

**ITUEvents**

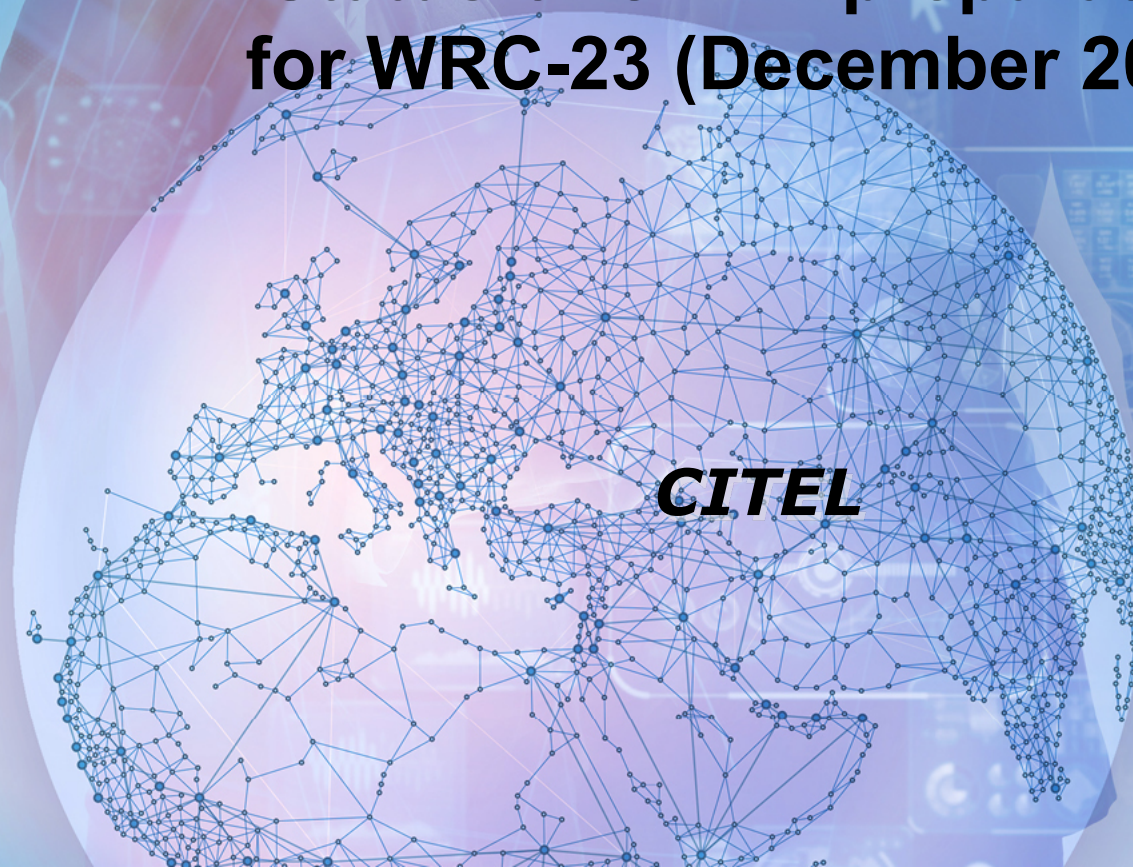
# 1<sup>st</sup> ITU Inter-regional Workshop on WRC-23 preparation

13 - 15 December 2021

[www.itu.int/go/ITU-R/wrc-23-irwsp-21](http://www.itu.int/go/ITU-R/wrc-23-irwsp-21)

