

United States of America

PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.7: to consider the results of ITU-R studies regarding sharing between the mobile-satellite service and the space research service (passive) in the band 1 668 - 1 668.4 MHz, and between the mobile-satellite service and the mobile service in the band 1 668.4 - 1 675 MHz in accordance with Resolution **744 (WRC-03)**;

Background Information: (Issue A) The band 1 668-1 668.4 MHz is allocated to the space research (passive) service (SRS (passive)) and the mobile-satellite service (MSS) (Earth-to-space). The space research allocation may be used by space-based radio astronomy applications, as part of Space Very Long Baseline Interferometry systems (S-VLBI). The band 1 668-1 668.4 MHz is a part of the band, 1 660.5-1 668.4 MHz, allocated to the SRS (passive). However S-VLBI spaceborne receivers typically receive over a wider frequency band because a wider band is desirable for increasing the sensitivity of systems and also to observe highly red-shifted objects.

The potential for interference from mobile earth stations (MES) operating in the MSS to the S-VLBI systems has been studied by the ITU-R, in accordance with Resolution **744**. The studies concluded that to ensure protection of future SRS (passive) systems operating in highly elliptical orbits, with an apogee of 150 000 km and higher, the power density of MESs operating in the GSO MSS networks should not exceed to – 12.5 dBW/4 kHz in any part of the frequency band 1 668-1 668.4 MHz.

(Issue B) The band 1 668.4-1 675 MHz is allocated to the fixed and mobile services on a primary basis. The WRC-03 allocated to MSS the bands 1518-1525 MHz (space-to-Earth) and 1 668.4-1 675 MHz (Earth-to-space). In allocating the band 1668.4-1675 MHz to the MSS, the WRC-03 recognized that this allocation cannot be used in the United States. Specifically, the WRC-03 recognized that constraints on the MSS in the corresponding downlink band 1518-1525 MHz (see RR 21.16 and 5.348B) preclude the feasibility of using the 1668-1675 MHz for MSS uplinks in the United States. The WRC-03 further recognized that the United States intends to implement systems in the existing fixed and mobile allocation in the 1668-1675 MHz and that these systems must not be constrained by the new MSS allocation. To that end, the WRC-03 adopted Resolution 744 (WRC-03). In accordance with the *recommends* of Resolution 744 (WRC-03), the studies conducted under this resolution did not consider sharing between MSS and mobile services in the United States.

The United States therefore, proposes to maintain the *resolves* of Resolution 744 as adopted at WRC-03.

Proposal:

USA/ /1 ADD

5.379[F] In order to protect the space research service (passive) in the band 1 668-1 668.4 MHz the maximum emission power density of any mobile earth station in a mobile-satellite service network in the geostationary satellite orbit network operating in this band, shall not exceed -12.5 dBW/4 kHz in any part of the frequency band 1 668-1 668.4 MHz.

Reasons: To ensure the protection of and future S-VLBI systems operating in the SRS (passive).

USA/ /2 MOD

5.379D For sharing of the band 1 668-1 675 MHz between the mobile-satellite service and the fixed, ~~and mobile and space research (passive)~~ services, Resolution **744 (WRC-03)** shall apply. (WRC-03)

Reasons: Studies under Res. **744** have concluded with regard to the SRS (passive).

USA/ /3 MOD

RESOLUTION 744 (WRC-0307)

Sharing between the mobile-satellite service (Earth-to-space) and the space research (passive) service in the band 1 668-1 668.4 MHz and between the mobile-satellite service (Earth-to-space) and the fixed and mobile services in the band 1 668.4-1 675 MHz

The World Radiocommunication Conference (Geneva, 2007~~3~~),

Considering

- a) that ~~this conference~~ WRC-03 has made a global allocation to the mobile-satellite service (MSS) (Earth-to-space) in the band 1 668-1 675 MHz and a global allocation to the MSS (space-to-Earth) in the band 1 518-1 525 MHz;
- b) that due to sharing conditions between MSS (space-to-Earth) and the aeronautical mobile service for telemetry in the band 1 518-1 525 MHz (see No. **5.348B**), MSS operation in the United States is unlikely to be feasible;
- c) that the above constraints on the MSS in the band 1 518-1 525 MHz therefore limit the possible use of the band 1 668-1 675 MHz by the MSS in the United States;
- d) that the band 1 660.5-1 668.4 MHz is allocated to the space research (passive) service;

~~e) that in the band 1 668-1 68.4 MHz, mobile earth stations and space research (passive) stations are subject to coordination under No.9.11A;~~

~~f) that the band 1 670-1 675 MHz is currently planned for use in the United States for the fixed and mobile services,~~

considering further

~~a) that the band 1 668.4-1 675 MHz is allocated to the fixed and mobile services;~~

~~b) that No. 5.380 identifies the band 1 670-1 675 MHz for aeronautical public correspondence systems but that no such systems exist;~~

~~c) that sharing between mobile systems other than those referred to in No. 5.380 and the MSS in the band 1670-1 675 MHz has not been studied, since mobile service system characteristics were not available;~~

~~d) that MSS systems in the band 1 668-1675 MHz are not expected to become operational prior to 2007,~~

resolves

that, in the band 1 670-1 675 MHz, stations in the MSS shall not claim protection from fixed and mobile stations operating within the United States,

invites ITU-R

~~1 to complete, as a matter of urgency and in time for WRC-07, studies relating to provisions to protect space research (passive) space stations from harmful interference from mobile earth stations in the band 1 668-1 668.4 MHz, taking care to avoid undue constraints on either service;~~

~~2 to study, as a matter of urgency and in time for WRC-07, the use of the band 1668.4-1 675 MHz by the mobile service, and to complete any relevant sharing studies between the mobile service and the MSS in this band, taking care to avoid undue constraints on either service;~~

~~3 to bring the results of these studies to the attention of WRC-07,~~

invites administrations and interested parties

~~to participate actively in these studies,~~

recommends

~~that WRC 07 take appropriate action based on the results of those studies, excluding modification of the above *resolves*.~~

Reasons: The studies called for in Resolution 744 (WRC-03) have been completed. No further action is required.
