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution **27 (Rev.WRC‑12)**;

Introduction

Agenda item 2, a standing WRC agenda item, aims at examining the revised ITU-R Recommendations incorporated by reference in the Radio Regulations. It also covers situations where an ITU-R Recommendation is cited using mandatory text in the *resolves* part of a Resolution. In addition, any actions necessary to clarify the status of ambiguous references to ITU-R Recommendations are generally likewise resolved under this agenda item.

The changes proposed under the above principles are set forth below.

Proposals

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations
(See No. 2.1)

MOD CHN/62A19/1

5.208B[[1]](#footnote-1)\* In the bands:

 137-138 MHz,
 387-390 MHz,
 400.15-401 MHz,
 1 452-1 492 MHz,
 1 525-1 610 MHz,
 1 613.8-1 626.5 MHz,
 2 655-2 690 MHz,
 21.4-22 GHz,

Resolution **739** **(Rev.WRC-15)** applies.     (WRC-07)

**Reasons:** Change consequent to the addition of an indicator -0 for the first version of Recommendation ITU-R RA.1631.

MOD CHN/62A19/2

5.327A The use of the frequency band 960-1 164 MHz by the aeronautical mobile (R) service islimited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **417 (Rev.WRC‑15)**.    (WRC‑15)

**Reasons:** Change consequent to the addition of -0 to Recommendation ITU-R M.2013.

MOD CHN/62A19/3

5.391 In making assignments to the mobile service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU‑R SA.1154-0, and shall take that Recommendation into account for the introduction of any other type of mobile system.     (WRC‑15)

**Reasons:** Addition of -0 for the first version of the Recommendation.

MOD CHN/62A19/4

5.443B In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth’s surface in the band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the band 5 010-5 030 MHz shall not exceed −124.5 dB(W/m2) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the band 5 010-5 030 MHz shall comply with the limits in the band 4 990-5 000 MHz defined in Resolution **741** **(Rev.WRC‑15)**.    (WRC‑15)

**Reasons:** Change consequent to the addition of an indicator -0 for the first version of Recommendation ITU-R RA.1631.

MOD CHN/62A19/5

5.447E *Additional allocation:*The band 5 250-5 350 MHz is also allocated to the fixed service on a primary basis in the following countries in Region 3: Australia, Korea (Rep. of), India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Papua New Guinea, the Philippines, Dem. People’s Rep. of Korea, Sri Lanka, Thailand and Viet Nam. The use of this band by the fixed service is intended for the implementation of fixed wireless access systems and shall comply with Recommendation ITU-R F.1613-0. In addition, the fixed service shall not claim protection from the radiodetermination, Earth exploration-satellite (active) and space research (active) services, but the provisions of No. 5.43A do not apply to the fixed service with respect to the Earth exploration-satellite (active) and space research (active) services. After implementation of fixed wireless access systems in the fixed service with protection for the existing radiodetermination systems, no more stringent constraints should be imposed on the fixed wireless access systems by future radiodetermination implementations.     (WRC-15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/6

5.447F In the band 5 250-5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU‑R M.1849‑0 and ITU‑R RS.1632‑0.     (WRC-15)

**Reasons:** 1) The characteristics of meteorological radars as contained in Recommendation ITU-R M.1638 have been removed and can now be found in Recommendation ITU-R M.1849; and 2) Addition of the indicator -0 for the first version of the Recommendations.

MOD CHN/62A19/7

5.450A In the band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU‑R M.1849‑0.     (WRC-15)

**Reasons:** 1) The characteristics of meteorological radars and contained in Recommendation ITU‑R M.1638 have been removed and can now be found in Recommendation M.1849; and 2) Addition of the indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/8

5.504B Aircraft earth stations operating in the aeronautical mobile-satellite service in the band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU‑R M.1643‑0, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa.     (WRC-15)

**Reasons:** Addition of the indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/9

5.504C In the band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Côte d’Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, Nigeria, Oman, the Syrian Arab Republic and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU‑R M.1643‑0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29.    (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/10

5.508A In the band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, China, Côte d’Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU‑R M.1643‑0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29.    (WRC‑12)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/11

5.509A In the band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Cameroon, China, Côte d’Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Morocco, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom, Sri Lanka, Tunisia and Viet Nam by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU‑R M.1643‑0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29.    (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/12

5.511A The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space‑to‑Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. 9.11A. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU‑R S.1341‑0. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of −156 dB(W/m2) in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time. (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/13

5.511C Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340‑0. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **4.10** applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU‑R S.1340.     (WRC-15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/14

5.551H The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:

 −230 dB(W/m2) in 1 GHz and –246 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and

 −209 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

 These epfd values shall be evaluated using the methodology given in Recommendation ITU‑R S.1586‑1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU‑R RA.1631‑0 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θ*min* of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).

