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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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|  | | **Doc. CPG(23)045 ANNEX V-27A** | |
| PLENARY MEETING | | **Addendum 1 to Addendum 27 to Document XXXX-E** | |
|  | | **1 September 2023** | |
|  | | **Original: English** | |
|  | | | |
| European Common Proposals | | | |
| Proposals for the work of the conference | | | |
|  | | | |
| Agenda item 10 | | | |

10to recommend to the ITU Council items for inclusion in the agenda for the next world radiocommunication conference, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the ITU Convention and Resolution **804 (Rev.WRC‑19)**,

Part 1: Agenda for the 2027 World Radiocommunication Conference

Introduction

Agenda item 10 requests WRC-23 to recommend to the ITU Council items for inclusion in the agenda for the next WRC, and to give its view on the preliminary agenda for the subsequent Conference and on possible agenda items for future Conferences, taking into account Resolution **812 (WRC‑19)**.

The European proposals for the Agenda for WRC-27 builds upon some of the preliminary agenda items contained in Resolution **812 (WRC-19)**, as well as proposals for the consideration of new topics.

On a general basis, all proposed agenda items have to be considered under the general principle to take due regard of the requirements of existing and future services in the frequency bands under consideration in a view of not putting undue constraints on existing services.

On this basis, Europe proposes that WRC-23 suppresses Resolution **812 (WRC-19)** and adopts the new Resolution **[EUR-A10] (WRC-23)** as the basis for the provisional agenda for WRC-27 for adoption by the ITU Council.

Proposals

SUP EUR/XXXXA27A1/1

RESOLUTION 812 (WRC-19)

Preliminary agenda for the 2027 World Radiocommunication Conference

**Reasons:** The Resolution is not needed anymore.

ADD EUR/XXXXA27A1/2

Draft New Resolution [EUR-A10] (WRC-23)

Agenda for the 2027 World Radiocommunication Conference

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for a world radiocommunication conference should be established four to six years in advance and a final agenda shall be established by the Council two years before the conference;

*b)* Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;

*c)* the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

recognizing

that, in preparing this agenda, many items proposed by administrations could not be included and have had to be deferred to future conference agendas,

resolves

to recommend to the Council that a world radiocommunication conference be held in 2027 for a period of four weeks, with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC‑23 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the frequency bands under consideration, to consider and take appropriate action in respect of the following items:

1.1 to consider, in accordance with Resolution **663 (Rev.WRC-23)**, additional spectrum allocations to the radiolocation service on a co-primary basis in the frequency band 231.5-275 GHz and an identification for radiolocation applications in frequency bands in the frequency range 275-700 GHz for millimetre and sub-millimetre wave imaging systems;

1.2 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 40.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by aeronautical, maritime and land earth stations in motion communicating with geostationary or non-geostationary space stations in the fixed-satellite service, in accordance with Resolution **176 (Rev.WRC-23)**;

1.3 to consider the introduction of power flux-density (pfd) and equivalent isotropically radiated power (e.i.r.p.) limits in Article **21** for the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775 (Rev.WRC-23)**;

1.4 to consider regulatory provisions for receive-only space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies reported to WRC-23 under agenda item 9.1 and its corresponding Resolution **[EUR-A10-1.4] (WRC-23)**;

1.5 to study the technical and operational matters, and regulatory provisions, for space-to-space links in the frequency bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660.0 MHz, 1670 - 1675 MHz and 2 483.5-2 500 MHz among non-geostationary and geostationary satellites operating in the mobile-satellite service, in accordance with Resolution **249 (Rev WRC-23)**;

1.6 to consider a new global primary allocation to the Earth exploration-satellite service (Earth-to-space) in the frequency band 22.55-23.15 GHz, in accordance with Resolution **664 (Rev.WRC-23)**;

1.7 to consider the use of existing International Mobile Telecommunications (IMT) identifications in the frequency range 694-960 MHz, by consideration of the possible removal of the limitation regarding aeronautical mobile in IMT for the use of IMT user equipment by non-safety applications, where appropriate, in accordance with Resolution **251 (Rev.WRC-23)**;

1.8 to consider, based on the results of studies, global allocations to the mobile-satellite service and regulatory actions in the frequency bands 1 645.5-1 646.5 MHz, 1880-1920 MHz and 2 010-2 025 MHz required for the future development of low data rate mobile-satellite systems that can coexist in the same frequency band, in accordance with Resolution **[EUR-A10-1.8] (WRC‑23)**;

1.9 to consider, based on the results of ITU-R studies, adequate regulatory measures regarding the protection of the Earth exploration-satellite service (passive) in certain frequency bands above 86 GHz subject to No. **5.340**, from unwanted emissions of active services, in accordance with Resolution **[EUR-A10-1.9] (WRC‑23)**;

1.10 to consider the results of studies regarding the compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands in accordance with Resolution **[EUR-A10-1.10]** **(WRC-23)**, in order to review and update tables of threshold levels in Resolution **739 (Rev.WRC-19)**;

1.11 to consider, based on the results of ITU‑R studies, revisions to the allocation to the fixed-satellite service (FSS) (Earth-to-space) in the frequency band 51.4-52.4 GHz, and associated regulatory provisions, to enable use by non-geostationary satellite orbit systems and associated gateway earth stations on a primary basis in accordance with Resolution **[EUR-A10-1.11] (WRC‑23);**

1.12 to consider, based on the results of ITU‑R studies, to support space-to-space connectivity in the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz, and associated regulatory provisions, including revised frequency allocations to the fixed-satellite service (FSS) or the addition of frequency allocations to the inter-satellite service (ISS), to enable links between non-geostationary satellites and geostationary satellites in accordance with Resolution **[EUR-A10-1.12] (WRC‑23);**

2 to examine the revised ITU‑R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with *further resolves* of Resolution **27 (Rev.WRC‑19)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in *resolves* of that Resolution;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

4 in accordance with Resolution **95 (Rev.WRC‑19)**, to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

6 to identify those items requiring urgent action by the radiocommunication study groups in preparation for the next world radiocommunication conference;

7 to consider possible changes in response to Resolution 86 (Rev.Marrakesh, 2002) of the Plenipotentiary Conference on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)**, in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC‑19)**;

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC‑23;

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations[[1]](#footnote-1)\*; and

9.3 on action in response to Resolution **80 (Rev.WRC‑07)**;

10to recommend to the ITU Council items for inclusion in the agenda for the next world radiocommunication conference, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7of the Convention and Resolution **804 (Rev.WRC-23)**,

resolves further

to activate the Conference Preparatory Meeting,

invites the Council

to finalize the agenda and arrange for the convening of WRC‑27, and to initiate as soon as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

1 to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting (CPM) and to prepare a report to WRC‑27;

2 to submit a draft report on any difficulties or inconsistencies encountered in the application of the Radio Regulations referred in agenda item 9.2 to the second session of the CPM and to submit the final report at least five months before the next WRC,

invites the Secretary General

to communicate this Resolution to international and regional organizations concerned.

MOD EUR/XXXXA27A1/3

RESOLUTION 663 (REV.WRC‑23)

Studies on possible new additional allocations for systems and applications of the radiolocation service on a co-primary basis in the frequency band 231.5‑275 GHz, and new identifications for radiolocation service applications in frequency bands within the frequency range 275-700 GHz

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that all millimetre and sub-millimetre wave systems and applications in the radiolocation service (RLS) to be considered by this Resolution fall under the categories ranging, imaging (including material analysis), and localisation;

*b)* that that those systems and applications are typically designed in two main configurations: active (radars) and receive-only (radiometers);

*c)* that those RLS systems and applications:

– have been recognized by scientific communities and governmental organizations as well suited for stand-off detection of concealed objects in the imaging category;

– will provide a significant contribution to public safety, counterterrorism and the security of high-risk/high-value assets or areas- in the imaging and localisation categories;

– will significantly contribute to improve road safety in the near ranges around vehicles and in the Intelligent Transport Systems (ITS) context in general - in the ranging, localisation and imaging categories;

*cbis)* that the RLS systems and applications are divided into:

– active use, which may require a frequency bandwidth up to 30 GHz to achieve range resolutions in the order of half a centimetre;

– receive-only use, which will detect the extremely weak power that is naturally radiated by objects and require a much wider frequency bandwidth than active systems to collect enough power for detection;

*d)* that globally harmonized spectrum for those millimetre and sub-millimetre wave RLS systems and applications is required;

*e)* that the optimal frequency range for the operation of those active millimetre and sub-millimetre wave RLS systems is between 231.5 GHz and 320 GHz, where the atmospheric absorption is relatively low;

*f)* that there are some narrower existing allocations to the RLS in the frequency range 217-275 GHz in the three ITU Regions, which however may not support the bandwidth required for these millimetre and sub-millimetre wave RLS systems and applications;

*g)* that those RLS systems and applications in the

– imaging category will operate at low transmit powers, in ranges up to 300 metres, are limited in space and in time;

– ranging category are expected to be ubiquitously deployed specifically in the near ranges around vehicles, while the category localisation is used in general in the ITS context;

– all categories may be severely affected by other power sources operating in the same frequency band;

*h)* that the technical and operational characteristics for those receive-only and active millimetre and sub-millimetre wave systems and applications in the different categories need to be defined, including protection criteria in particular for receive-only systems and applications;

*i)* that the combination of chosen transmitting power and bandwidth for some of the applications listed in *considering c)* within the regulatory framework, depends on the operational requirements in the used frequency band(s),

noting

*a)* that the frequency bands 235-238 GHz and 250-252 GHz are allocated to the Earth exploration-satellite service (EESS) (passive) on a primary basis;

*b)* that the frequency bands 241-248 GHz and 250-275 GHz are allocated to the radio astronomy service (RAS) on a primary basis;

*c)* that the frequency band 248-250 GHz is allocated to the RAS a on a secondary basis;

*d)* that the frequency band 248-250 GHz is allocated to amateur and amateur-satellite services on a primary basis;

*e)* that a number of frequency bands in the frequency range 275-1 000 GHz are identified for use by passive services, such as the RAS, the EESS (passive) and the space research service (SRS) (passive);

*f)* that WRC-23 reviewed under agenda item 1.14 the frequency allocations for the EESS (passive) in the frequency range 231.5-252 GHz, in accordance with Resolution **662 (WRC-19)** and related results of studies and decisions of WRC-23 under agenda item 1.14 should be taken into account under this Resolution;

*g)* that No. **5.563A** applies in the frequency ranges 235-238 GHz, 250-252 GHz and 265-275 GHz, identifying using of these frequency bands by ground-based passive atmospheric sensing;

*h)* that No. **5.340** applies in the frequency range 250-252 GHz, prohibiting all emissions in this frequency range;

*i)* that receive-only imaging systems and the naturally compatible EESS (passive) and RAS, can be considered together when making common assignments in order to improve the overall spectrum usage efficiency*;*

*j)* that No. **5.565** states that the use of the frequency range 275-1 000 GHz by the passive services does not preclude use of this frequency range by active services;