#ITUWRC

**Status of CITELE preparation  
for WRC-23 (December 2021)**





---

# Inter-American Telecommunication Commission (CITEL)

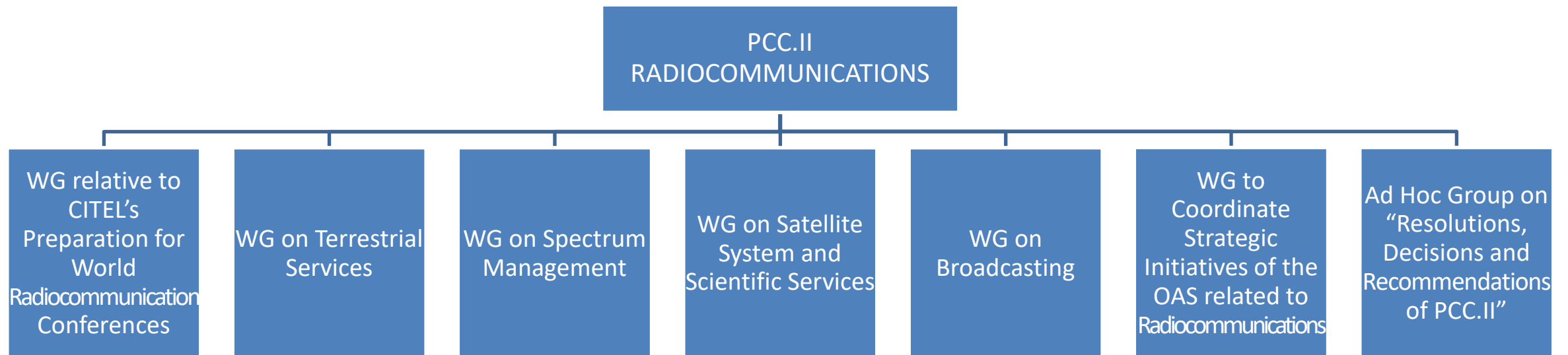
---



**OAS** | **CITEL**



## Permanent Consultative Committee II: Radiocommunications (PCC.II)



# CITEL's Preparation for World Radiocommunication Conferences



OAS | CITEL

## Working Group relative to CITEL's Preparation for World Radiocommunication Conferences

Chairman: Victor Martínez (MEX). [victor.martinezv@ift.org.mx](mailto:victor.martinezv@ift.org.mx)

Vice-Chairwoman: Carol Sosa (CLM). [carol.sosa@ane.gov.co](mailto:carol.sosa@ane.gov.co)

Vice-Chairman: Kenji Kuramochi (PRG) [kenji@conatel.gov.py](mailto:kenji@conatel.gov.py)

SUB-WORKING GROUP	ISSUES	AGENDA ITEMS	COORDINATOR	VICE – COORDINATOR
SGT-1	MOBILE, FIXED & BROADCASTING	1.1 ,1.2 ,1.3 ,1.4 ,1.5 9.1 C 9.2 TERRESTRIAL	Amy SANDERS (USA) <a href="mailto:asanders@ntia.gov">asanders@ntia.gov</a>	Jose COSTA (CAN) <a href="mailto:jose.costa@ericsson.com">jose.costa@ericsson.com</a>
SGT-2	RADIOLOCATION, MARITIME, AERONAUTICAL	1.6, 1.7, 1.8, 1.9, 1.10, 1.11	Michael RAZI (CAN) <a href="mailto:mrazi@parscom.ca">mrazi@parscom.ca</a>	Carlos VIOLANTE(MEX) <a href="mailto:carlos.violante@ift.org.mx">carlos.violante@ift.org.mx</a>
SGT-3	SCIENCE SERVICES	1.12, 1.13, 1.14, 9.1 A	Ángeles AYALA(MEX) <a href="mailto:mayalaco@sct.gob.mx">mayalaco@sct.gob.mx</a>	Serafín CHAVEZ (MEX) <a href="mailto:chavez.serafin@aem.gob.mx">chavez.serafin@aem.gob.mx</a>
SGT-4	SATELLITE SERVICES	1.15, 1.16, 1.17, 1.18, 1.19, 7, 9.2 SATELLITE 9.3	Afonso ROCHA (B) <a href="mailto:afonsor@anatel.gov.br">afonsor@anatel.gov.br</a>	Fernanda SÁNCHEZ ZAVALA (MEX) <a href="mailto:fernanda.sanchez@ift.org.mx">fernanda.sanchez@ift.org.mx</a>
SGT-5	GENERAL REGULATORY, FUTURE WORK & OTHER	2, 4, 9.1B, 9.1D, 10	Carol SOSA L (CLM) <a href="mailto:carol.sosa@ane.gov.co">carol.sosa@ane.gov.co</a>	Vice-Chairman: Kenji KURAMOCHI (PRG) <a href="mailto:kenji@conatel.gov.py">kenji@conatel.gov.py</a>