 These values shall apply at any radio astronomy station that either:

 – was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or

 – was notified before the date of receipt of the complete Appendix **4** information for coordination or notification, as appropriate, for the space station to which the limits apply.

 Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution **743 (WRC‑03)** shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

ARTICLE 19

Identification of stations

Section III − Formation of call signs

MOD CHN/62A19/15

19.48 *b)* combinations in Recommendation ITU‑R M.1172‑0 that are reserved for the abbreviations to be used in the radiocommunication services.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

Section V − Selective call numbers in the maritime mobile service

MOD CHN/62A19/16

19.83 § 36 When stations of the maritime mobile service use selective calling devices in accordance with Recommendations ITU‑R M.476-5 and ITU‑R M.625‑4, their call numbers shall be assigned by the responsible administrations in accordance with the provisions below.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.625.

Section VI − Identities in the maritime mobile service    (WRC‑12)

19.98 A − General

MOD CHN/62A19/17

19.99 § 39 When a station6 operating in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Annex 1 of Recommendation ITU‑R M.585‑7. In accordance with No. **20.16**, administrations shall notify the Radiocommunication Bureau immediately when assigning maritime mobile service identities.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.585.

MOD CHN/62A19/18

19.102 3) The types of maritime mobile service identities shall be as described in Annex 1 of Recommendation ITU‑R M.585‑7.    (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.585.

19.110 C − Maritime mobile service identities    (WRC‑07)

MOD CHN/62A19/19

19.111 § 43 1) Administrations shall follow Annex 1 of Recommendation ITU‑R M.585‑7 concerning the assignment and use of maritime mobile service identities.    (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.585-5.

ARTICLE 22

Space services1

Section II − Control of interference to geostationary-satellite systems

MOD CHN/62A19/20

22.5A § 5 In the frequency band 6 700-7 075 MHz, the maximum aggregate power flux-density produced at the geostationary-satellite orbit and within ±5° of inclination around the geostationary-satellite orbit by a non-geostationary-satellite system in the fixed-satellite service shall not exceed −168 dB(W/m2) in any 4 kHz band. The maximum aggregate power flux-density shall be calculated in accordance with Recommendation ITU‑R S.1256‑0.     (WRC‑15)

**Reasons:**

MOD CHN/62A19/21

TABLE **22-1D**     (Rev.WRC‑15)

Limits to the epfd↓ radiated by non-geostationary-satellite systems in the fixed-satellite
service in certain frequency bands into 30 cm, 45 cm, 60 cm, 90 cm, 120 cm,
180 cm, 240 cm and 300 cm broadcasting-satellite service antennas6, 9, 10, 11

| Frequency band(GHz) | epfd↓ (dB(W/m2)) | Percentage of time during which epfd↓ may notbe exceeded | Referencebandwidth(kHz) | Reference antennadiameter and referenceradiation pattern12 |
| --- | --- | --- | --- | --- |
| 11.7-12.5in Region 1;11.7-12.2 and12.5-12.75in Region 3;12.2-12.7in Region 2 | −165.841−165.541−164.041−158.6−158.6−158.33−158.33 | 0259698.85799.42999.429100 | 40 | 30 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −175.441−172.441−169.441−164−160.75−160−160 | 06697.7599.35799.80999.986100 | 40 | 45 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −176.441−173.191−167.75−162−161−160.2−160−160 | 097.899.37199.88699.94399.97199.997100 | 40 | 60 cmRecommendationITU‑R BO.1443-3,Annex 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 11.7-12.5in Region 1;11.7-12.2 and12.5-12.75in Region 3;12.2-12.7in Region 2 | −178.94−178.44−176.44−171−165.5−163−161−160−160 | 0339899.42999.71499.85799.94399.991100 | 40 | 90 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −182.44−180.69−179.19−178.44−174.94−173.75−173−169.5−167.8−164−161.9−161−160.4−160 | 09098.998.999.599.6899.6899.8599.91599.9499.9799.9999.998100 | 40 | 120 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −184.941−184.101−181.691−176.25−163.25−161.5−160.35−160−160 | 03398.599.57199.94699.97499.99399.999100 | 40 | 180 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −187.441−186.341−183.441−178−164.4−161.9−160.5−160−160 | 03399.2599.78699.95799.98399.99499.999100 | 40 | 240 cmRecommendationITU‑R BO.1443-3,Annex 1 |
| −191.941−189.441−185.941−180.5−173−167−162−160−160 | 03399.599.85799.91499.95199.98399.991100 | 40 | 300 cmRecommendationITU‑R BO.1443-3,Annex 1 |