*k)* that No. **5.564A** identifies the range 275-450 GHz for the use by administrations for the implementation of land mobile and fixed service applications with certain limitations to protect the EESS (passive) in the frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz and to protect the RAS in general, in accordance with Resolution **731 (Rev.WRC-19)**,

recognizing

*a)* that administrations wishing to make frequencies available in the frequency range 275‑1 000 GHz for active service applications are urged to take all practicable steps to protect the passive services from harmful interference until the date when the Table of Frequency Allocations is established for the relevant frequencies,

*b)* that, when an active service is newly allocated in a frequency band in which a passive service is already allocated, it may be appropriate to consider the status of the allocation of the passive service in order to grant it the possibility to claim protection from harmful interference caused by this active service,

resolves to invite ITU-R Sector to complete in time for WRC-27

1 the definition of the technical and operational characteristics, including required protection criteria, for those receive-only and active millimetre and sub-millimetre wave RLS systems and applications in the categories listed in *considering c)* and further specified in *considering g)* to *i*);

2 studies on the future requirements for globally harmonized spectrum for the RLS, in particular for those millimetre and sub-millimetre wave RLS systems and applications above 231.5 GHz;

3 sharing and compatibility studies between active millimetre and sub-millimetre wave RLS systems and applications with other services in the frequency range between 231.5 GHz and 275 GHz, while ensuring protection to the current use and further development of the EESS (passive), SRS (passive) and RAS allocated to this frequency range;

4 studies on possible regulatory measures on the protection of the RAS in the frequency band 248-250 GHz from RLS, including the upgrade of the allocation to a primary status or new footnotes of the Table of Frequency Allocations;

5 sharing and compatibility studies between RLS applications and EESS (passive), SRS (passive) and RAS applications operating in the frequency range 275-700 GHz, while maintaining protection of the passive service applications identified in No. **5.565**;

6 sharing and compatibility studies of receive-only millimetre and sub-millimetre wave imaging applications with other applications in the frequency range between 275 GHz and 1000 GHz, identified by No. **5.564A**,

and provide the technical and operational characteristics of the systems involved by submitting contributions to the ITU Radiocommunication Sector ,

invites the 2027 World Radiocommunication Conference

1 to determine, based on the results of studies, possible new allocations to the RLS in the frequency range between 231.5 GHz and 275 GHz on a co-primary basis, while ensuring the protection of the current use and further development of existing services in the frequency bands considered and in adjacent frequency bands;

2 to determine, based on the results of studies, adequate regulatory measures to protect the RAS in the frequency band 248-250 GHz;

3 to determine, based on the results of studies, possible identifications of frequency bands in the frequency range between 275 and 700 GHz for use by RLS applications while ensuring the protection of the identified applications in Nos. **5.564A** and **5.565** in the frequency bands considered and, as appropriate, in adjacent frequency bands.

Proposals on an agenda item for WRC-27

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| **Subject: Studies on possible new additional allocations for systems and applications of the radiolocation service on a co-primary basis in the frequency band 231.5-275 GHz, and new identifications for radiolocation service applications in frequency bands within the frequency range 275-700 GHz** | |
| **Origin:** CEPT | |
| ***Proposal*:**  Studies on possible new additional allocations for systems and applications of the RLS on a co-primary basis in the frequency band 231.5-275 GHz, and new identifications for RLS applications in frequency bands within the frequency range 275-700 GHz, in accordance with Resolution **663 (Rev.WRC-23)** | |
| ***Background/reason*:**  WRC-19 agreed to include this proposal as preliminary agenda item 2.1 in the preliminary agenda for WRC-27 (Res. **812 (WRC-19)**).  The applications and systems as defined in this Resolution are planned to be deployed and operated globally under the radio location service:  Systems for stand-off detection of concealed objects: will provide a significant contribution to public safety, counterterrorism and the security of high-risk/ high-value assets or areas.  Applications in the near ranges around vehicles: these applications will provide increased traffic safety for vehicle passengers and vulnerable road users. The envisaged functions require protection from interference from users in the same or adjacent bands.  The protection of the existing services such as RAS, EESS(passive), in the bands 231.5-275 GHz and 275 - 700 GHz is ensured by the already existing footnotes.  WRC-23 reviewed under agenda item 1.14 the frequency allocations for the EESS (passive) in the frequency range 231.5-252 GHz, in accordance with Resolution **662 (WRC-19)** and related results of studies and decisions of WRC-23 under agenda item 1.14 will be taken into account under this Resolution.  Work under this Resolution does not intend to extend the existing table of frequency allocations. | |
| ***Radiocommunication services concerned*:**  Radio Astronomy, Fixed, Mobile, Fixed-Satellite, Mobile-Satellite, Earth Exploration-Satellite (passive), Radio location, Radionavigation, Radionavigation-Satellite, Space Research (passive), Amateur, Amateur-Satellite | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  WRC-19, agenda item 1.15; WRC-23, agenda item 1.14 | |
| ***Studies to be carried out by*:**  WP 5B | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG1, SG4, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

MOD EUR/XXXXA27A1/4

RESOLUTION 176 (Rev.WRC‑23)

Use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 40.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz   
(Earth-to-space) by aeronautical, maritime and land earth stations in motion communicating with geostationary or non-geostationary space stations in the fixed-satellite service

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) are globally allocated on a primary basis to the fixed-satellite service (FSS) and that existing regulatory and technical procedures between geostationary-satellite orbit (GSO) FSS networks and non-geostationary-satellite orbit (non-GSO) FSS systems in those frequency bands apply;

*b)* that there is an increasing need for mobile communications, including global broadband satellite services, and that some of this need can be met by allowing aeronautical, maritime and land earth stations in motion (ESIMs) to communicate with FSS space stations operating in the frequency bands 37.5-40.5 GHz (space-to-Earth), 40.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space);

*c)* that in the FSS, there are GSO networks and non-GSO systems operating and/or planned for near-term operation in the frequency bands allocated to the FSS in the frequency range 37.5‑51.4 GHz;

*d)* that some administrations have already deployed, and plan to expand their use of, ESIMs with operational and future GSO FSS networks;

*e)* that GSO FSS networks and non-GSO FSS systems in the frequency bands 37.5-39.5 GHz (space-to-Earth), 40.5‑42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) are required to be coordinated and notified in accordance with the provisions of Articles **9** and **11**;

*f)* that the frequency bands 37.5-39.5 GHz, 40.5-42.5 GHz, 47.2-50.2 GHz and 50.4‑51.4 GHz are also allocated to several other services on a primary basis, the allocated services are used by a variety of different systems in many administrations, and these existing services and their future development should be protected without undue constraints;

*g)* the need to encourage the development and implementation of new technologies in the FSS at frequencies above 30 GHz,

recognizing

*a)* that Article **21** contains power flux-density (pfd) limits for GSO and non-GSO FSS;

*b)* that Nos. **22.5L** and **22.5M** of Article **22** specify the applicable limits for a non-GSO system in the FSS in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) to protect geostationary-satellite orbit, and that Resolution **769 (WRC-19)** and Resolution **770 (WRC-19)** shall also apply;

*c)* that advances in technology, including the use of tracking techniques, allow ESIMs to operate within the characteristics of fixed earth stations of the FSS;

*d)* that WRC‑15 adopted No. **5.527A** and Resolution **156 (WRC‑15)** related to ESIMs;

*e)* that WRC-19 adopted No. **5.517A** and Resolution **169 (WRC-19)** related to ESIMs communicating with GSO FSS networks in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz;

*f)* that WRC-23 reviewed under agenda item 1.16 the use of the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by earth stations in motion communicating with non-GSO space stations in the FSS, in accordance with Resolution **173 (WRC-19)**;

*g)* that ESIMs addressed by this Resolution are not to be used for safety-of-life applications;

*h)* that the frequency bands 40.5-42 GHz (space-to-Earth) in Region 2, 47.5-47.9 GHz (space-to-Earth) in Region 1, 48.2-48.54 GHz (space-to-Earth) in Region 1, 49.44-50.2 GHz (space-to-Earth) in Region 1 and 48.2-50.2 GHz (Earth-to-space) in Region 2 are identified for use by high-density applications in the FSS (No. **5.516B**);

*i)* that the provisions of No. **5.550B** apply;

*j)* that the use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-GSO system in the FSS is subject to the application of the provisions of No. **9.12** for coordination with other non-GSO system;

*k)* that the frequency bands 37-40 GHz, 40.5-43.5 GHz are available for high-density applications in the fixed service (No. **5.547**);

*l)* that the pfd in the frequency band 42.5-43.5 GHz produced by any GSO space station in the FSS (space-to-Earth) or the broadcasting-satellite service (BSS) operating in the frequency band 42-42.5 GHz shall not exceed, at the site of any radio astronomy station, the values listed in No. **5.551I**;

*m)*that the allocation of the spectrum for the FSS in the frequency bands 42.5‑43.5 GHz and 47.2-50.2 GHz for Earth-to-space transmission is greater than that in the frequency band 37.5‑39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites, and administrations are urged to take all practicable steps to reserve the frequency band 47.2-49.2 GHz for feeder links for the BSS operating in the frequency band 40.5‑42.5 GHz (No. **5.552**);

*n)*that the allocation to the fixed service in the frequency bands 47.2-47.5 GHz and 47.9‑48.2 GHz is designated for use by high-altitude platform stations, and the use of the frequency bands 47.2-47.5 GHz and 47.9‑48.2 GHz is subject to the provisions of Resolution **122 (Rev.WRC‑19)** (No. **5.552A**);

*o)*that the use of the frequency bands 47.5-47.9 GHz, 48.2-48.54 GHz and 49.44-50.2 GHz by the FSS (space-to-Earth) is limited to GSO satellites (No. **5.554A**);

*p)*that the pfd in the frequency band 48.94-49.04 GHz produced by any GSO space station in the FSS (space-to-Earth) operating in the frequency bands 48.2-48.54 GHz and 49.44-50.2 GHz shall not exceed −151.8 dB(W/m2) in any 500 kHz band at the site of any radio astronomy station (No. **5.555B**);

*q)*that, in the frequency bands 49.7-50.2 GHz, 50.4-50.9 GHz and 51.4-52.6 GHz, Resolution **750** **(Rev.WRC‑19)** applies, and Nos. **5.338A**, **5.340** and**5.340.1** apply among other provisions of the Radio Regulations;

*r)* that the fixed and mobile services are allocated on a primary basis in the frequency bands 37.5-42.5 GHz and 47.2-50.2 GHz on a global basis;

*s)* that the frequency band 37.5-38 GHz is allocated to the space research service (SRS) (deep space) in the space-to-Earth direction and the frequency band 40.0-40.5 GHz is allocated to the SRS and the Earth exploration-satellite service (EESS) in the Earth-to-space direction on a primary basis;

*t)* that the frequency bands 37.5-40.5 GHz and 38-39.5 GHz are also allocated to the EESS in the space-to-Earth direction on a secondary basis;

*u)* that the frequency band 50.2-50.4 GHz is allocated on a primary basis to the EESS (passive) and SRS (passive), which need to be adequately protected;

*v)* that all allocated services in these frequency bands should be taken into account,

resolves to invite the ITU Radiocommunication Sector

1 to study the technical and operational characteristics of aeronautical, maritime and land ESIMs communicating with GSO and non-GSO space stations that plan to operate within FSS allocations in the frequency bands 37.5-39.5 GHz, 40.5‑42.5 GHz, 47.2-50.2 GHz and 50.4‑51.4 GHz;

2 to study sharing and compatibility between aeronautical, maritime and land ESIMs communicating with GSO and non -GSO space stations in the FSS in the frequency bands 37.5-39.5 GHz, 40.5‑42.5 GHz, 47.2‑50.2 GHz[[2]](#footnote-2)\* and 50.4-51.4 GHz\* and stations of existing services allocated in these frequency bands and, where appropriate, in adjacent frequency bands, in order to ensure protection of, and not impose undue constraints on, those services;

3 to develop, for different types of ESIM, technical conditions and regulatory provisions for their operation, taking into account the results of the studies above;

4 to ensure that the technical and operational measures and the possible regulatory changes established in accordance with this Resolution shall not affect the relevant provisions related to the protection of GSO networks from non-GSO FSS systems,

invites the 2027 World Radiocommunication Conference

to consider the results of the above studies and take necessary actions, as appropriate, provided that the results of the studies referred to in *resolves to invite the ITU Radiocommunication Sector* are complete and agreed by the radiocommunication study groups.

