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| **44 MEETING OF PERMANENT****CONSULTATIVE COMMITTEE II:****RADIOCOMMUNICATIONS****September 23 to 27, 2024****Merida, Mexico** | **CITEL/GT/CMR-27/doc. /24****August 30, 2024****Original: English** |
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|  | **DRAFT PRELIMINARY VIEW FOR** **WRC-27 AGENDA ITEM 1.1** |  |
|  | **(Item on the Agenda: 3.1)** |  |
|  | **(Document submitted by the Delegation of the United States)** |  |

**SGT#: 1**

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**UNITED STATES OF AMERICA**

**DRAFT PRELIMINARY VIEWS FOR WRC-27**

**Agenda Item 1.1**: to consider the technical and operational conditions for the use of the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime earth stations in motion communicating with space stations in the fixed-satellite service and develop regulatory measures, as appropriate, to facilitate the use of the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime earth stations in motion communicating with geostationary space stations and non-geostationary space stations in the fixed-satellite service, in accordance with Resolution **176 (Rev.WRC-23);**

**BACKGROUND**:

Previous WRC’s have addressed the spectrum needs and use of aeronautical and maritime earth station in motion (ESIM), which includes the adoption of technical and regulatory requirements to allow such operations. In the Radio Regulations, Resolutions **902 (WRC-03)**, **156 (WRC-15)**, **169 (WRC-19)**, **121 (WRC-23)** and **123 (WRC-23)** define technical and regulatory rules to allow ESIM communicating with GSO FSS networks and/or non-GSO FSS systems to provide broadband communications in various frequency bands.

Resolution **176 (Rev.WRC-23)** calls for studies on possible use of frequency bands 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical ESIM (A-ESIM) and maritime ESIM (M-ESIM) to communicate with space station in the fixed-satellite service. These studies should assess the spectrum needs for additional A-ESIM and M-ESIM, as well as the sharing and compatibility with the services allocated in these frequency bands (and adjacent) on a primary basis. Given Resolution **176** considers both the use of GSO and NGSO ESIM, the aggregate impact should be accounted for in the studies.

Under Resolution **176 (Rev. WRC-23),** Agenda Item 1.1 considers the frequency band 47.2-50.2 GHz for FSS (Earth-to-space) NGSO A-ESIM and M-ESIM operations.  This band is often paired with the 37.5-42.5 GHz FSS (space-to-Earth) frequency band, which is not covered by Resolution **176** and is not addressed under this agenda item.  It is noted that under RR No. **21.16.4**, the applicability of the pfd limit values in Table **21-4**, in the bands 37.5-40 GHz and 40.5-42.5 GHz,for space stations operating in NGSO systems with 100 or more satellites is subject to further study.

**U.S. VIEW**:

The United States supports the sharing and compatibility studies called for in Resolution **176 (WRC-23)**, with a view to ensure the protection of services to which the frequency bands are allocated on a primary basis. Studies should take into account:

* In Region 2, the frequency band 47.2-48.2 GHz is identified for the terrestrial component of IMT (see No. **5.553B**), the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz are identified for HAPS (see No. **5.552A**) and the frequency band 48.2-50.2 GHz is identified for use by high-density applications of the fixed-satellite services (see No. **5.516B).**
* The frequency band 48.94-49.04 GHz is allocated to the radio astronomy service (RAS) on a primary basis, and administrations are urged to take all practicable steps to protect the RAS from harmful interference, in accordance with No. **5.149**.
* The frequency band 50.2-50.4 GHz is allocated to the Earth exploration-satellite service (EESS) (passive) on a primary basis, where No. **5.340** applies.

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