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United States of America

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

WRC-11 Agenda Item 1.11: to consider a primary allocation to the space research service (Earth-to-space) within the band 22.55-23.15, taking into account the results of ITU-R studies, in accordance with Resolution 753 (WRC-07)

Background Information:

To support the SRS missions in near Earth orbit, including missions in transit to the moon and at or near the moon, downlink (space-to-Earth) transmissions will operate in the 25.5-27.0 GHz SRS allocation. This 1.5 GHz wide downlink band will be used for both scientific data retrieval and voice/video communication with the Earth. However, there is a need for a companion uplink (Earth-to-space) band to provide the mission data, command and control links for these missions. Due to the potential for many concurrent exploration-related systems and the large bandwidth requirements of these systems, especially those supporting manned missions, it is envisioned that an uplink bandwidth of up to 600 MHz will be needed. Allocating sufficient primary space research service frequency spectrum in the 22.55-23.15 GHz band will provide the space exploration initiatives adequate uplink (Earth-to-space) bandwidth capacity in a band that is paired with the inter-satellite service and thus is a reasonable companion to the primary space research service 25.5-27.0 GHz space-to-Earth band.

Resolution **753 (WRC-07)** calls for sharing studies between SRS (Earth-to-space) and the fixed, inter-satellite and mobile services in the band 22.55-23.15 GHz to determine appropriate criteria which will provide for sharing between a new SRS (Earth-to-space) allocation and the existing services in the 22.55-23.15 GHz band. These sharing studies have been initiated in ITU-R Working Party 7B, the responsible group for CPM studies in support of WRC-11 agenda item 1.11.

Proposal

ADD

USA/1.11/ISS-2

5.ISS the aggregated unwanted emission levels from all earth stations in the space research service in the band 22.55-23.15 GHz shall not exceed a power density of -215 dBW/Hz at the input to the non-GSO ISS satellite receiver, not to be exceeded for a fraction of time greater than 10-2 percent (0.01%) in the band 23.183-23.377 GHz.

Reason: to ensure protection of the operational ISS links operating in the band 22.15-23.55 GHz.