Proposals on an agenda item for WRC-27

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| **Subject Earth Stations In Motion (ESIM) communicating with geostationary-satellite orbit (GSO) and non-geostationary-satellite orbit (non-GSO) space stations in the fixed-satellite service (FSS) in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-40.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space)** | |
| **Origin:** CEPT | |
| ***Proposal*:**  Study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-40.5 GHz (space-to-Earth), 47.2‑50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by earth stations in motion communicating with geostationary and non-geostationary space stations in the fixed-satellite service, in accordance with Resolution **176 (Rev.WRC-23)** | |
| ***Background/reason*:**  ESIM, earth stations in motion that communicate with GSO FSS space stations, are currently facilitated under Resolution **156 (WRC-15)**, within the frequency bands 19.7-20.2 GHz and 29.5‑30.0 GHz and under Resolution **169 (WRC-19)**, within the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz. There is currently an increasing demand for broadband services that can provide high data rates to users on-board moving platforms such as ships or aircraft. The accelerating utilization of Ka-band frequency spectrum for the provision of these ESIM services will be stifled by the exponential user demand and the scarcity of spectral resources in this frequency band. In order to overcome these challenges and continue to improve the services provided to end-users on the move, it is proposed to carry out technical sharing and compatibility studies between ESIM communicating with GSO and non-GSO FSS systems and other services in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-40.5 GHz (space-to-Earth), 47.2‑50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space). The goal of these studies will be to develop the appropriate technical, operational and regulatory measures that facilitate the use of earth stations in motion communicating with geostationary and non-geostationary space stations in the fixed-satellite service in those frequency bands and ensure the protection of the co-primary incumbent services. | |
| ***Radiocommunication services concerned*:**  Fixed, Mobile, Broadcasting, Broadcasting-satellite, Mobile-satellite, Fixed-satellite, Radio Astronomy, Space Research, Space Research (passive), Earth Exploration-satellite and Earth Exploration-satellite (passive) | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  None | |
| ***Studies to be carried out by*:**  SG4 | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG1, SG5, SG6, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

MOD EUR/XXXXA27A1/5

RESOLUTION 775 (REV.WRC‑23)

Introduction of power flux-density and equivalent isotropically radiated power limits in Article 21 to enable sharing between stations in the fixed service and satellite services  
in the frequency bands 71-76 GHz and 81-86 GHz

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that WRC‑2000 made a number of different allocation changes to the frequency bands 71-76 GHz and 81-86 GHz based on the requirements known at the time;

*b)* that sharing conditions between the fixed service (FS) and satellite services in the frequency bands 71-76 GHz and 81-86 GHz could not be fully developed at WRC‑2000 due to lack of available information on these services at the time;

*c)* that in the last two decades there have been a number of significant technology advances and changes in network requirements in the fixed service, and the frequency bands 71-76 GHz and 81-86 GHz have become strategically important frequency bands for high-capacity FS links, including backhaul for future mobile networks;

*d*FS

*e*,

noting

*a)* that the frequency bands 71-76 GHz and 81-86 GHz are allocated on a primary basis, among other services, to the FS globally;

*b)* that the frequency band 71-76 GHz is also allocated to the fixed-satellite service (FSS) (space-to-Earth) and the mobile-satellite service (MSS) (space-to-Earth) and the frequency band 74-76 GHz is allocated to the broadcasting-satellite service;

*c)* that the frequency band 81-86 GHz is also allocated to the FSS and MSS (Earth-to-space);

*d)* that the frequency band 81-86 GHz is allocated to the radio astronomy service (RAS) on a primary basis, and that No. **5.149** applies;

*e)* that WRC‑12 already addressed sharing and compatibility issues between the FS and passive services in the frequency bands 71-76 GHz and 81-86 GHz and relevant adjacent frequency bands,

recognizing

*a)* that Article **21** and other provisions of the Radio Regulations currently do not contain the necessary technical and regulatory provisions to protect the FS use in the frequency bands 71-76 GHz and 81-86 GHz;

*b)* that Resolution **750 (Rev.WRC‑19)** already contains necessary provisions to protect passive services in the frequency bands and adjacent frequency bands from emissions of the FS in the frequency bands 71-76 GHz and 81-86 GHz, and there is no intention to change these provisions;

*c)* that there is no intention to change the existing allocations or status of those allocations in Article **5** of the Radio Regulations for the frequency bands 71-76 GHz and 81-86 GHz,

resolves to invite ITU-R to complete in time for WRC\_27

studies on power flux-density (pfd) and equivalent isotropically radiated power (e.i.r.p.) limits for satellite services to protect the FS in the frequency bands 71-76 GHz and 81-86 GHz without unduly constraining satellite systems,

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to ITU‑R,

invites the 2027 World Radiocommunication Conference

to consider, based on the results of studies, the introduction of pfd and e.i.r.p. limits in Article **21**  for the frequency bands 71-76 GHz and 81-86 GHz .

Proposals on an agenda item for WRC-27

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| **Subject:**  **To consider the introduction of pfd and e.i.r.p. limits in Article 21 for the bands 71‑76 GHz and 81-86 GHz in accordance with Resolution 775 (Rev.WRC-23).** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To consider the introduction of pfd and e.i.r.p. limits in Article **21** for the bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775** **(Rev.WRC-23)** | |
| ***Background/reason*:**  The 71-76/81-86GHz frequency bands were subject to a number of different allocation changes at WRC-2000. However, the detailed sharing conditions for Article **21** were not able to be developed at the time due to a lack of available information on the different services. Now, over two decades on, there have been a number of significant technology advances and network change requirements and the 71-76/81-86 GHz frequency bands have become strategically important growth bands for high capacity backhaul fixed links including for future 5G fronthaul and backhaul solutions. Given the above and that there is now much more information available on the characteristics of fixed service systems as well as an increasing number of satellite filings in these bands, it is considered appropriate and timely to develop pfd and e.i.r.p. limits for Article **21** of the Radio Regulations. Introducing such technical framework, similar to all other shared terrestrial / satellite bands will set a clear regulatory environment in which the different services can coexist from an international perspective and provide clarity and certainty for the future development of both the fixed and satellite services in these bands to avoid potential interference cases in the future. It is envisaged that changes to the Radio Regulations (Article **21**) will be required including the development of power flux density limits for satellite systems sharing with the fixed service in the band 71 - 76 GHz.  This was also discussed and agreed at WRC-19 as preliminary agenda item 2.4 for WRC-27 in Resolution **812 (WRC-19).** | |
| ***Radiocommunication services concerned*:**  Fixed, Fixed-satellite, Mobile-satellite, Broadcasting-satellite. | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  The studies between passive services in and adjacent bands to the frequency bands 71-76/81-86 GHz and fixed service have already been addressed under WRC-12 agenda item 1.8 leading to Report ITU-R F.2239 and changes to Resolution **750** **(WRC-07)**. | |
| ***Studies to be carried out by*:**  WP 5C | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4 and SG5 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/6

Draft New Resolution [EUR-A10-1.4](WRC-23)

Studies towards new primary allocations to the meteorological aids service (space weather) for receive-only space weather observations

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that space weather observations are important for detecting natural phenomena, mainly originating from solar activity and occurring beyond the major portion of the Earth’s atmosphere, that impact services critical to the economy, safety and security of administrations and their population, and for understanding the origins of these phenomena;

*b)* that these observations are made from space- and ground-based systems;

*c*) that the observational frequencies used by these space weather sensors have been chosen based on physical properties of the observed phenomena;

*d)* that some space weather sensors operate by receiving signals of opportunity, including, but not limited to, low-level natural emissions of the Sun, Earth’s atmosphere, and other celestial bodies, and therefore may suffer from harmful interference;

*e)* that some space weather sensors are operating without appropriate protection in the Radio Regulation while receive-only space weather sensors are vulnerable to interference from both terrestrial and spaceborne systems;

*f)* that a wide variety of space weather sensors currently operate relatively free of harmful interference; however, the radio interference environment could change as a result of future changes made to the Radio Regulations;

*g)* that space weather sensors need appropriate radio regulatory protection to continue their operation in the production of data used to provide forecasts and warnings of space weather events that can cause harm to important sectors of national economies, human welfare and national security;

*h*) that the meteorological aids service (MetAids) (*space weather*) frequency allocations refer to a use of the MetAids that is limited to space weather observations;

i) that the bandwidth requirement for observations by receive-only space weather sensors may typically encompass a minimum continuous bandwidth,

noting

*a)* that WRC-23 decided that space weather observation systems should operate under the MetAids (space weather);

*b)* that Report ITU‑R RS.2456 contains a summary of spectrum-reliant space weather sensors and identifies the most critical operational systems;

*c)* that Report ITU-R RS.[SPEC\_REQTS\_RX\_SPACE\_WEATHER] to provide the requirements of receive-only space weather sensors is currently under development in ITU-R;

*d)* that Report ITU-R RS.[RXSW\_INTERF\_CRITERIA] to provide the protection criteria of receive-only space weather sensors is currently under development in ITU-R;

*e)* that receive-only space weather sensors cannot cause any interference to other services,

recognizing

*a*) that the MetAids(space weather) is covering both, receive-only and active usages of space weather sensors;

*b*) that:

- the monitoring and forecasting of the occurrence and probability of space weather disturbances, which impact Earth’s environment and human activities, is essential;

- there is a need to maintain awareness of any environmental conditions;

- the continuity of guidance in the design of both space- and ground-based systems is necessary;

*c*) that no undue constraints should be imposed by MetAids (space weather) observations on existing services, their systems and applications, and their future development in the bands and in adjacent frequency bands,

resolves to invite ITU-R to complete in time for WRC-27

1 studies of technical, operational and regulatory issues pertaining new primary MetAids (*space weather*) allocations for operations of receive-only space weather sensors in the frequency bands:

• 27.5 - 28.0 MHz

• 37.5 - 38.25 MHz

• 51.0 - 54.0 MHz

• 73.0 - 74.6 MHz

• 153.0 - 154.0 MHz

• 218.28 - 248.28 MHz

• 606 - 614 MHz;

2 studies to ensure that any new primary MetAids (space weather) allocations resulting from resolves 1 shall not constrain the current and future development of applications of incumbent services in bands and in adjacent bands of the frequency bands listed under resolves 1,

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to ITU-R,

invites the 2027 World Radiocommunication Conference

to consider, based on the results of the studies, the technical and regulatory provisions for receive-only usage of space weather sensors and their protection in the Radio Regulations,

invites the Secretary-General of the ITU

to bring this Resolution to the attention of the World Meteorological Organization (WMO) and other international and regional organizations concerned.