**Reasons:** New version of Recommendation ITU-R BO.1443.

MOD CHN/62A19/22

12 22.5C.11 For this Table, reference patterns of Annex 1 to Recommendation ITU‑R BO.1443‑3 shall be used only for the calculation of interference from non‑geostationary-satellite systems in the fixed-satellite service into geostationary-satellite systems in the broadcasting-satellite service.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R BO.1443.

ARTICLE 51

Conditions to be observed in the maritime services

Section I − Maritime mobile service

51.39 CA − Ship stations using narrow-band direct-printing telegraphy

MOD CHN/62A19/23

51.41 2) The characteristics of the narrow-band direct-printing equipment shall be in accordance with Recommendations ITU‑R M.476‑5 and ITU‑R M.625‑4. The characteristics should also be in accordance with the most recent version of Recommendation ITU‑R M.627.    (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.625.

ARTICLE 52

Special rules relating to the use of frequencies

Section VI − Use of frequencies for radiotelephony

52.176 A − General

MOD CHN/62A19/24

52.181 § 85 Single-sideband apparatus in radiotelephone stations of the maritime mobile service operating in the bands allocated to this service between 1 606.5 kHz and 4 000 kHz and in the bands allocated exclusively to this service between 4 000 kHz and 27 500 kHz shall satisfy the technical and operational conditions specified in Recommendation ITU‑R M.1173‑1.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.1173.

52.182 B − Bands between 1 606.5 kHz and 4 000 kHz     (WRC‑03)

B2 − Call and reply

MOD CHN/62A19/25

52.192 *b)* by coast stations to announce the transmission, on another frequency, of traffic lists as specified in Recommendation ITU‑R M.1171‑0.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

APPENDIX 15 (REV.WRC‑12)

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

MOD CHN/62A19/26

TABLE 15-2     (WRC‑15)

Frequencies above 30 MHz (VHF/UHF)

|  |  |  |
| --- | --- | --- |
| Frequency(MHz) | Descriptionof usage | Notes |
| \*121.5 | AERO-SAR | The aeronautical emergency frequency 121.5 MHz is used for the purposes of distress and urgency for radiotelephony by stations of the aeronautical mobile service using frequencies in the band between 117.975 MHz and 137 MHz. This frequency may also be used for these purposes by survival craft stations. Use of the frequency 121.5 MHz by emergency position-indicating radio beacons shall be in accordance with Recommendation ITU‑R M.690‑3.Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency frequency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **5.111** and **5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated. |

**Reasons:** New version of Recommendation ITU-R M.690.

ARTICLE 52

Special rules relating to the use of frequencies

Section VI − Use of frequencies for radiotelephony

52.182 B − Bands between 1 606.5 kHz and 4 000 kHz     (WRC‑03)

B2 − Call and reply

MOD CHN/62A19/27

52.195 § 89 1) Before transmitting on the carrier frequency 2 182 kHz, a station shall, in accordance with Recommendation ITU‑R M.1171‑0, listen on this frequency for a reasonable period to make sure that no distress traffic is being sent.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

B4 − Additional provisions applying to Region 1

MOD CHN/62A19/28

52.213 2) In exceptional circumstances, if frequency usage according to Nos. 52.203 to 52.208 or No. 52.210 is not possible, a ship station may use one of its own assigned national ship-to-shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station shall take precautions, in accordance with Recommendation ITU‑R M.1171‑0, to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

52.216 C − Bands between 4 000 kHz and 27 500 kHz

C2 − Call and reply

MOD CHN/62A19/29

52.224 § 99 1) Before transmitting on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz or 16 420 kHz a station shall, in accordance with Recommendation ITU‑R M.1171‑0, listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see No. 52.221A).     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

C3 − Traffic

MOD CHN/62A19/30

52.229 4) Transmitters used for radiotelephony in the bands between 4 000 kHz and 27 500 kHz shall comply with technical characteristics specified in Recommendation ITU‑R M.1173‑1.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.1173.

