

ITUEvents

1st ITU Inter-regional information session (IRIS) on WRC-27 Preparations

**3 - 5 December 2025
Geneva, Switzerland**

**www.itu.int/iris-wrc-27/2025/
#ITUWRC**

**Satellite Issues
WRC-27 agenda item**

1.3

**Use of 51.4-52.4 GHz frequency band
by non-GSO FSS gateway**

***Hastyar Barvar
Chairman, SWG***

AI 1.3



Our Panelists Today:

- **Mr Hastyar BARVAR** (Chair, ITU-R WP 4A SWG AI 1.3)
- **APT – Mr Mrunmaya PATTANAIK** (APG WP 1 Co-Chair)
- **ASMG – Eng. Omar Saleh Al MARRI** (Vice Chair WG 1 - ASMG)
- **ATU – Ms Basebi MOSINYI** (ATU WG 1 Chair)
- **CEPT – Mr Thomas WELTER** (CPG PT B Chair & CPG Vice Chair)
- **CITEL – Mr Sandra WRIGHT** (CITEL Working Group Vice Chair)
- **RCC – Mr Sergey UVAROV** (RCC Coordinator AI 1.3)

WRC-27 Agenda Item 1.3

AI 1.3 *to consider studies relating to the use of the frequency band 51.4-52.4 GHz to enable use by gateway earth stations transmitting to non-geostationary-satellite orbit systems in the fixed-satellite service (Earth-to-space), in accordance with Resolution **130 (WRC-23)**;*

Resolution 130 (WRC-23) *Studies relating to the use of the frequency band 51.4-52.4 GHz to enable its use by gateway earth stations transmitting to non-geostationary-satellite orbit systems in the fixed-satellite service (Earth-to-space)*

Responsible Group:
Working Party 4A
Sub Working Group 4A1a

Contributing Groups:
WP 3M; WP 5A; WP 5C;
WP 7C; WP 7D

WRC-27 Agenda Item 1.3: Background and motivation

- that satellite systems are increasingly being used to deliver broadband services and can help enable universal broadband access;
- that next-generation fixed-satellite service (FSS) technologies for broadband will increase speeds, with faster rates expected in the near future;
- 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;
- that the current frequency allocations to the FSS in the frequency band 51.4-52.4 GHz do not enable its use by non-geostationary-satellite orbit (non-GSO) gateway operations, and as such do not meet the expected needs of such systems;

WRC-27 Agenda Item 1.3: Organization of the work in WP 4A

WRC-27 Agenda Item 1.3: **SWG 4A1a**

Main Activities:

- Development of the Working Document Relating to WRC-27 AGENDA ITEM 1.3 (Doc. 4A/830 [Annex 7](#))
- Development of the Working Document towards draft CPM text for WRC-27 AGENDA ITEM 1.3 (Doc. 4A/830 [Annex 6](#))

WRC-27 Agenda Item 1.3: Status of the studies

A number of studies have been carried out to estimate the conditions under which GSO space stations receivers could be protected from the possible interference caused by operation of non-GSO FSS gateways. Some studies have assessed the possibility of extending the existing sharing framework in the other part of Q/V frequency band, to this part of Q/V band as well. Other studies have indicated that another methodology might be needed to be developed for this portion of the Q/V band. This issue requires more work and analysis by WP 4A.

A number of studies have been carried out to assess whether unwanted emissions limits for non-GSO FSS gateways to protect EESS (passive) band 200 MHz away from the frequency band 51.4-52.4 GHz. While there is a convergence on the methodology, the results of the studies varies when different systems are considered. Additional work is needed to identify for a possible update to Resolution **750**.

A number of studies have been carried out to assess potential interference into Fixed Service (FS) from non-GSO FSS gateways. These studies are mostly converging in specifying coordination as the regulatory mechanism for sharing between FS receivers and non-GSO FSS gateway. Additionally there seems to be a convergence on the appropriateness of providing some guidance on how to protect radio astronomy service operating in the 51.4-54.25 GHz in accordance to No. **5.556** from non-GSO FSS gateways.

WRC-27 Agenda Item 1.3: Draft CPM Text

	Non-GSO FSS GW** Sharing With Coprimary GSO FSS GW	Sharing between non-GSO FSS GWs	Non-GSO FSS GW Sharing With Coprimary FS	Non-GSO FSS GW compatibility With adjacent EESS (passive)	Space receiver versus terrestrial services transmitters
Method A (NOC)	-	-	-	-	-
Method B	Through application of EPFD limits, to be added to Table 22-2 Limit value single entry: TBD Limit value aggregate: TBD	TBD	TBD	TBD	TBD
Method C	Extension of the Q/V band regulatory framework (Res 770 and Res 769) Limit value: Extension of QV band limits in Article 22 Single entry: 22.2L / Aggregate: 22.2M	TBD	Limits per section III of Article 21 + coordination using parameters in modified Appendix 7 to determine the coordination contour	Modification of Resolution 750 to include limits applicable to this band Limit value: TBD	Subject to the limits specified under section II of Article 21 (no change is needed)
Method D	Extension and modification of the Q/V band regulatory framework (Res 770 and Res 769) Limit value: New provision in article 22 similar to QV band limits, and in part, relaxing the limits	TBD	TBD	TBD	TBD

* The groups is working to identify regulatory conditions to limit the use of the band to those non-ubiquitous earth stations providing feeder link-like services.

ITUEvents

1st ITU Inter-regional information session (IRIS) on WRC-27 Preparations

**3 - 5 December 2025
Geneva, Switzerland**

**www.itu.int/iris-wrc-27/2025/
[#ITUWRC](https://twitter.com/ITUWRC)**

Thank you!

***Any questions?
hbarvar@amazon.com***