Proposals on an agenda item for WRC-27

**Subject: Studies towards new primary allocations to the MetAids (space weather) for receive-only space weather observations**

**Origin:** CEPT

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| ***Proposal*:**  to consider regulatory provisions for receive-only space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies reported to WRC-23 under agenda item 9.1 and its corresponding Resolution **[EUR-A10-1.4] (WRC-23)**; | |
| ***Background/reason*:**  WRC-19 agreed to include this proposal as preliminary agenda item 2.6 in the preliminary agenda for WRC-27 (Res. **812 (WRC-19)**).  Space weather observations from ground-based and space-based systems are becoming more and more important for the detection of solar activity events that can harmfully affect national economies, human welfare as well as national security and safety. Currently, these sensor systems are deployed on a world-wide basis with a strong involvement of a large number of countries and institutions within Europe, and they operate over a large spectral range without any protection from interferences. Some of the sensors operate by receiving low-level natural emission from the sun or Earth’s atmosphere, and they are therefore sensitive to harmful interference from both spaceborne and terrestrial system at already low levels. Though a wide variety of space weather sensors currently operate relatively free of harmful interference, the interference environment could change as a result of changes made to the Radio Regulations. Therefore, space weather sensors will need an appropriate radio regulatory protection to continue their operation in the view of forecasts and warnings of harmful space weather events.  WRC-23 agenda item 9.1 topic a already intended to achieve appropriate recognition of space weather sensors in the Radio Regulations. As a second step, this proposed agenda item for WRC‑27 aims at performing studies for the appropriate protection of space weather sensors, which are crucial for space weather forecasts and warnings, while not placing any constrains on the existing services in the considered frequency bands. | |
| ***Radiocommunication services concerned*:**  MetAids (space weather) | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  Studies performed in relation to the WRC-23 agenda item 9.1 topic A (Protection of radio-reliant space weather sensors used for global prediction and warning (Res. 657 (Rev. WRC-19))). | |
| ***Studies to be carried out by*:**  ITU-R WP 7C | ***with the participation of*:**  Administrations and Sector members |
| ***ITU‑R Study Groups concerned*:**  SG 4, 5, 6 and 7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks*** | |

MOD EUR/XXXXA27A1/7

RESOLUTION 249 (REV.WRC‑23)

Study of technical and operational issues and regulatory provisions for space-to-space transmissions in the Earth-to-space direction in the frequency bands 1 610-1 645.5, 1 646.5-1 660 MHz and 1 670-1 675 MHz and the space-to-Earth direction in the frequency bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 613.8-1 626.5 MHz and 2 483.5-2 500 MHz among non-geostationary and geostationary satellites operating in the mobile-satellite service

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that the definition of mobile-satellite service (MSS) in No. **1.25** includes communication between space stations;

*b)* that the definition of inter-satellite service (ISS) in No. **1.22** includes only links between space stations, and that the term *inter-satellite link* in this Resolution is taken to mean a radiocommunication service link between artificial satellites;

*c)* that many non-geostationary-satellite orbit (non-GSO) satellites operate with limited and non-real-time connectivity to earth stations;

*d)* that space-to-space communication between such non-GSO satellites and geostationary-satellite orbit (GSO) MSS satellites would enhance the security and efficiency of operations;

*e)* that MSS satellites operating in the frequency bands 1 525‑1 544 MHz, 1 545‑1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660 MHz, 1 670-1 675 MHz and 2 483.5-2 500 MHz can support these types of operation;

*f)* that using the frequency bands 1 610-1 645.5 MHz, 1 646.5-1 660 MHz and 1 670-1 675 MHz allocated to the MSS (Earth-to-space) for transmissions in the Earth-to-space direction from non-GSO MSS space stations towards MSS space stations operating at higher orbital altitudes, including GSO, may increase spectral efficiency in these frequency bands;

*g)* that using the frequency bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 613.8‑1 626.5 MHz and 2 483.5‑2 500 MHz allocated to the MSS (space-to-Earth) for transmissions in the space-to-Earth direction from MSS space stations operating at higher orbital altitudes, including GSO, towards non-GSO MSS satellites, may increase spectral efficiency in these frequency bands;

*h)* that all MSS allocations in the above frequency bands include a space-to-Earth or Earth-to-space direction indicator, but do not include a space-to-space direction indicator;

*i)* that the ITU Radiocommunication Sector (ITU‑R) has begun preliminary studies on the technical and operational issues associated with the operation of space-to-space links between non-GSO MSS satellites and GSO MSS satellites in the above frequency bands, but no studies have been conducted on the technical and operational issues associated with the operation of space-to-space links between non-GSO MSS satellites and non-GSO MSS satellites in the above frequency bands;

*j)* that it is technically feasible for a lower orbital altitude non-GSO space station to transmit data to and receive data from a higher orbital altitude non-GSO or GSO space station when passing within the satellite antenna coverage beam that is directed towards the Earth;

*k)* that several satellite systems have been relying on satellite-to-satellite communication in existing satellite frequency bands under No. **4.4**, and such reliance on No.**4.4** does not provide a sound basis for continued development of such systems nor the confidence in commercial viability and availability of the service to the end users;

*l)* that there is growing interest for utilizing space-to-space satellite links for a variety of applications;

*m)* that a precedent for space-to-space links sharing with Earth-to-space and space-to-Earth exists for the space operation, Earth exploration-satellite and space research services in the frequency bands 2 025-2 110 MHz and 2 200-2 290 MHz through the inclusion of a space-to-space allocation,

recognizing

*a)* that it is necessary to study the impact on other services, as well as Earth-to-space and space-to-Earth operation within the MSS, of the operation of inter-satellite links in the above frequency bands, taking into account applicable footnotes to the Table of Frequency Allocations, to ensure compatibility with all primary allocated services in these frequency bands and the adjacent frequency bands and avoid harmful interference;

*b)* that there should be no additional regulatory or technical constraints imposed on primary services to which the frequency band and adjacent frequency bands are currently allocated;

*c)* that it is necessary to study whether space-to-Earth direction transmissions from space stations at higher orbital altitudes, including GSO, can be successfully received by lower orbital altitude non-GSO satellites, without imposing any additional constraints on all allocated services in these frequency bands;

*d)* that the sharing scenarios may vary widely because of the wide variety of orbital characteristics of the non-GSO MSS space stations;

*e)* that out-of-band emissions, signals due to antenna pattern sidelobes, reflections from receiving space stations and in-band unintentional radiation due to Doppler shifts may impact services operating in the same and adjacent or nearby frequency bands;

*f)* that currently the only option for MSS space stations in the frequency bands 1 525‑1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646-1 660 MHz, 1 670-1 675 MHz and 2 483.5‑2 500 MHz needing to communicate with other orbital space stations is to operate under No. **4.4**, without recognition and on a non-harmful interference/non-protected basis in frequency bands allocated to another space service,

recognizing further

*a)* that the use of frequency bands by the MSS in the frequency range 1-3 GHz is subject to existing Resolutions, coordination requirements and country footnotes taking into account, in particular, the protection of safety services and aeronautical mobile-satellite (R) services, and of the Global Maritime Distress and Safety System;

*b)* that the fixed and mobile services are allocated on a primary basis in the frequency bands 1 670-1 675 MHz and 2 483.5-2 500 MHz on a global basis and that the fixed service is also allocated on a primary basis in the frequency band 1 525-1 530 MHz in Regions 1 and 3;

*c)* that the radionavigation-satellite service is allocated on a primary basis in the frequency band 1 559-1 610 MHz for both space-to-Earth and space-to-space use;

*d)* that the radio astronomy service is allocated on a primary basis in the frequency bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 670 MHz, and No. **5.149** applies,

noting

*a)* that section 3.1.3.2 of the Director’s Report to WRC-19 highlights that the Radiocommunication Bureau has received an increased number of Advance Publication Information (API) submissions for non-GSO networks in frequency bands which are not allocated by Article **5** for the type of service foreseen, including satellite network filings for inter-satellite applications in frequency bands allocated only in the Earth-to-space or space-to-Earth directions;

*b)* that the above Director’s Report concludes that, in view of recent technical developments and the increasing number of submissions of inter-satellite links in frequency bands not allocated to the ISS or to a space service in the space-to-space direction, this conference may wish to consider means to give recognition to these uses based on the conditions derived from studies by ITU‑R Working Parties 4A and 4C in order to avoid interfering with existing systems operating in the same frequency bands,

resolves to invite the ITU Radiocommunication Sector

1 to study the technical and operational characteristics of different types of non-GSO MSS space stations that operate or plan to operate space-to-space links with GSO MSS networks in the following frequency bands:

a) Earth-to-space direction in the frequency bands 1 626.5-1 645.5 MHz, 1 646.5‑1 660 MHz and 1 670-1 675 MHz; and

b) space-to-Earth direction in the frequency bands 1 525-1 544 MHz and 1 545‑1 559 MHz;

2 to study the technical and operational characteristics of different types of non-GSO MSS space stations that operate or plan to operate space-to-space links with non-GSO and GSO MSS networks in the following frequency bands:

a) Earth-to-space direction in the frequency band 1 610-1 626.5 MHz; and

b) space-to-Earth direction in the frequency bands 1 613.8-1 626.5 MHz and 2 483.5‑2 500 MHz;

3 to study sharing and compatibility between space-to-space links in the cases described in *resolves to invite the ITU Radiocommunication Sector* 1 and 2 and

– current and planned stations of the MSS;

– other existing services allocated in the same frequency bands; and

– other existing services allocated in adjacent frequency bands,

in order to ensure protection of, and not impose undue constraints on, other MSS operations and other services allocated in those frequency bands and in adjacent frequency bands, taking into account *recognizing further* *a)* to *d)*;

4 to develop technical conditions and regulatory provisions for the operation of space-to-space links in these frequency bands, including new or revised MSS allocations or the addition of ISS allocations, while ensuring the protection of, and without imposing additional constraints on, other MSS operations or other services allocated in those and adjacent frequency bands, taking into account the results of the studies called for in *resolves to invite the ITU Radiocommunication Sector*1, 2,and 3above;

5 to complete these studies by WRC-27,

invites administrations

to participate in the studies by submitting contributions to ITU‑R,

invites the 2027 World Radiocommunication Conference

to consider the results of the above studies and take necessary regulatory actions, as appropriate.