52.230 D − Bands between 156 MHz and 174 MHz

D1 − Call and reply

MOD CHN/62A19/31

52.234 *b)* by coast stations to announce the transmission on another frequency of traffic lists, in accordance with Recommendation ITU‑R M.1171‑0, and important maritime information.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/32

52.240 8) Before transmitting on the frequency 156.8 MHz, a station shall, in accordance with Recommendation ITU‑R M.1171‑0, listen on this frequency for a reasonable period to make sure that no distress traffic is being sent.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

ARTICLE 57

Radiotelephony

MOD CHN/62A19/33

57.1 § 1 The procedure detailed in Recommendation ITU‑R M.1171‑0 shall be applicable to radiotelephone stations, except in cases of distress, urgency or safety.     (WRC‑15)

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

APPENDIX 4 (REV.WRC‑12)

Consolidated list and tables of characteristics for use in the
application of the procedures of Chapter III

ANNEX 2

Characteristics of satellite networks, earth stations
or radio astronomy stations2     (Rev.WRC‑12)

Footnotes to Tables A, B, C and D

MOD CHN/62A19/34

**TABLE A**

GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION

| **Items in Appendix** | ***A \_ GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION***  | **Advance publication of a geostationary-satellite network** | **Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9** | **Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9** | **Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)** | **Notification or coordination of a non-geostationary-satellite network** | **Notification or coordination of an earth station (including notification under Appendices 30A or 30B)** | **Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)** | **Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)** | **Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)** | **Items in Appendix** | **Radio astronomy** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A.17.b.1 | the calculated aggregate power flux-density produced at the Earth’s surface by any geostationary radionavigation-satellite system in the band 4 990-5 000 MHz in a 10 MHz bandwidth, as defined in *resolves* 1 of Resolution **741 (WRC‑15)**Required only for geostationary satellite systems operating in the radionavigation-satellite service in the band 5 010-5 030 MHz |  |  |  | **+** |  |  |  |  |  | A.17.b.1 |  |
| ... |  |  |  |  |  |  |  |  |  |  |  |  |
| A.17.b.3 | the equivalent power flux-density produced at the Earth’s surface by all space stations within any non-geostationary radionavigation-satellite service system in the band 4 990-5 000 MHz in a 10 MHz bandwidth, as defined in *resolves* 2 of Resolution **741 (WRC‑15)**... |  |  |  |  | **+** |  |  |  |  | A.17.b.3 |  |

**Reasons:** Change consequent to the addition of adding -0 to Recommendation ITU-R SA.1631.

APPENDIX 17 (REV.WRC‑12)

Frequencies and channelling arrangements in the
high-frequency bands for the maritime mobile service

Annex 1[[2]](#footnote-2)\*     (WRC‑12)

Frequencies and channelling arrangements in the high-frequency
bands for the maritime mobile service, in force
until 31 December 2016     (WRC‑12)

PART B – Channelling arrangements     (WRC‑07)

MOD CHN/62A19/35

Section I – Radiotelephony

1 Radiotelephone channelling arrangements for the frequencies to be used by coast and ship stations in the bands allocated to the maritime mobile service are indicated in the following Sub-Sections:

*Sub-Section A* – Table of single-sideband transmitting frequencies (kHz) for duplex (two-frequency) operation;

Sub-Section B – Table of single-sideband transmitting frequencies (kHz) for simplex (single‑frequency) operation and for intership cross-band (two-frequency) operation;

Sub-Section C-1 – Table of recommended single-sideband transmitting frequencies (kHz) for ship stations in the band 4 000-4 063 kHz shared with the fixed service;

Sub-Section C-2 – Table of recommended single-sideband transmitting frequencies (kHz) for ship and coast stations in the band 8 100-8 195 kHz shared with the fixed service.

