

**United States of America**  
**DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE**  
*Proposal for Resolution 226*

**Agenda Item 1.31:** to consider the additional allocations to the mobile-satellite service in the 1-3 GHz band, in accordance with Resolutions **226 (WRC-2000)** and **227 (WRC-2000)**;

**Background Information:** WRC-2000 considered proposals for an allocation to the mobile-satellite service (MSS) (space-to-Earth) in Regions 1 and 3 in the frequency band 1 518-1 525 MHz. This band is adjacent to the 1 525-1 559 MHz band in use by geostationary orbit (GSO) MSS operators.

WRC-2000 considered in Resolution **226** that the proposed allocation to the MSS (space-to-Earth) at 1 518-1 525 MHz due to potentially widespread emissions upon the Earth from either GSO or non-GSO systems, could have an impact on the mobile service, including aeronautical mobile and aeronautical mobile telemetry, in all three Regions. Resolution **226** also states there is a need to review the power-flux-density (pfd) values in Appendix **5** in order to ensure that they are adequate to protect new point-to-multipoint systems operating in the fixed service in the band, as well as, a need to study sharing between the MSS and aeronautical mobile telemetry in all the Regions in the band. Sharing studies have been performed, and a number of these studies lead to the conclusion that sharing between MSS and flight aeronautical mobile telemetry is not possible.

Recommendation ITU-R M.1459 gives the values needed for protection of the aeronautical mobile service for telemetry systems in the 1 452-1 525 MHz band from GSO satellites operating in the MSS. The validity of M.1459 has been affirmed in several sharing studies presented to and debated within ITU-R Working Parties 8B and 8D. The required separation distances between co-frequency telemetry and MSS operations prescribed by the levels in M.1459 are large, making the feasibility of use of the 1 518-1 525 MHz band by MSS questionable. This is true for co-frequency, co-coverage sharing and for co-frequency, non-co-coverage sharing, even when the mitigation techniques suggested in Recommendation M.1459 are considered.

There has been no MSS implemented in the 1 492-1 525 MHz band due to the incompatibility between aeronautical telemetry and MSS systems.

**Proposals:**

**USA/ /1**  
**MOD**

**1 452-1 525 MHz**

<b>Allocation to Services</b>		
<b>Region 1</b>	<b>Region 2</b>	<b>Region 3</b>
<b>1 452 - 1492</b>  FIXED MOBILE except aeronautical mobile BROADCASTING 5.345 5.347 BROADCASTING-SATELLITE 5.345 5.347  5.341 5.342	<b>1 452 - 1 492</b>  FIXED MOBILE 5.343 BROADCASTING 5.345 5.347 BROADCASTING SATELLITE 5.345 5.347  5.341 <b>MOD 5.344</b>	
<b>1 492 - 1 525</b>  FIXED MOBILE except aeronautical mobile  5.341 5.342	<b>1 492 - 1 525</b>  FIXED MOBILE 5.343 MOBILE SATELLITE –(space to Earth) 5.348A  5.341 5.344 5.348	<b>1 492 - 1 525</b>  FIXED MOBILE  5.341 5.348A

**Reasons:** There has been no MSS implemented in the 1 492-1 525 MHz band due to the incompatibility between aeronautical telemetry and MSS systems.

**USA/ /2**  
**NOC**

**1 492-1 525 MHz**

<b>Allocation to Services</b>		
<b>Region 1</b>	<b>Region 2</b>	<b>Region 3</b>
<b>1 492 - 1 525</b>  FIXED MOBILE except aeronautical mobile  5.341 5.342	<del><b>1 492 - 1 525</b></del>  <del>FIXED</del> <del>MOBILE 5.343</del> <del>MOBILE SATELLITE</del> <del>–(space to Earth) 5.348A</del>  <del>5.341 5.344 5.348</del>	<b>1 492 - 1 525</b>  FIXED MOBILE  5.341 5.348A

**Reasons:** U.S. studies have shown that sharing between MSS and aeronautical telemetry in 1 492 - 1 525 MHz, even when the service area is in an adjacent ITU Region, is not feasible. Note; the U.S. proposes that there be no change to the Allocations to Services in Regions 1 and 3 in the band 1 492 - 1 525 MHz. The proposed deletion of **No. 5.348A** from Region 3 is a consequence of the proposed deletion of the mobile-satellite service (space-to-Earth) allocation in Region 2 (see proposal USA/ / 1 above) and is shown here for sake of consistency.

