



Items on the Agenda of WRC-23

USTTI WRC-23 Panel Discussion with Members of the NTIA
International Spectrum Policy Division

June 29, 2022

United States Preparations for WRC-23

The United States has just begun the process for formulating official positions on all agenda items before the WRC-23. Some U.S. positions have been established to date and more will be forthcoming shortly and will be found in CITEL PCC.II contributions starting in October 2022.

We have chosen three agenda items to discuss today to illustrate the issues the United States faces as it formulates positions. All three of these were agenda item proposals that were recommended at WRC-19 for inclusion on the WRC-23 agenda.

- Agenda item 1.6: Sub-Orbital Vehicles
- Agenda item 1.10: Non-Safety Aeronautical Mobile Service
- Agenda item 1.18: New narrowband MSS allocations

Agenda item 1.6: Sub-Orbital Vehicles

The Issue: This agenda invites ITU-R to study the radiocommunications for suborbital vehicles and to consider, in accordance with Resolution 772 (WRC-19), regulatory provisions to facilitate those radiocommunications for sub-orbital vehicles

Why is this Topic Important?: The United States supports the development of the sub-orbital vehicles. The Federal Aviation Administration's Office of Commercial Space Transportation (FAA/AST) is directed to encourage, facilitate, and promote commercial space launches and reentries. There are commercial and federal interests in the use of sub-orbital vehicles.

According to Report ITU-R M.2477, a sub-orbital vehicle is a vehicle executing suborbital flight and suborbital flight is defined as the intentional flight of a vehicle expected to reach the upper atmosphere with a portion of its flight path that may occur in space without completing a full orbit around the Earth before returning to the surface of the Earth.

Radio stations operating onboard suborbital vehicles are expected to operate in frequency bands currently allocated for certain terrestrial and space service. Several radiocommunications services are envisaged for use by stations onboard and require careful consideration of the regulatory implications/actions.

Agenda item 1.10: Non-Safety Aeronautical Mobile Service

The Issue: This agenda invites ITU-R to study and consider possible new/modified allocation to the aeronautical mobile service (AMS) for non-safety aeronautical applications in the frequency bands 15.4-15.7 GHz and 22.01-22.21 GHz

Why is this Topic Important?: The United States are users of the existing radiocommunication services in the two bands under study:

- 15.4-15.7 GHz – radiolocation service (RLS), aeronautical radionavigation service (ARNS) and fixed-satellite service (FSS) (earth-to-space). Adjacent frequency bands have allocations for the earth exploration-satellite service (EESS) (passive), radio astronomy service (RAS), space research service (SRS) (passive) and RLS
- 22.01-22.21 GHz – fixed service (FS). Adjacent frequency bands have allocations to the FS, mobile service (MS), broadcasting-satellite service (BSS), RAS, SRS (passive) and EESS (passive)

A number of studies have been performed and showed differing results, some of which concluded that a large separation distance (200~800km) or significant out-of-band emission limit (-19 ~-23 dBW/100MHz) is needed.

Agenda item 1.18: New Narrowband-MSS Allocations

The Issue: Studies related to spectrum needs and new potential allocations to the MSS in the bands 1695-1710 MHz, 2010-2025 MHz, 3300-3315 MHz, and 3385-3400 MHz for narrowband MSS.

Why is this Topic Important?: There are some that believe such allocations would be useful for specialized applications such as the “Internet of Things”.

The United States has observed several issues with this agenda item that make work on this topic *undoable*,

- Problems with the interpretation of Resolution 248(WRC-19)
 - The maximum e.i.r.p. of 27 dBW or less is not clear if it applies to the aggregate of a satellite system or to the individual satellites in a system
 - The maximum e.i.r.p. is being interpreted by some as a protection for terrestrial systems
- System characteristics must be agreed upon before studies can be performed
- The consequences of not completing the work on this agenda item
- *Try again for WRC-27?*

Thank you