2 The technical characteristics for single-sideband transmitters are specified in Recommendation ITU‑R M.1173‑1.

...

6 *a)* Maritime radiotelephone stations using single-sideband emissions in the bands between 4 000 kHz and 27 500 kHz exclusively allocated to the maritime mobile service shall operate only on the carrier frequencies shown in the Sub-Sections A and B and, in the case of analogue radiotelephony, shall be in conformity with the technical characteristics specified in Recommendation ITU‑R M.1173‑1.

 *b)* Ship stations, when using frequencies for single-sideband emissions in the bands 4 000-4 063 kHz and ship and coast stations, when using frequencies for single-sideband emissions in the band 8 100-8 195 kHz should operate on the carrier frequencies indicated in Sub-Sections C‑1 and C‑2 respectively. In the case of analogue radiotelephony technical characteristics of the equipment shall be those specified in Recommendation ITU‑R M.1173‑1.

 *c)* Stations, when employing the single-sideband mode for analogue radiotelephony, shall use only class J3E emissions. For digital communications, class J2D emissions shall be used.     (WRC‑15)

7 The channelling plan established in Sub-Section C-2 does not prejudice the rights of administrations to establish, and to notify assignments to stations in the maritime mobile service other than those using radiotelephony in the band 8 100-8 195 kHz, in conformity with the relevant provisions of these Regulations.

8 (SUP - WRC‑03)

**Reasons:** New version of Recommendation ITU-R M.1173.

MOD CHN/62A19/36

APPENDIX 18 (REV.WRC‑12)

Table of transmitting frequencies in the
VHF maritime mobile band

(See Article 52)

NOTE A – For assistance in understanding the Table, see Notes *a)* to *z)* below.     (WRC‑12)

NOTE B – The Table below defines the channel numbering for maritime VHF communications based on 25 kHz channel spacing and use of several duplex channels. The channel numbering and the conversion of two-frequency channels for single-frequency operation shall be in accordance with Recommendation ITU‑R M.1084‑5 Annex 4, Tables 1 and 3. The Table below also describes the harmonized channels where the digital technologies defined in the most recent version of Recommendation ITU‑R M.1842 could be deployed.     (WRC‑15)

**Reasons:** New version of Recommendation ITU-R M.1084.

MOD CHN/62A19/37

RESOLUTION 417 (Rev.WRC‑15)

Use of the frequency band 960-1 164 MHz by the aeronautical mobile (R) service

The World Radiocommunication Conference (Geneva, 2015),

...

MOD CHN/62A19/38

resolves

...

4 that administrations authorizing AM(R)S systems in the frequency band 960-1 164 MHz shall ensure compatibility with systems indicated under *considering* *f)* whose characteristics are described in Annex 1 of RecommendationITU‑R M.2013‑0;

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/39

RESOLUTION 739 (Rev.WRC-15)

Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands

The World Radiocommunication Conference (Geneva, 2015),

MOD CHN/62A19/40

ANNEX 1 TO RESOLUTION 739 (Rev.WRC-15)

Unwanted emission threshold levels

The unwanted emission threshold levels applicable to geostationary space stations are given in Table 1‑1 in terms of power flux-density (pfd) in a reference bandwidth produced at a radio astronomy station.

In Table 1‑1 the unwanted emission threshold levels given in the fourth, sixth and eighth columns (associated with the reference bandwidth contained in the adjacent columns) should be met by any geostationary space station operating in the bands indicated in the second column at the radio astronomy station operating in the band mentioned in the third column.

The unwanted emission threshold levels applicable to space stations of a non-geostationary system are given in Table 1‑2 in terms of the equivalent power flux-density (epfd), produced at a radio astronomy station in a reference bandwidth by all the space stations in a non-geostationary satellite system that are visible to the radio astronomy station considered, not to be exceeded during a given percentage of time, over the whole sky.