- **Preliminary View (PVP or PV)**
- **Preliminary Proposal (PP):** a proposal that one (1) OAS/CITEL Member State presents to PCC.II, and that has not yet been supported by any other Member State. The PP is to be considered by the WG-WRC, with the objective of developing it into an INTER-AMERICAN PROPOSAL for its eventual submission to the WRC.
- **Draft Inter-American Proposal (DIAP):** PRELIMINARY PROPOSAL which has been supported by at least one (1) other Member State. The DIAP is to be considered by the WG-WRC, with the objective of developing it into an INTER-AMERICAN PROPOSAL for its eventual submission to the WRC.
- **Inter-American Proposal (IAP):** DRAFT INTER-AMERICAN PROPOSAL, for which the PCC.II has ended its evaluation and discussion as early as the LIMIT MEETING but not later than the FINAL MEETING; it must be supported by at least 6 (six) Administrations, and not opposed by more than 50% (fifty per cent) of the total number of endorsements obtained.



### Preliminary Views:

- Some Administrations share the view that protection of aeronautical mobile and maritime mobile services and/or applications of the primary Mobile Service in the frequency band 4 800-4 990 MHz cannot be fulfilled solely through application of **No. 9.21**. These Administrations **support the study of technical and regulatory conditions for the protection of aeronautical mobile and maritime mobile services and/or applications** located in international airspace or waters (i.e., outside national territories) and operated in **the frequency band 4 800-4 990 MHz**. Regarding the review of the pfd criteria contained in **No. 5.441B**, the continued protection of aeronautical mobile and maritime mobile services and/or applications of the Mobile Service must be ensured.
- An Administration **supports appropriate sharing studies under** Agenda Item 1.1 in **the band 4 800-4 990 MHz**. This Administration believes this band will be important to satisfy the needs of IMT in mid-band spectrum and plans to use it for IMT services.
- An Administration **considers convenient to conduct studies on technical and regulatory conditions for the protection of the stations** of aeronautical and maritime mobile services located in international waters or international airspace (that is, outside the national territory) that operate in the frequency **band 4 800-4 990 MHz**, so that IMT systems can operate at levels that allow the provision of mobile broadband services in the territories of those Administrations that desire so, pursuing coexistence with the aforementioned services.



## Preliminary Views

- **3 300-3 400 MHz**

Some Administrations support sharing and compatibility studies under agenda item 1.2 in the frequency band 3 300 - 3 400 MHz with aims to ensure the protection of the services primarily allocated on such frequency band, without imposing additional regulatory or technical constraints on that service, and as deemed appropriate, on primary services allocated in adjacent bands.

An Administration considers it is advisable to pursue and collaborate, as appropriate, in the protection, sharing, and compatibility studies of this frequency band for the purpose of achieving regional harmonization in the use of IMT systems without constraining the operation of services and applications that have already been identified in the RR.



### Preliminary Views

- **3 600-3 800 MHz**

Some Administrations support the studies called for in Resolution **245 (WRC-19)** concerning the 3 600-3 800 MHz frequency band, including sharing and compatibility studies with a scope to ensure protection from harmful interferences and without imposing additional regulatory or technical constraints on existing primary services allocated in this band.

Some Administrations support the development of sharing and compatibility studies in accordance with Resolution **245 (WRC-19)**, for the 3 600-3 700 MHz frequency bands, which would allow the harmonization of these frequency segments in the countries of the region. However, for the frequency range from 3 700 to 3 800 (included in Resolution 245) allocated on a primary basis to the Fixed Satellite Service (space-to-Earth) in Region 2, it is necessary to guarantee protection measures for the existing operations, as well as the corresponding criteria for protection, sharing, and compatibility, as applicable.