Proposals on an agenda item for WRC-27

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| **Subject: Study of technical and operational issues and regulatory provisions for** **space-to-space transmissions in the Earth-to-space direction in the frequency bands** **1 610-1 645.5, 1 646.5-1 660 MHz and 1 670-1 675 MHz and the space-to-Earth direction in the frequency bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 613.8-1 626.5 MHz and 2 483.5-2 500 MHz among non-geostationary and geostationary satellites operating in the mobile-satellite service** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To enable the establishment of a primary spectrum allocation and associated regulatory provisions to support space-to-space transmissions in the Earth-to-space direction in the frequency bands 1 610-1 645.5, 1 646.5-1 660 MHz and 1 670-1 675 MHz and in the space-to-Earth direction in the frequency bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 613.8-1 626.5 MHz and 2 483.5-2 500 MHz among non-geostationary and geostationary satellites operating in the mobile-satellite service in accordance with Resolution **249 (Rev.WRC 23)** | |
| ***Background/reason*:**  Imaging and tracking non-GSO satellites often encounter difficulties in offloading data from the satellite to the ground in a timely and efficient manner due to the limited period of visibility the satellites have with their associated ground networks. This often limits the amount of data that may be transferred and complicates the design of the satellites in needing to store data during periods when a ground network is not visible.  By making use of space-to-space transmissions to relay data to the ground, the data can be made available to ground networks in near-real time across a much greater portion of a non-GSO satellite’s orbit and more data may be transmitted.  The use of the 1.5/1.6/2.5 GHz frequency bands offers near real-time communications for relaying data to/from the Earth by making use of GSO or non-GSO MSS space station network infrastructure operating at an orbital altitude(s) greater than that of the non-GSO space station generating the data. Both small and large non-GSO satellite missions would benefit from satellite-to-satellite data relay transmissions in the 1.5/1.6/2.5 GHz frequency bands. | |
| ***Radiocommunication services concerned*:**  Aeronautical Radionavigation, Earth Exploration-satellite, Fixed, Mobile, Mobile-satellite, Radio Astronomy, Radiodetermination-satellite, Radiolocation, Space Operations | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:** | |
| ***Studies to be carried out by*:**  WP 4C | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG1, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

MOD EUR/XXXXA27A1/8

RESOLUTION 664 (REV.WRC‑23)

Use of the frequency band 22.55-23.15 GHz by the Earth exploration-satellite service (Earth-to-space)

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that the frequency band 25.5-27 GHz, allocated worldwide to the Earth exploration-satellite service (EESS) (space-to-Earth) on a primary basis, currently does not have a paired band for potential associated Earth-to-space links;

*b)* that an EESS (Earth-to-space) allocation in the frequency range 22.55-23.15 GHz would allow its use for satellite tracking, telemetry and control (TT&C) in combination with the existing EESS (space-to-Earth) allocation referred to in *considering a)*;

*c)* that an EESS (Earth-to-space) allocation in the 23 GHz frequency range would allow for uplinks and downlinks on the same transponder, increasing efficiency and reducing satellite complexity,

noting

*a)* that the frequency band 22.55-23.55 GHz is allocated to the fixed, inter-satellite and mobile services on a primary basis;

*b)* that the frequency band 22.55-23.15 GHz is also allocated to the space research service (SRS) (Earth-to-space) on a primary basis, paired with the SRS (space-to-Earth) allocation in the frequency band 25.5-27 GHz;

*c)* that the frequency band 22.21-22.5 GHz is allocated to the radio astronomy service (RAS) on a primary basis;

*d)* that for the RAS in the frequency bands 22.81-22.86 GHz and 23.07-23.12 GHz No. **5.149** applies,

recognizing

*a)* that the possible development of the EESS (Earth-to-space) in the frequency band 22.55‑23.15 GHz should not constrain the use and development of the SRS (Earth-to-space) in this frequency band;

*b)* that protection of the RAS sites operating in the frequency ranges indicated in *noting* *c)* and *d)* may be achieved by sufficient geographic separation from the EESS Earth stations,

resolves to invite ITU-R to complete in time for WRC-23

1 the identification of relevant technical and operational parameters of the current and planned use of the radiocommunication services listed in *noting* *a)* to *d)* to be used in sharing and compatibility studies;

2 sharing and compatibility studies between EESS (Earth-to-space) systems and the existing services mentioned in *noting* *a)* to *d)*, while ensuring the protection of current use and future development of existing services, in the frequency band 22.55-23.15 GHz and adjacent frequency bands,

ITU-R and provide the technical and operational characteristics of the systems involved

invites the 2027 World Radiocommunication Conference

to consider, based on the results of studies, new global primary allocation to the EESS (Earth-to-space) in the frequency band 22.55-23.15 GHz,

invites the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned.

Proposals on an agenda item for WRC-27

|  |  |
| --- | --- |
| **Subject: Possible new global primary allocation to the EESS (Earth-to-space) in the frequency band 22.55-23.15 GHz** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To consider a new global primary allocation to the EESS (Earth-to-space) in the frequency band 22.55-23.15 GHz, in accordance with Resolution **664 (REV.WRC-23)** | |
| ***Background/reason*:**  WRC-19 agreed to include this proposal as preliminary agenda item 2.11 in the preliminary agenda for WRC-27 (Res. **812 (WRC-19)**).  Similarly to what has been achieved under WRC-12 agenda item 1.11 with a primary allocation to the space research service (Earth-to-space) in the frequency band 22.55-23.15 GHz, it is proposed to investigate a possible new primary allocation to the EESS (Earth-to-space) in the same frequency band. Such an allocation would provide a companion earth-to-space allocation to the existing EESS (space-to-Earth) allocation in 25.5-27 GHz frequency band in order to provide the associated command and control links. | |
| ***Radiocommunication services concerned*:**  Earth exploration-satellite (Earth-to-space), Fixed, Inter-satellite, Mobile, Space Research (Earth-to-space) | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  Studies performed in relation to the WRC-12 agenda item 1.11 (allocation to the space research service (Earth-to-space) in the frequency band 22.55-23.15 GHz) may be relevant. | |
| ***Studies to be carried out by*:**  WP 7B | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

MOD EUR/XXXXA27A1/9

RESOLUTION 251 (REV.WRC‑23)

Considerations on the removal of the limitation regarding aeronautical mobile in the frequency range 694-960 MHz for the use of International Mobile Telecommunications user equipment by non-safety applications

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that there is a demand for greater connectivity for passengers and aeronautical communications in different classes of aeronautical vehicles at lower and higher altitudes;

*b)* that current and future International Mobile Telecommunications (IMT) networks can already provide connectivity services to helicopters, small aircraft and unmanned aircraft systems (UAS) at lower altitudes;

*c)* that future IMT networks may also provide connectivity for passengers and aeronautical communications at higher altitudes;

*d)* that future IMT networks may provide communication functions beyond line-of-sight;

*e)* that IMT networks already support direct air-ground connectivity services to commercial airplanes with specific equipment on board airplanes in other frequency bands;

*f)* that earlier ITU-R sharing and compatibility studies supporting the IMT identification of specific frequency bands in the range under consideration did not consider aeronautical use cases,

noting

*a)* that the frequency band 694-960 MHz is allocated on a primary basis to the mobile, except aeronautical mobile, service in Region 1;

*b)* that the frequency bands 890-902 MHz and 928-942 MHz are allocated on a primary basis to the mobile, except aeronautical mobile, service in Region 2 and that the frequency band 902‑928 MHz is allocated on a secondary basis to the mobile, except aeronautical mobile, service in Region 2;

*c)* that Nos. **5.312** and **5.323** allocate the frequency band 645-960 MHz or parts thereof to the aeronautical radionavigation service on a primary basis in several countries of Region 1;

*d)* that the frequency band 694-960 MHz is allocated on a primary basis to the broadcasting service in Region 1;

*e)* that the frequency bands 1 400-1 427 MHz, 1 610.6-1 613.8 MHz, and 1 660-1 670 MHz are allocated to the radio astronomy service (RAS) on a primary basis;

*f)* that the frequency bands under consideration are identified for use by IMT user equipment in accordance with Nos. **5.286AA**, **5.295**, **5.308A** and **5.317A**, and Recommendation ITU-R M.1036;

*g)* that Resolution **224 (Rev.WRC‑19)** addresses frequency bands for the terrestrial component of IMT below 1 GHz;

*h)* that Resolution **749 (Rev.WRC-19)**addresses the use of the frequency band 790‑862 MHz in countries of Region 1 and the Islamic Republic of Iran by mobile applications and by other services;

*i)* that Resolution **760 (Rev.WRC-19)** addresses provisions relating to the use of the frequency band 694-790 MHz in Region 1 by the mobile, except aeronautical mobile, service and by other services,

recognizing

*a)* that the removal of the limitation regarding aeronautical mobile in the proposed frequency bands would enable the unified use of the IMT identifications by aeronautical user equipment throughout the Regions;

*b)* that IMT networks can already support a significant number of airborne user equipment and therefore the expected deployment density of airborne user equipment is high;

*c)* that RAS stations are extremely sensitive to air- and spaceborne transmissions of active services (see No. **5.149**) owing to the increased likelihood of line-of-sight conditions and main-beam to main-beam coupling and may suffer from 2nd harmonics of airborne user equipment in the IMT networks,

resolves to invite ITU-R to complete in time for WRC-27

1 assessment of relevant aeronautical mobile service scenarios for air-ground and ground-air connectivity for airborne user equipment in IMT networks to be addressed in compatibility and sharing studies;

2 identification of relevant technical parameters associated with the aeronautical mobile systems;

3 sharing and compatibility studies with existing services, including in adjacent frequency bands, in order to ensure protection of, and not impose undue constraints on the existing services, and their future development;

4 studies on spurious emissions, including 2nd harmonics of airborne user equipment in IMT networks into RAS stations in the frequency bands listed in *noting e)* in order to ensure protection of, and not impose undue constraints on, existing and future RAS stations in those frequency bands,

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to ITU-R,

invites the 2027 World Radiocommunication Conference

to consider, based on the results of studies,the possibility of removing the aeronautical mobile service exception or other suitable regulatory measures in the frequency ranges 694-960 MHz in Region 1, and 890‑942 MHz in Region 2.