In Table 1‑2 the epfd value given in the fourth, sixth and eighth columns (associated with the reference bandwidths contained in the adjacent column) should be met by all the space stations of a non-geostationary satellite systemoperating in the bands indicated in the second column at the radio astronomy station operating in the band mentioned in the third column. The epfd value at a given radio astronomy station shall be evaluated by using the antenna pattern and the RAS maximum antenna gain given in Recommendation ITU‑R RA.1631‑1. Guidance on the calculation of epfd can be found in Recommendations ITU‑R S.1586 and ITU‑R M.1583. The elevation angles of the radio astronomy stations to be taken into account in the epfd calculation are those higher than the minimum elevation angle θ*min* of the radio telescope. In the absence of such information a value of 5° shall be taken. The percentage of time during which the epfd level shall not be exceeded is mentioned in Note (1) of Table 1‑2.

Some sections of Report ITU‑R SM.2091 indicate levels of unwanted emissions in radio astronomy bands that certain satellite systems, by design, do not exceed.

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/41

RESOLUTION 741 (Rev.WRC‑15)

Protection of the radio astronomy service in the band 4 990-5 000 MHz from unwanted emissions of the radionavigation-satellite service (space-to-Earth) operating in the frequency band 5 010-5 030 MHz

The World Radiocommunication Conference (Geneva, 2015),

MOD CHN/62A19/42

resolves

1 that in order not to cause harmful interference to the RAS in the band 4 990-5 000 MHz, the pfd produced in this band by any GSO RNSS network operating in the 5 010-5 030 MHz band shall not exceed −171 dB(W/m2) in a 10 MHz band at any radio astronomy station;

2 that in order not to cause harmful interference to the RAS in the band 4 990-5 000 MHz, over the whole sky, for elevations higher than the minimum operating elevation angle θ*min*[[3]](#footnote-3)1 specified for the radio telescope, the epfd produced in this band by all space stations within any non-GSO RNSS system operating in the 5 010-5 030 MHz band shall not exceed −245 dB(W/m2) in a 10 MHz band at any radio astronomy station for more than 2% of the time, using the methodology in Recommendation ITU‑R M.1583‑1 and a reference antenna with a radiation pattern and maximum antenna gain given in Recommendation ITU‑R RA.1631‑0;

3 that the limits referred to in *resolves*1 and 2 shall apply to RNSS systems as from 3 June 2000;

4 that administrations planning to operate a GSO or a non-GSO RNSS system in the band 5 010-5 030 MHz, for which complete coordination or notification information, as appropriate, has been received by the Bureau after 2 June 2000, shall send to the Bureau the value of the maximum level of pfd as referred to in *resolves*1 or the value of the maximum level of epfd as referred to in *resolves*2, as appropriate.

**Reasons:** Addition of an indicator -0 for the first version of the Recommendation.

MOD CHN/62A19/43

RESOLUTION 748 (REV.WRC‑15)

Compatibility between the aeronautical mobile (R) service and the fixed-satellite service (Earth-to-space) in the band 5 091-5 150 MHz

The World Radiocommunication Conference (Geneva, 2015),

**Reasons:** New version of Recommendation ITU-R P.526 and M.1827.

MOD CHN/62A19/44

resolves

1 that any AM(R)S systems operating in the band 5 091-5 150 MHz shall not cause harmful interference to, nor claim protection from, systems operating in the ARNS;

2 that any AM(R)S systems operating in the frequency band 5 091-5 150 MHz shall meet the SARPs requirements published in Annex 10 of the ICAO Convention on International Civil Aviation and the requirements of Recommendation ITU‑R M.1827‑1, to ensure compatibility with FSS systems operating in that band;

3 that, in part to meet the provisions of No. **4.10**, the coordination distance with respect to stations in the FSS operating in the band 5 091-5 150 MHz shall be based on ensuring that the signal received at the AM(R)S station from the FSS transmitter does not exceed −143 dB(W/MHz), where the required basic transmission loss shall be determined using the methods described in Recommendations ITU‑R P.525‑2 and ITU‑R P.526‑13,

**Reasons:** New version of Recommendation ITU-R P.526 and M.1827.

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1. \* This provision was previously numbered as No. 5.347A. It was renumbered to preserve the sequential order. [↑](#footnote-ref-1)
2. \* *Note by the Secretariat*: Annex 1 contains the entire text of Appendix 17     (REV. WRC‑07) [↑](#footnote-ref-2)
3. 1 Until adoption of a definition of θ*min* by ITU‑R, and publication of notified radio astronomy observatory data, a value of 5° should be assumed in appropriate calculations. [↑](#footnote-ref-3)