**USA/ /3  
MOD**

**5.344 Alternative Allocation:** in the United States, the band 1 452-~~1 492~~ 1-525 MHz is allocated to the fixed and mobile services on a primary basis (see also No. **5.343**).

**Reasons:** Consequential to the suppression of the mobile-satellite service from the Table of Frequency Allocations in the band 1 492-1 525 MHz in Region 2.

**USA/ /4  
SUP**

**5.348**

**Reasons:** Consequential to the deletion of the mobile-satellite service from the Table of Frequency Allocations at 1492 - 1525 MHz in Region 2.

**USA/ /5  
SUP**

**5.348A**

**Reasons:** Consequential to the deletion of the mobile-satellite service from the Table of Frequency Allocations at 1492 - 1525 MHz in Region 2.

**USA/ /6  
MOD**

**Appendix 5**

**ANNEX 1**

**TABLE 5-2**

Frequency band (MHz)	Terrestrial service to be protected	Coordination threshold values				
		GSO space stations		Non-GSO space stations		
		pfd (per space station) calculation factors (NOTE 2)		pfd (per space station) calculation factors (NOTE 2)		% FDP (in 1 MHz) (NOTE 1)
		<i>P</i>	<i>r</i> dB/degrees	<i>P</i>	<i>r</i> dB/degrees	
1492-1525	Analogue FS telephony (NOTE 5)	-146 dB(W/m <sup>2</sup> ) in 4 kHz and -128 dB(W/m <sup>2</sup> ) in 1 MHz	0.5	-146 dB(W/m <sup>2</sup> ) in 4 kHz and -128 dB(W/m <sup>2</sup> ) in 1 MHz	0.5	
	All other cases (NOTE 4)	-128 dB(W/m <sup>2</sup> ) in 1 MHz	0.5	-128 dB(W/m <sup>2</sup> ) in 1 MHz	0.5	25

~~NOTE 4 – Exceptions for the band 1 492-1 525 MHz are as follows:~~

~~4.1 For the land mobile service on the territory of Japan (No. 5.348A): 150 dB(W/m<sup>2</sup>) in 4 kHz at all angles of arrival is applicable to all satellite space to Earth emissions.~~

~~4.2 For the aeronautical mobile service for telemetry (No. 5.343), the requirement for coordination is determined by frequency overlap (No. 5.348).~~

**Reasons:** Consequential changes due to the deletion of MSS from the band 1 492- 1 525 MHz.

**USA/ 7  
(MOD)**

~~NOTE-5-4~~ – In all cases involving sharing with analogue systems for telephony in the FS, further coordination is only required when the pfd values are greater than or equal to the coordination threshold values in both reference bandwidths.

~~NOTE-6-5~~ – The pfd values specified for the band 2 160-2 200 MHz provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with a non GSO MSS system employing narrow-band time division multiple access/frequency division multiple access techniques.

~~NOTE-7-6~~ – The pfd values specified for the band 2483.5-2 500 MHz provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non GSO MSS systems employing code division multiple access techniques. The pfd values specified will not provide full protection for existing digital fixed systems in all cases. However, these pfd values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high-power industrial, scientific and medical equipment and possible low-power applications are expected to produce a relatively high interference environment.

**Reasons:** Proposing no change to these Notes, only consequential numbering changes due to the deletion NOTE 4.