Proposals on an agenda item for WRC-27

|  |  |
| --- | --- |
| **Subject: : Air-to-ground and ground-to-air connectivity for airborne base station and user equipment in IMT frequency bands within 694-960 MHz for non-safety applications** | |
| **Origin:** CEPT | |
| ***Proposal*:**  to consider the removal of the limitation regarding aeronautical mobile in the IMT frequency bands within the frequency range 694-960 MHz for non-safety applications, where appropriate in accordance with Resolution **251 (Rev.WRC-23)**. | |
| ***Background/reason*:**  There is a growing demand for:  – affordable air-to-ground and ground-to-air connectivity, due the rising expectation for connectivity in e.g. helicopters and small airplanes. Several test campaigns have demonstrated that IMT networks can respond to this type of connectivity demand,  – platforms capable of providing IMT coverage either in areas where there is no terrestrial network, or in case of disaster and the potential unavailability of the terrestrial network.  Standards Developing Organizations (SDOs) such as 3GPP are currently standardizing functionalities to support these use cases.  IMT networks with national coverage rely on the frequency range 694-960 MHz. However, the frequency range 694‑960 MHz is currently allocated to the ‘MOBILE, except aeronautical mobile’ service in Region 1, which would prevent or at least restrict the possibility to connect Unmanned Aircraft to IMT network. Similar restrictions apply in the frequency band 890-942 MHz in Region 2. | |
| ***Radiocommunication services concerned*:**  Mobile, Fixed, Aeronautical Radionavigation, Broadcasting | |
| ***Indication of possible difficulties*:**  Sharing studies with radiocommunication services in band and in adjacent bands | |
| ***Previous/ongoing studies on the issue*:** | |
| ***Studies to be carried out by*:**  SG5 (WP 5D) | ***with the participation of*:**  --- |
| ***ITU‑R study groups concerned*:**  SG5 (WP 5B) SG6 (WP 6A) | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/10

Draft New Resolution [EUR-A10-1.8](WRC-23)

Studies relating to potential new global allocations to the mobile-satellite service and regulatory actions in the frequency bands 1 645.5-1 646.5 MHz, 1 880-1 920 MHz and 2 010-2 025 MHz required for the future development of low data rate mobile-satellite systems that can coexist in the same frequency band

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that there is a need for low data rate mobile-satellite service (MSS) systems for the purpose of developing Internet of Things applications;

*b)* that there are insufficient spectrum opportunities for new non-voice low data rate non-geostationary MSS systems to operate in existing MSS frequency bands below 5 000 MHz;

*c)* that the number of mobile-satellite systems using small satellites is growing and the spectrum demand for suitable MSS allocations is increasing;

*d)* that the contribution of the low data rate MSS applications is delivering actionable information, to the promotion of human welfare;

*e)* that low data rate MSS systems, in the context of this Resolution, refers to non-geostationary non-voice applications that do not require uninterrupted links, and are resilient to interference and data packet loss,

noting

*a)* that the frequency band 1 645.5-1 646.5 MHz is currently allocated to the MSS (earth-to-space) on a primary basis;

*b)* that the frequency band 1 880-1 920 MHz is currently allocated to the fixed and mobile services on a primary basis;

*c)* that the frequency band 2 010-2 025 MHz is currently allocated to the fixed and mobile services on a primary basis;

*d)* that the frequency band 2 010-2 025 MHz is currently allocated to the MSS on a primary basis only in Region 2;

*e)* that in Regions 1 and 3, the band 2 010-2 025 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications (IMT), in accordance with No. **5.388A**;

*f)* that Reports ITU-R M.2218 and ITU-R M.2221 indicate spectrum requirements for new broadband MSS applications in the 4-16 GHz frequency range;

*g)* that Report ITU-R M.2218 suggests that the operational characteristics of incumbent MSS systems may constrain and effectively hamper the sharing of existing MSS spectrum, resulting in a requirement for additional spectrum for new applications;

*h)* that Report ITU-R SA.2312 provides technical characteristics and benefits of some low data rate MSS satellites and suggests that MSS frequency bands already allocated above 5 000 MHz are not suited to the inherent size, weight and power restrictions of small satellites (usually having a mass of less than 100 kg);

*i)* the need for regulatory certainty regarding the available spectrum for both satellite and earth station design and planning purposes,

recognizing

*a)* that the frequency bands 1 645.5-1 646.5 MHz, 1 880-1 920 MHz and 2 010-2 025 MHz are also allocated to other radiocommunication services on a primary basis and that those allocations are used by a variety of incumbent systems in many administrations, and that these existing services should be protected and their future development should not be limited; for the determination of these incumbents, the latest edition of the Radio Regulations applies;

*b)* that for multiple non-geostationary low data rate MSS systems and applications to be able to co-exist in the same frequency band a low data rate MSS systems should, in the context of this Resolution, have the following properties:

– not cause harmful interference to other systems

– not require uninterrupted links

– be resilient to interference

– accept data transmission loss

*c)* that various low data rate MSS systems and applications may have different modes of operation and employ different interference mitigating measures, such as combinations of low power, intermittent transmissions and bandwidth, to facilitate spectrum sharing and compatibility;

*d)* that low data rate MSS systems require spectrum that is not subject to the coordination procedures described in Section II of Article **9** to facilitate equitable access and avoid unnecessary hurdles for new entrants;

*e)* that multiple low data rate MSS systems shall be able to co-exist simultaneously and in the same frequency band,

resolves to invite ITU-R to complete in time for WRC-27

1 sharing and compatibility studies between the low data rate MSS systems and the current and future stations of the existing primary services operating in the frequency bands 1 645.5-1 646.5 MHz, 1 880-1 920 MHz and 2 010-2 025 MHz and in the relevant adjacent frequency bands, in order to ensure protection of existing services from harmful interference and not impose limitations to these services and their future development,

2 studies on technical and operational conditions, including mitigation techniques, to facilitate co-existence of multiple low date rate satellite systems in the same frequency bands,

invites administrations

to participate actively in the studies and provide the information required for the studies listed in the *resolves to invite ITU-R to complete in time for WRC-27* by submitting contributions to the ITU Radiocommunication Sector,

invites the 2027 World Radiocommunication Conference

to consider, based on the results of studies, global allocations to the mobile-satellite service and regulatory actions in the frequency bands 1 645.5-1 646.5 MHz, 1880-1920 MHz and 2 010-2 025 MHz required for the future development of low data rate mobile-satellite systems that can coexist in the same frequency band.

Proposals on an agenda item for WRC-27

|  |  |
| --- | --- |
| **Subject: Possible allocations to low data rate mobile-satellite service in the frequency bands 1 645.5-1 646.5 MHz, 1 880-1 920 MHz and 2 010-2 025 MHz** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To consider, based on the results of studies, global allocations to the mobile-satellite service and regulatory actions in the frequency bands 1 645.5-1 646.5 MHz, 1880-1920 MHz and 2 010-2 025 MHz required for the future development of low data rate mobile-satellite systems that can coexist in the same frequency band, in accordance with Resolution **[EUR-A10-1.8] (WRC-23)** | |
| ***Background/reason*:**  The emerging development of satellite-based Internet of Things (IoT) applications require a global access to frequency spectrum to proliferate. These applications are typically of a low data rate nature and are sometimes categorized as narrowband mobile-satellite service (MSS), but to avoid confusion and ambiguity with respect to bandwidth usage the term low data rate MSS should be used. Use of low cost and rapidly deployable satellite systems to support these applications allow for short iteration cycles with respect to service technology and satellite lifetime. This philosophy lowers the threshold for deployment of novel systems while supporting efficient use of spectrum through the improvement in technology for viable systems and the cessation of operations for non-viable systems.  Satellite-based IoT applications can deliver actionable information, services and solutions that promote and support human welfare. Studies and Reports prepared by ITU-R, such as Reports ITU-R M.2218, ITU-R M.2221 and ITU-R SA.2312 indicate that the operational characteristics of incumbent MSS systems may constrain and hamper the sharing of existing MSS spectrum with low data rate MSS systems providing novel IoT applications, and that existing MSS allocations above 5 GHz are not suited for these low data rate MSS systems.  To ensure sufficient spectrum opportunities for new low data rate MSS entrants and innovative applications, suitable frequency bands should be identified and, if needed, allocated to MSS for low data rate mobile-satellite systems. Various low data rate MSS systems and applications may have different modes of operations. Thus, it is important that multiple low data rate MSS systems should be able to co-exist simultaneously in the same frequency bands to ensure equitable access for both new and existing systems and applications in the bands identified for low data rate MSS.  A global allocation (new or existing) to MSS is needed to support the future development of low data rate MSS systems, and suitable candidate frequency bands for development of low data rate MSS are the frequency bands 1 645.5-1 646.5 MHz, 1 880-1 920 MHz and 2 010-2 025 MHz. | |
| ***Radiocommunication services concerned*:** Mobile-satellite, Fixed, Mobile | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  Revision of WRC-27 preliminary agenda item 2.13 (see Resolution **812 (WRC-19)**) | |
| ***Studies to be carried out by*:**  WP 4C | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG5 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/11

Draft New Resolution [EUR-A10-1.9](WRC-23)

Studies on the adjacent band compatibility between the Earth exploration-satellite service (passive) in certain bands above 86 GHz, subject to No. 5.340, and relevant active services

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that WRC‑2000 made a number of different allocation changes to the frequency bands above 71 GHz, including primary allocations to the Earth exploration-satellite service (EESS) (passive) subject to No. **5.340**, based on the requirements known at the time of that Conference;

*b)* that primary allocations have been made to various active services in frequency bands adjacent to frequency bands above 86 GHz allocated to the Earth exploration-satellite service (EESS) (passive) subject to No. **5.340**;

*c)* that unwanted emissions from active services have the potential to cause unacceptable interference to EESS (passive) sensors;

*d)* that, in many cases, the frequencies used by EESS (passive) sensors are chosen to study natural phenomena producing radio emissions at frequencies fixed by the laws of nature, and therefore shifting frequency to avoid or mitigate interference problems is not possible;

*e)* that several frequency bands above 71 GHz are already used by the EESS (passive);

*f)* that there is currently only limited knowledge of requirements and implementation plans for the active services that will operate in frequency bands above 71 GHz,

noting

*a)* that Resolution **731 (Rev.WRC‑19)** calls for consideration of sharing and adjacent-band compatibility between passive and active services in frequency bands above 71 GHz;

*b)* that Resolution **750** **(Rev.WRC‑19)** deals with the compatibility between the Earth exploration-satellite service (passive) and some active services;

*c)* that Resolution **750** **(Rev.WRC‑19)** already contains necessary provisions to protect EESS (passive) in the frequency band 86-92 GHz from emissions of the fixed service in frequency bands 81‑86 GHz and 92‑94 GHz and that there is no intention to change these provisions;

*d)* that there is no intention to change the existing allocations or status of allocations in Article **5** of the Radio Regulations for the frequency bands above 86 GHz;

*e)* that interference criteria for passive sensors have been developed and are given in Recommendation ITU-R RS.2017;

*f)* that typical technical and operational characteristics of EESS (passive) systems are given in Recommendation ITU-R RS.1861,

recognizing

*a)* that compatibility conditions between the EESS (passive) in frequency bands above 86 GHz and active services in adjacent frequency bands could not be fully developed at WRC‑2000 due to lack of available information at the time;

*b)* that it is necessary to ensure equitable burden sharing for achieving compatibility between active and passive services operating in adjacent frequency bands,

resolves to invite ITU-R to complete in time for WRC-27

the appropriate studies on the adjacent frequency band compatibility between EESS (passive) and the corresponding active services as listed in the Table below

Table

Frequency bands to be studied and corresponding active services to be included

|  |  |  |
| --- | --- | --- |
| EESS (passive) frequency band | Active service frequency band | Active service |
| 86-92 GHz | 81-86 GHz | Fixed-satellite service (FSS) (Earth-to-space), mobile service (MS) |
| 92-94 GHz | MS, radiolocation service (RLS) |
| 114.25-116 GHz | 111.8-114.25 GHz | Fixed service (FS), MS |
| 116-119.98 GHz | Inter-satellite service (ISS) |
| 148.5-151.5 GHz | 141-148.5 GHz | FS, MS, RLS |
| 151.5-155.5 GHz | FS, MS, RLS |
| 164-167 GHz | 158.5-164 GHz | FS, FSS (space-to-Earth), MS, mobile-satellite service (MSS) (space-to-Earth) |
| 167-174.5 GHz | FS, FSS (space-to-Earth), ISS, MS |
| 182-185 GHz | 174.8-182 GHz | ISS |
| 185-190 GHz | ISS |
| 190-191.8 GHz | 185-190 GHz | ISS |
| 191.8-200 GHz | FS, ISS, MS, MSS, radionavigation service (RNS), radionavigation-satellite service (RNSS) |
| 200-209 GHz | 191.8-200 GHz | FS, ISS, MS, MSS, RNS, RNSS |
| 209-217 GHz | FS, FSS (Earth-to-space), MS |
| 226-231.5 GHz | 217-226 GHz | FS, FSS (Earth-to-space), MS |
| 231.5-235 GHz | FS, FSS (space-to- Earth), MS |

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to ITU-R,

resolves to invite the 2027 World Radiocommunication Conference

to determine, based on the results of studies, adequate regulatory measures regarding the protection of the EESS (passive) in frequency bands above 86 GHz from unwanted emissions of active services, including a potential update of Resolution **750** **(Rev.WRC‑19)**,

instructs the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned.

