

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS ON 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 GHz, taking into account the results of ITU-R studies, in accordance with Resolution **753 (WRC-07)**

ISSUE: Resolution **753 (WRC-07)**, “Use of the band 22.55-23.15 GHz by the space research service,” calls for consideration of sharing between space research service systems operating in the Earth-to-space direction and the fixed, inter-satellite, and mobile services in the band 22.55-23.15 GHz, with a view to consider the inclusion of the sharing criteria within the Radio Regulations and appropriate modifications to the Table of Frequency Allocations.

BACKGROUND: CITEL proposed this agenda item to WRC-07 in order to fulfill a requirement for space research service (SRS) uplink spectrum. SRS missions in near-Earth-orbit, including missions in transit to the moon and at or near the moon, will operate downlink (space-to-Earth) transmissions 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, an uplink bandwidth of up to 600 MHz will be needed. Allocating sufficient primary SRS 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 SRS 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.

U.S. VIEW: The United States supports a new SRS (Earth-to-space) primary allocation in the band 22.55-23.15 GHz taking into account the results of ITU-R studies. (August 7, 2008)