### Preliminary proposal

- An Administration proposes IMT identification in Region 2 in the band 3600-3800 MHz by modification of **5.434**.





## Preliminary Views

- **6 425-7 125 MHz**

Some Administrations acknowledge that 6 425-7 025 MHz is under study only in Region 1, and there are no difficulties concerning studies of the frequency band 6 425-7 025 MHz in Region 1, thus, any resulting regulatory solution would not impose additional constraints on the existing services in Region 2.

- **7 025-7 125 MHz**

Some Administrations support appropriate sharing and compatibility studies under Agenda Item 1.2 in the bands 7 025-7 125 MHz globally, remarking that sharing and compatibility studies for the possible identification of IMT in this band must account for the technical and operational characteristics of connection links for non-GSO systems of the MSS that are currently operating, as well as their future development.



## Preliminary Views

- **10-10.5 GHz**

Some Administrations support appropriate sharing and compatibility studies under Agenda Item 1.2 in the bands 10-10.5 GHz in Region 2 in accordance with Resolution **245 (WRC-19)**, while ensuring the protection of existing services (in-band and, as appropriate, adjacent bands) without having additional regulatory or technical constraints imposed on these services.



## **Preliminary Views**

- Some Administrations support studies to consider a primary allocation to the mobile service in the band 3 600-3 800 MHz in Region 1, in the interest of global harmonization and economies of scale. These Administrations share the view that any eventual changes to the Radio Regulations under WRC-23 Agenda Item 1.3 must not impact Region 2 services and their future development, nor subject Region 2 services to any altered procedural or regulatory provisions.



## Preliminary Views

- An Administration supports studies on WRC-23 agenda item 1.4, “to consider the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level” in accordance with Resolution **247 (WRC-19)**. It is also of the view that there should be no additional regulatory or technical constraints imposed to existing ground-based IMT networks in the frequency bands under study.
- Some Administrations consider that modifications to the identifications to IMT (RR Nos. **5.286AA, 5.317A, 5.341A, 5.341B, 5.341C, 5.346, 5.346A, 5.384A** and **5.388**) in the Radio Regulations are outside the scope of WRC-23 Agenda Item 1.4; there should be no additional regulatory or technical constraints imposed on the deployment of terrestrial IMT in the frequency bands referred to in those footnotes.





## Preliminary Views

- Some Administrations support conducting sharing and compatibility studies to ensure the protection of services to which the frequency bands 694-960 MHz, 1 710-1 885 MHz and 2 500-2 690 MHz are allocated on a primary basis, including other IMT uses, incumbent systems and the planned development of services allocated on a primary basis, with the aim of knowing and assessing the potential for establishing the necessary technical and regulatory provisions for HIBS to be used in such frequency bands, if deemed advisable.



## PRELIMINARY PROPOSAL

An Administration proposes Modifications to **5.388A** to enable the use by HIBS in all the bands under study.

**Reason:** The identification of additional frequency bands below 2.7 GHz for HIBS has the potential to support the expansion of coverage and connectivity for existing ground-based IMT networks. The technical studies show that sharing and compatibility with other services is feasible, and that some additional measures may be required, as provided in the revision of Resolution **221 (Rev.WRC-07)**. The proposal replicates the regional variations of the existing IMT identification in these different bands, noting that the regulatory conditions for the use of HIBS in these bands are expected to be globally harmonized.



### **Preliminary Views**

- Some Administrations, recognizing that scope of the agenda item is limited to Region 1, share the view that any eventual changes to the Radio Regulations under WRC-23 agenda item 1.5 must not impact Region 2 services nor subject Region 2 services to any changed procedural or regulatory provisions.
- Some Administrations support studies for additional allocations to the mobile service in Region 1, including potential identifications to IMT, in the interest of global harmonization and economies of scale, with the understanding that any changes to the Radio Regulations would not impact Region 2.