Proposals on an agenda item for WRC-27

|  |  |
| --- | --- |
| **Subject: Possible regulatory measures regarding the protection of the EESS (passive) in frequency bands above 86 GHz from unwanted emissions of active services** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To consider, based on the results of ITU-R studies, adequate regulatory measures regarding the protection of the EESS (passive) in certain frequency bands above 86 GHz subject to No. **5.340**, from unwanted emissions of active services, in accordance with Resolution**[EUR-A10-1.9] (WRC‑23)** | |
| ***Background/reason*:**  Resolution **750 (Rev.WRC-19)**, initially developed as the outcome of WRC-07 agenda item 1.20, deals with the compatibility between the Earth exploration-satellite service (passive) in bands subject to No. **5.340** and relevant active services in adjacent bands. It basically provides limits for the unwanted emission levels of active service stations for the compatibility with EESS (passive). This Resolution has been updated, as appropriate, in subsequent WRC (in particular WRC-19) to cover compatibility scenarios previously not addressed.  The latest version of Resolution **750 (Rev.WRC-19)** includes unwanted emission levels from the fixed service into the frequency band 86-92 GHz. However, unwanted emissions from other active services allocated in frequency bands adjacent to 86-92 GHz are currently not included.  In addition, frequency bands allocated to EESS (passive) above 92 GHz and subject to No. **5.340**, are not yet included in Resolution **750 (Rev.WRC-19)**.  Thus, taking into account the technological developments since 2007 and the increased interests for frequency bands above 71 GHz by active services, it is the right time to consider the compatibility in adjacent frequency bands between active services and EESS (passive) in frequency bands subject to No. **5.340** above 86 GHz. Therefore, this proposal for a new WRC-27 agenda item intends to address the protection of EESS (passive) in a number of frequency bands covered by No. **5.340** above 86 GHz from unwanted emissions from active services operating in adjacent frequency bands. These studies might lead to an update of Resolution **750 (Rev.WRC‑19)**, as appropriate.  This proposed agenda item is intended to replace WRC-27 preliminary agenda item 2.5 listed in Resolution **812 (WRC-19)** and described in Resolution **776 (WRC-19)**, in relation to EESS (passive), with a broader scope in term of considered frequency bands and active services. | |
| ***Radiocommunication services concerned*:** Earth exploration-satellite (passive), Fixed, Fixed-satellite, Inter-satellite, Mobile, Mobile-satellite, Radiolocation, Radionavigation, Radionavigation-satellite | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  Revision of WRC-27 preliminary agenda item 2.13 (see Resolution **812 (WRC-19)**) | |
| ***Studies to be carried out by*:**  WP 7C | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/12

Draft New Resolution [EUR-A10-1.10](WRC-23)

Revision of Resolution 739 (Rev.WRC-19)

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that primary service allocations have been made, in adjacent or nearby frequency bands, to the radio astronomy service (RAS) and to various space services, such as the fixed-satellite service (FSS), mobile-satellite service (MSS), broadcasting-satellite service (BSS) and radionavigation satellite service (RNSS), hereafter referred to as “active space services”;

*b)* that unwanted emissions from active space services may cause unacceptable interference to the RAS;

*c)* that, in many cases, the frequencies used by the RAS are chosen to study natural phenomena producing radio emissions at frequencies fixed by the laws of nature, and therefore shifting frequency to avoid or mitigate interference problems may not be possible;

*d)* that there are an increasing number of satellite filings in the frequency bands listed in Table 1 of this Resolution;

*e)* that the current regulatory provisions and procedures may not be sufficient to ensure protection of the RAS from harmful interference produced by the increasing number of satellite networks,

noting

*a)* that Resolution **739 (Rev.WRC-19)** applies under No. **5.208B** for the frequency bands listed in the Annex to that Resolution;

*b)* that, according to resolves 3 of Resolution **739 (Rev.WRC-19)**, in case the unwanted emissions from the space station or satellite system cannot meet the values given in the Annex to that Resolution, the concerned administrations enter into a consultation process in order to achieve a mutually acceptable solution;

*c)* that Resolution **739 (Rev.WRC-19)** defines thresholds to be met by any geostationary space station (Table 1 of Annex to Resolution **739 (Rev.WRC-19**) or by any single network of non-geostationary space stations (Table 2 of Annex to Resolution **739 (Rev.WRC-19**) in order to protect radio astronomy stations;

*d)* that Recommendation ITU-R RA.769 provides, in Annex 1, the general consideration and assumptions used in the calculation of interference levels;

*e)* that Recommendation ITU-R RA.769 provides, in Table 1 and Table 2, the threshold levels of interference detrimental to radio astronomy observations in some radio astronomy bands;

*f)* that Recommendation ITU-R RA.1631 provides, the typical maximum RAS antenna gains in order to derive the equivalent power lux density (epfd) resulting from unwanted emission levels produced by a non-geostationary-satellite system at radio astronomy stations,

recognizing

*a)* that compatibility conditions between space services and passive services in the frequency bands pairs in Table 1 to this Resolution could not be fully developed at WRC-07;

*b)* that Resolution **739 (Rev.WRC-19)** contains no pfd/epfd threshold for unwanted emission from any geostationary satellite orbit (GSO)/non-GSO space station in bands listed in Table 1 to this Resolution;

*c)* that the current values provided in Resolution **739 (Rev.WRC-19)** are derived from Recommendation ITU-R RA.769 and Recommendation ITU-R RA.1631,

*resolves to invite the ITU-R to complete in time for WRC-27*

the study of the compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands listed in Table 1 to this Resolution with a view to set the relevant thresholds levels for unwanted emissions from any GSO space station and from all non-GSO space stations and revise Resolution **739 (Rev.WRC-19)**,

Table 1

Frequency band pairs for consideration

|  |  |  |
| --- | --- | --- |
| Active space service frequency band | Active space service (space-to-Earth) | Radio astronomy frequency band |
| 71-76 GHz | FSS, MSS | 76-81 GHz |
| 123-130 GHz | FSS | 130-134 GHz |
| 167-174.5 GHz | FSS | 164-167 GHz |
| 232-235 GHz | FSS | 226-231.5 GHz |

invites administrations

to participate actively in the studies and provide the information required for the studies listed in the *resolves to invite ITU-R to complete in time for WRC-27* by submitting contributions to ITU-R,

resolves to invite the 2027 World Radiocommunication Conference

to consider the results of studies and take necessary actions, such as a potential update of Resolution **739** **(Rev.WRC‑19)**.

Proposals on an agenda item for WRC-27

|  |  |
| --- | --- |
| **Subject:**  **Revision of Resolution 739 to address the protection of a number of frequency bands above 76 GHz allocated to the radio astronomy service from** **downlink emissions of active space services operating in adjacent and nearby frequency bands** | |
| **Origin:** CEPT | |
| ***Proposal*:**  Studies regarding the compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands in accordance with Resolution **[EUR-A10-1.10]** **(WRC-23)**, in order to review and update tables of threshold levels in Resolution **739 (WRC-19)**; | |
| ***Background/reason*:**  Resolution **776 (WRC-19)** calls for studies to define the conditions for the use of the frequency bands 71-76 GHz and 81-86 GHz by stations in the satellites services to ensure compatibility with passive services.  Based on this initial framework for studies, a proposal is made for a new WRC-27 agenda item that addresses the protection of a number of bands above 76 GHz allocated to RAS on a primary basis from downlink emissions of active space services operating in adjacent and nearby frequency bands, where no related provision exist to protect RAS, with a view to amend Resolution **739 (Rev. WRC-19)**. The Annex to Resolution **739 (Rev. WRC-19)** defines thresholds that apply to any GSO space station (Table 1) and to all space stations of a non-GSO satellite system (Table 2) with respect to radio astronomy sites. Thresholds applicable under Resolution **739 (Rev. WRC-19)** do not consider the aggregate impact from multiples satellite systems on a radio astronomy station.  The Q/V frequency bands are not proposed to be investigated under this agenda item since the Radio Regulations already contains provisions supporting the protection of the RAS, namely Nos. **5.551H** and **5.555B**. | |
| ***Radiocommunication services concerned*:** All satellite services (in particular Mobile-satellite and Fixed-satellite), Radio Astronomy | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:** | |
| ***Studies to be carried out by*:**  WP 7D | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/13

Draft New Resolution [EUR-A10-1.11](WRC-23)

Studies relating to possible revision of the allocation to the fixed-satellite service (FSS) in the frequency band 51.4-52.4 GHz to enable use by non-geostationary satellite orbit (non-GSO) FSS systems and associated gateway earth stations on a primary basis

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that satellite systems are increasingly being used to deliver broadband services and can help enable universal broadband access;

*b)* that next-generation fixed-satellite service (FSS) technologies for broadband will increase speeds, with faster rates expected in the near future;

*c)* that technological developments such as advances in spot-beam technologies and frequency reuse are used by the FSS in frequency bands above 30 GHz to increase the efficient use of spectrum;

*d)* that fixed-satellite applications in frequency bands above 30 GHz, such as feeder links, should be easier to share with other radiocommunication services than high-density fixed-satellite service (HDFSS) applications;

*e*) that the current frequency allocations to FSS in the frequency band 51.4-52.4 GHz do not enable use by non-geostationary satellite orbit (non-GSO) gateways operations, and as such do not meet the expected needs of such systems,

noting

*a)* that the frequency band 51.4-52.4 GHz is allocated to fixed and mobile services, and is available for high-density applications in the fixed service as indicated in No. **5.547**;

*b)* that the frequency band 52.6-54.25 GHz is allocated to passive services;

*c)* that radio astronomy observations are carried out in the frequency band 51.4-54.25 GHz under national arrangements as indicated in No. **5.556**;

*d)* that Report ITU-R S.2461 on spectrum needs for the fixed-satellite service in the frequency band 51.4-52.4 GHz (2019), demonstrated the need for additional FSS spectrum in the Earth-to-space direction for both GSO FSS networks and non-GSO FSS systems;