### **Preliminary Views**

- An Administration supports studies to research the use of IMT technologies for fixed wireless broadband in the bands allocated to the fixed service.
- Some Administrations agree that changes to the Radio Regulations are outside the scope of Agenda Item 9.1 and that existing ITU-R Recommendations / Reports / Handbooks should be taken into account in the assessment of Topic 9.1.c), especially in those recommendations referring to the use of fixed wireless access systems in the frequency bands allocated to fixed services published by the ITU-R and still in force to date.





## Preliminary views

- An Administration ponders to pursue studies called for by Resolution **772 (WRC-19)** as a basis for possible new regulatory provisions to support the growing radiocommunications needs of sub-orbital vehicles.



### **Preliminary Views:**

- Some Administrations support the ongoing technical and regulatory studies for co-existence between potential new primary AMS(R)S service in the frequency band 117.975 – 137 MHz and existing terrestrial primary allocated in-band and adjacent band services in anticipation of providing space-based VHF communications between pilot and air traffic controllers. This potential new allocation must protect current systems using existing primary allocated services and not constrain planned usage of those systems.



### Preliminary views:

Some Administrations support completion of the studies called for by Resolutions **171 (WRC-19)** and **155 (Rev.WRC-19)** to define the conditions for operating UAS CNPC links in the FSS (see resolves 19 of Resolution **155 (Rev.WRC-19)**) in the frequency bands for which No. **5.484B** already applies. Based on the results of studies, to consider revisions to Resolution **155 (Rev.WRC-19)**, in order to finalize the provisions needed to accommodate the use of FSS networks by UAS CNPC systems and to revise No. **5.484B** to clarify that the provisions apply to the use of earth stations on board unmanned aircraft.

An Administration is of the view that UAS CNPC links using FSS shall operate in accordance with ICAO SARPs. Additionally, the Administration supports a review of the current conditions for the use of FSS assignments, where this could allow for additional assignments to be available for UAS CNPC while meeting safety requirements. Particularly, further consideration should be given to grant the use of FSS frequency assignments recorded under No. **11.41** for UAS CNPC applications.



## Preliminary Views

- Some Administrations support studies called for by Resolution **429 (WRC-19)** to accommodate new digital HF technologies.





## Preliminary Views

- Some Administrations support GMDSS modernization and could support additional satellite providers of GMDSS contingent upon demonstrating compatibility of proposed GMDSS operations with other satellite systems operating within the band 1610-1626.5 MHz, and with the radio astronomy service operating in the band 1610-1613.8 MHz. Furthermore, the proposed system should complete ITU-R coordination and notification with other MSS systems operating within the band 1610-1626.5 MHz and also obtain IMO approval prior to its consideration by WRC-23.



## Preliminary views

- Some Administrations support studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, in accordance with Resolution **656 (Rev.WRC-19)**, and taking into account the protection of incumbent services, including in adjacent bands.



## Preliminary views

- Some Administrations support studies in accordance with Resolution **661 (Rev. WRC-19)** to consider a possible upgrade to the existing global allocation to the SRS in the frequency range 14.8-15.35 GHz, taking into account the need to provide protection to and not to impose constraints on the incumbent services in this frequency band and its adjacent frequency bands.
- Some Administrations noted that the existing secondary allocation to the SRS (passive) in the band 15.2-15.35 GHz per No. **5.339** is not considered in this view.



## Preliminary Views

- Some Administrations support studies to review the existing EESS (passive) allocations and to consider possible adjustments to existing allocations or new allocations to the EESS (passive) within the frequency range 231.5-252 GHz in accordance with Resolution **662 (WRC-19)**, without unduly constraining the primary services currently allocated.





## Preliminary Views

- An Administration is of the view that changes to the Radio Regulations are outside the scope of Agenda Item 9.1.
- Some Administrations support conducting the studies called for in Resolution **657 (Rev.WRC-19)** and will contribute to the work required under this Resolution.