*e)* that Report ITU-R S.2462, on sharing between 50/40 GHz GSO networks and non-GSO systems (2019), presents sharing and compatibility studies between GSO FSS networks and non-GSO FSS systems;

*f)* that WRC-19, pursuant to Resolution **162 (WRC-15)[[3]](#footnote-4)\*,** allocated the frequency band 51.4-52.4 GHz to the FSS (Earth-to-space) on a primary basis;

*g)* that No. **5.555C** limits the use of the FSS allocation to GSO networks and associated gateway earth stations with a minimum antenna diameter of 2.4 meters,

recognizing

*a)* the need to protect existing services when considering frequency bands for possible additional allocations to any service;

*b)* that the conditions in No. **5.555C** with respect to GSO networks shall not be changed;

*c)* that, although the studies prior to WRC-19 were conducted only for GSO FSS earth stations, as noted in Report ITU-R S.2463, spectrum needs for both GSO and non-GSO FSS in the frequency band 51.4-52.4 GHz were ultimately identified, as indicated in *noting* *d)*,

*resolves to invite ITU-R to complete in time for WRC-27*

1 sharing studies between non-GSO FSS gateways operation and the current and planned stations of the existing primary services operating in the frequency band 51.4-52.4 GHz, in order to determine the conditions to ensure the protection of these services;

2 compatibility studies between non-GSO FSS gateways operation in the frequency band 51.4-52.4 GHz and the existing primary passive services operating in the frequency band 52.6-54.25 GHz in order to possibly revise Resolution **750 (Rev. WRC-19)**;

3 sharing and compatibility studies between non-GSO FSS gateways operation in the frequency band 51.4-52.4 GHz and the radio astronomy observations carried out in the frequency band 51.4-54.25 GHz in conformity with No. **5.556**, in order to determine the conditions to ensure the protection of these observations,

invites administrations

to participate actively in the studies by submitting contributions to ITU-R,

resolves to invite the 2027 World Radiocommunication Conference

to consider, based on the results of the ITU-R studies, the possible revision of the allocation to the fixed-satellite service (FSS) in the frequency band 51.4-52.4 GHz to enable use by non-geostationary satellite orbit (non-GSO) FSS systems and associated gateway earth stations on a primary basis;

instructs the Director of the Radiocommunication Bureau

to report on the results of the ITU-R studies to WRC-27.

Proposals on an agenda item for WRC-27

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| **Subject: To study and develop technical, operational and regulatory measures, as appropriate, to support use of frequency band 51.4-52.4 GHz, allocated to the fixed-satellite service (Earth-to-space), for gateway earth stations operating with non-geostationary-satellite orbit FSS systems** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To enable the establishment of spectrum allocation and associated regulatory provisions to support in specific frequency bands, non-GSO gateway operations in the fixed-satellite service | |
| ***Background/reason*:**  To provide a means for recognizing in the Radio Regulations gateway stations communicating with non-geostationary space stations in the fixed-satellite service in specific frequency ranges in accordance with Resolution **[EUR-A10-1.11] (WRC‑23)** | |
| ***Radiocommunication services concerned*:** Fixed-satellite, Fixed, Mobile, Radio astronomy, Earth Exploration Satellite (passive) | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  V band studies for the operation of GSO gateways stations | |
| ***Studies to be carried out by*:**  WP 4A | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

ADD EUR/XXXXA27A1/14

Draft New Resolution [EUR-A10-1.12](WRC-23)

Study of technical and operational issues and regulatory provisions to support space-to-space transmissions in the frequency bands 3 700-4 200 MHz and 5  925-6 425 MHz for non-GSO user space stations operating at lower orbital altitudes, in communication with GSO satellites

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that many non-geostationary-satellite orbit (non-GSO) satellites operate with limited and non-real-time connectivity to earth stations;

*b)* that space-to-space communication between such non-GSO satellites and geostationary satellite orbit (GSO) satellites would enhance the efficiency of operations and that the effective re-use of some frequency bands allocated to the fixed-satellite service (FSS) for transmissions between space stations may increase the efficiency of use of those frequency bands;

*c)* that there is growing interest for utilizing satellite-to-satellite links for a variety of applications,

noting

*a)* that the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz are allocated to the FSS;

*b)* that the use of the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz by the non-GSO FSS is subject to the application of Nos. **22.5C** and **22.5D**;

*c)* that the frequency bands 5 925-6 425 MHz may be used for the FSS (Earth-to-space) for the provision of earth stations located on board vessels subject to Nos. **5.457A** and **5.457B;**

*d)* that the use of the frequency bands 5 925-6 425 MHz by aeronautical mobile telemetry is subject to the application of the provisions of No. **5.457C**,

recognizing

*a)* that the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz are also allocated to other radiocommunication services both on a primary and secondary basis, that those allocations are used by a variety of incumbent systems and that the protection of these services should be studied;

*b)* that the use of frequency bands by the FSS in the frequency ranges 3 700-4 200 MHz and 5 925-6 425 MHz is subject to existing Resolutions, coordination requirements and country footnotes taking into account, in particular, the protection of incumbent services;

*c)* that there should be no additional regulatory or technical constraints imposed on services to which the frequency bands and adjacent frequency bands are currently allocated on a primary and secondary basis;

*d)* that it is necessary to study whether space-to-Earth direction transmissions from GSO space stations can be successfully received by lower orbital altitude non-GSO satellites, without imposing any additional constraints on all allocated services in these frequency bands;

*e)* that the sharing scenarios may vary because of the wide variety of orbital characteristics of the non-GSO systems;

*f)* that out-of-band emissions, signals due to antenna pattern sidelobes, reflections from receiving space stations and in-band unintentional radiation due to Doppler shifts may impact services operating in the same and adjacent or nearby frequency bands;

*g*) that any future use of space-to-space links in the frequency band 3700 - 4200 MHz shall not claim protection from terrestrial services or other FSS applications operating in accordance with the Radio Regulations,

*resolves to invite ITU-R to complete in time for WRC-27*

1 sharing studies between space-to-space links from a GSO space station towards a non-GSO space station and the current and future use of the primary and secondary services operating in the frequency band 3 700-4 200 MHz;

2 sharing studies between space-to-space links from a non-GSO space station towards a GSO space station and the current and planned stations of the existing primary services operating in the frequency band 5 925-6 425 MHz;

3 studies to develop technical conditions and regulatory provisions for the operation of space-to-space links in these frequency bands including revised frequency allocations to FSS or the addition of frequency allocations to the inter-satellite service (ISS), while ensuring the protection of, and without imposing additional constraints on, other FSS operations or services allocated in those and adjacent frequency bands, allocated on a primary and secondary basis, taking into account the results of the studies called for in *resolves to invite ITU-R to complete in time for WRC-27* 1 and 2 above,

invites administrations

to participate actively in the studies by submitting contributions to ITU-R,

*resolves to invite the 2027 World Radiocommunication Conference*

to consider, based on the results of ITU‑R studies, technical and operational issues and regulatory provisions, including revised frequency allocations to FSS or the addition of frequency allocations to ISS, to support space-to-space transmissions in the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz for non-GSO space stations operating at lower orbital altitudes, in communication with GSO satellites.

Proposals on an agenda item for WRC-27

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| **Subject:**  **To consider, based on the results of ITU-R studies, an ISS spectrum allocation and associated regulatory provisions in the frequency bands 3 700 - 4 200 MHz and 5 925-6 425 MHz for non-GSO space stations in communication with GSO satellites** | |
| **Origin:** CEPT | |
| ***Proposal*:**  To consider, based on the results of ITU‑R studies, to support space-to-space connectivity in the frequency bands 3 700-4 200 MHz and 5 925-6 425 MHz, and associated regulatory provisions, to enable links between non-geostationary satellites and geostationary satellites in accordance with Resolution **[EUR-A10-1.12] (WRC‑23);** | |
| ***Background/reason*:**  Satellite data relay services continue to be a growing market for satellite operators and C-band can offer near real time, urgent request tasking as part of the larger system of satellite data relays in higher frequency bands. To provide a means for recognizing in the Radio Regulations transmissions for an allocation to the inter-satellite service in the frequency bands 3 700 - 4 200 MHz and 5 925-6 425 MHz in accordance with Resolution **[EUR-A10-1.12] (WRC‑23)**; | |
| ***Radiocommunication services concerned*:** Inter-satellite, Fixed-satellite, Fixed, Mobile | |
| ***Indication of possible difficulties*:**  None currently identified | |
| ***Previous/ongoing studies on the issue*:**  Studies have been initiated in ITU-R Working Party 4A during the 2019-2023 ITU-R Study Cycle on space-to-space satellite links in Ku and Ka band. | |
| ***Studies to be carried out by*:**  SG4 | ***with the participation of*:**  Administrations and Sector members of the ITU-R |
| ***ITU‑R study groups concerned*:**  SG4, SG5, SG7 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. No extra cost is foreseen. | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:** No  ***Number of countries*:** |
| ***Remarks***  None | |

SUP EUR/XXXXA27A1/15

RESOLUTION 177 (WRC‑19)

Studies relating to spectrum needs and possible allocation of the frequency band 43.5-45.5 GHz to the fixed-satellite service

**Reasons:** CEPT does not support the preliminary agenda item 2.3 as included in Resolution **812 (WRC-19)** for the agenda of WRC-27 and Resolution **177 (WRC-19)** can be suppressed.

SUP EUR/XXXXA27A1/16

RESOLUTION 178 (WRC‑19)

Studies of technical and operational issues and regulatory provisions for non‑geostationary fixed-satellite service satellite system feeder links   
in the frequency bands 71-76 GHz (space-to-Earth and proposed   
new Earth-to-space) and 81-86 GHz (Earth-to-space)

**Reasons:** CEPT does not support the preliminary agenda item 2.7 as included in Resolution **812 (WRC-19)** for the agenda of WRC-27 and Resolution **178 (WRC-19)** can be suppressed.

SUP EUR/XXXXA27A1/17

RESOLUTION 250 (WRC‑19)

Studies on possible allocations to the land mobile service (excluding International Mobile Telecommunications) in the frequency band 1 300-1 350 MHz for use by administrations for the future development of terrestrial mobile-service applications

**Reasons:** CEPT does not support the preliminary agenda item 2.9 as included in Resolution **812 (WRC-19)** for the agenda of WRC-27 and Resolution **250 (WRC-19)** can be suppressed.

SUP EUR/XXXXA27A1/18

RESOLUTION 776 (WRC‑19)

Conditions for the use of the frequency bands 71-76 GHz and 81-86 GHz   
by stations in the satellite services to ensure compatibility with passive services

**Reasons:** CEPT does not support the preliminary agenda item 2.5 as included in Resolution **812 (WRC-19)** for the agenda of WRC-27 and Resolution **776 (WRC-19)** can be suppressed.

1. \* This agenda item is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. [↑](#footnote-ref-1)
2. \* For the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz, sharing and compatibility studies for aeronautical ESIM should take into account all necessary steps to protect the terrestrial services to which the frequency band is allocated to. [↑](#footnote-ref-2)
3. \* *Note by the Secretariat:* This Resolution was abrogated by WRC-19. [↑](#footnote-ref-4)