### Preliminary Views:

- Some Administrations support studies on the operation of earth stations on aircraft and vessels communicating with GSO FSS space stations in the 12.75-13.25 GHz (Earth-to-space) frequency band with the objective of developing appropriate technical and regulatory provisions to protect allotments/assignments in the Appendix **30B** Plan and other primary allocated services, as well as primary services in adjacent bands, as called for in Resolution **172 (WRC-19)** .
- An Administration is also of the view that additional measures may be required to ensure the protection of non-GSO FSS systems from ESIM communicating with GSO space stations in the FSS.



## Preliminary Views

- Some Administrations support studies on technical and operational characteristics of ESIMs and sharing and compatibility studies to develop technical and regulatory provisions for the operation of ESIM with non-GSO FSS systems in accordance with Resolution **173 (WRC-19)** with a view of ensuring the protection of, and not imposing additional constraints on, existing services including terrestrial services and GSO FSS, in those frequency bands and in adjacent bands, including passive services.
- An Administration is of the view that the studies conducted in preparation of WRC-15 and WRC-19 to support the deployment of GSO ESIM in the Ka-band and led to the provisions included in Resolution **156 (WRC-15)** and Resolution **169 (WRC-19)**, respectively, have many similarities with those that are being carried out under Resolution **173 (WRC-19)**. Therefore, the WRC-23 should aim to establish for non-GSO ESIM the same technical, operational and regulatory provisions as those applicable to GSO ESIM operating in the same bands, to the extent possible and pending the results of these studies.



## Preliminary Views

- Some Administrations support studies under the terms of Resolution **773 (WRC-19)** to consider technical and regulatory provisions to allow satellite-to-satellite links in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz, or portions thereof. Satellite-to-satellite links should be allowed, provided that undue constraints are not imposed on incumbent services, both in-band and adjacent band. These Administrations support confining studies to links that operate in the same direction of transmission as provided for in the current allocations and confined to satellites located on different orbits.
- An Administration considers that satellite-to-satellite links operating “within the cone of coverage” concept of operations should provide the same levels of protection for GSOs and non-GSOs links as those currently provided in the RR and should not adversely affect GSOs and non-GSOs satellite systems currently operating and their future developments.



## Preliminary Views

- Some Administrations support studies to ponder appropriate regulatory measures for the allocation of additional spectrum in the MSS in the frequency bands under consideration, while ensuring the protection of existing primary services in these frequency bands and adjacent frequency bands.
- An Administration supports the view that the applicability of Resolution **248 (WRC-19)** is limited to those narrowband MSS systems that have a maximum e.i.r.p. of 27 dBW for each space station and for each deployed MSS frequency band, with a maximum satellite beamwidth of 120 degrees for a single beam or measured across all the beams in a multiple-spot beam configuration, and earth stations that individually communicate no more than once every 15 minutes, for no more than 4 seconds at a time, with a maximum e.i.r.p. of 7 dBW for each earth station.
- An Administration supports the sharing and compatibility studies to determine the suitability of new primary or secondary allocations for NGSO MSS in the frequency bands, or portions thereof, 1 695 – 1 710 MHz, 3 300 - 3 315 MHz, and 3 385 - 3 400 MHz in Region 2, as well as 2 010 - 2 025 MHz in Region 1, taking into account the need to ensure protection and to not impose any additional constraints on the current use and future development of existing primary services in these frequency ranges and adjacent frequency bands.



## Preliminary Views

- Some Administrations support conducting studies in accordance with Resolution **174 (WRC-19)** to facilitate a new FSS downlink allocation in the frequency range 17.3-17.7 GHz in Region 2. WRC-23 action would be subject to the development of the appropriate regulatory provisions and coordination mechanisms to protect Appendix **30A** BSS feeder links and the BSS downlinks, while also taking into account the need to ensure the protection of existing primary services in this band and the adjacent bands.



## Preliminary Views

### Topic A: Orbital tolerances for certain orbital Characteristics of non-GSO satellites

- Some Administrations support the study regarding the need for such tolerances and share the view that the study of tolerances for the characteristics of notified orbital planes for non-GSO FSS, BSS and MSS systems should be limited to the four parameters identified in the minutes of the Plenary of WRC-19: inclination of the orbital plane; the altitude of the apogee of the space station; the altitude of the perigee of the space station; and the argument of the perigee of the orbital plane.
- An Administration is also of the view that the above-mentioned four parameters, identified in the minutes of the plenary of WRC-19, are the only orbital parameters that could be considered in any application of Nos. **11.44C.2**, **11.44D.2**, **13.6** or any other relevant existing provisions of the Radio Regulations.





## Preliminary Views

### Topic B: post milestone procedure for non-GSO satellite systems.

- An Administration is of the view that final post-milestone procedures should be developed at WRC-23 to replace resolves 19 of Resolution **35 (WRC-19)**. It is also of the view that the development of new Resolution should also permit some temporary flexibilities on the real number of non-GSO satellites deployed compared to the number of satellites contained in the Master Register in order to allow some operational flexibility.
- An Administration is also of the view that additional provisions similar to No. **11.49** (suspension) are required in the RR in order to provide time to non-GSO satellite operators not operating in accordance with the characteristics of their recorded frequency assignments to make the proper adjustments.



## **Preliminary Views**

### **Topic D: Incorporate the Rules of Procedures in the Radio Regulations, where appropriate, with the objective of reducing their number (e.g., RoP on Appendix 1 to Annex 4 of Appendix 30B)**

- Some Administrations are of the view that it is important to correct the values of the coordination arc to be used in the aggregate C/I calculation in Appendix 1 to Annex 4 of RR Appendix 30B to reflect those adopted by WRC-19. As a result, these CITEL Administrations support the incorporation in the Radio Regulations of the rule of procedures on Appendix 1 to Annex 4 of Appendix 30B as adopted by the Radio Regulation Board at its 85th meeting.

### **Topic E: Improve procedures under Appendix 30B for new ITU Member States**

- An Administration is of the view that new ITU Member States seeking to obtain an allotment under Article 7 of Appendix 30B, should be granted the same privilege as those granted to Administrations having no assignments in the Appendix 30B List, or under coordination, as adopted in Resolution 170 (WRC-19) and is also of the view that additional technical analysis is needed to reach a comprehensive understanding of the interference scenarios for new ITU Members.



## Preliminary Views

- One Administration is of the view that changes to the Radio Regulations are outside the scope of Agenda Item 9.1. For WRC-23 Agenda Item 9.1, Topic b), and supports studies to be carried out under Resolution **774 (WRC-19)**. The results of these studies should seek to identify possible technical and operational measures to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz, without considering the removal of these amateur and amateur-satellite service.
- Another Administration supports studying the potential for interference to RNSS (space-to-Earth) receivers from amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz and, if warranted, providing possible technical and/or operational measures to prevent any future cases of such interference, without considering any regulatory measures under this topic.



## Preliminary Views

- Some Administrations support further study to determine if it is necessary and feasible for non-GSO FSS stations (space-to-Earth) operating in 37.5-38 GHz as part of high-density and low-altitude FSS constellations to not exceed a maximum out-of-band EIRP of  $-34$  dBW/100 MHz, for all angles greater than 71.4 degrees from nadir, into EESS (passive) operations in 36-37 GHz. Additionally, these Administrations support a study of potential interference from these high-density and low-altitude non-GSO FSS space stations operating in 37.5-38 GHz into the cold calibration channel of EESS (passive) sensors operating in the 36-37 GHz frequency band. These Administrations endorsement support the agreement of WRC-19 that no modifications to **Resolution 750 (Rev WRC-19)** are to be considered under these studies since the frequency band 36-37 GHz is not referenced in **No. 5.340**.
- One Administration is of the view that changes to the Radio Regulations are outside the scope of Agenda Item 9.1.



**39th. Meeting of PCC.II  
Mexico, April 25 to 29, 2022;**

**40th. Meeting of PCC.II  
Trinidad and Tobago, October 31 to  
November 4, 2022;**

Thank you  
for your  
attention!

---

Victor Martínez

- Chairman of WRC-WG
- [victor.martinezv@ift.org.mx](mailto:victor.martinezv@ift.org.mx)



OAS | CITEL