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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| **PLENARY MEETING** | **Addendum 7 to Document 9-E** |
|  | **24 June 2015** |
|  | **Original: English** |
|  | |
| European Common Proposals (CEPT) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.7 | |

1.7 to review the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in accordance with Resolution **114 (Rev.WRC‑12)**;

Introduction

The 5 091-5 150 MHz band was originally designated for expansion of the international standard Microwave Landing System (MLS). At WRC-95, a primary allocation, subject to No. 5.444A, was made to the fixed-satellite service (FSS) in the 5 091-5 150 MHz band for feeder links to non-geostationary mobile-satellite service (MSS) systems, in the Earth-to-space direction. Recommendation ITU-R S.1342 established a method for determining coordination distances between international standard MLS stations operating in the band 5 030-5 090 MHz and FSS stations providing Earth-to-space feeder links in the 5 091-5 150 MHz band.

At WRC-07, an aeronautical mobile service allocation was added to support various applications with studies indicating compatibility among these applications and the FSS.

Feeder links of MSS systems are continuing to operate in the 5 091-5 150 MHz band with the recent completion of a constellation replenishment program, that is expected to remain in service beyond the year 2025.

In order to ensure that a long-term stable operating environment is maintained between the services allocated in the 5 091-5 150 MHz band, Europe proposes to suppress the date limitations contained in No. 5.444A. Noting the current lack of new ARNS systems planned for the band, Europe also proposes to increase the operational flexibility for introducing the AM(R)S while ensuring protection of the FSS by revising Resolution 748 (Rev.WRC-12), and updating the version of Recommendation ITU-R M.1827 incorporated by reference following its revision by ITU-R.

These European Proposals are in line with the single method proposed in the CPM Report.

Proposals

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD EUR/9A7/1

4 800-5 570 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 091-5 150 FIXED-SATELLITE (Earth-to-space) 5.444A  AERONAUTICAL MOBILE 5.444B  AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA  AERONAUTICAL RADIONAVIGATION  5.444 | | |

**Reasons:** The fixed-satellite service allocation has been moved from No. 5.444A to the Table of Frequency Allocations as a consequence of removing the time limitation on the fixed-satellite service allocation.

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5.444A The use of the allocation to the fixed-satellite service (Earth-to-space) in the band 5 091-5 150 MHz is limited to feeder links of non‑geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**. The use of the band 5 091-5 150 MHz by feeder links of non‑geostationary satellite systems in the mobile-satellite service shall be subject to application of Resolution **114 (Rev.WRC‑15)**. Moreover, to ensure that the aeronautical radionavigation service is protected from harmful interference, coordination is required for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which are separated by less than 450 km from the territory of an administration operating ground stations in the aeronautical radionavigation service.

**Reasons:** To remove time limitations to the fixed-satellite service allocation (limited to feeder links of non-geostationary systems in the mobile-satellite service), while keeping all the other applicable regulatory provisions, i.e. No. 9.11A and Resolution 114 (Rev.WRC-15).

APPENDIX 7 (REV.WRC‑12)

Methods for the determination of the coordination area around an earth  
station in frequency bands between 100 MHz and 105 GHz

ANNEX 7

System parameters and predetermined coordination distances for determination of the coordination area around an earth station

# 3 Horizon antenna gain for a receiving earth station with respect to a transmitting earth station

MOD EUR/9A7/3

TABLE 10     (rev.WRC‑15)

Predetermined coordination distances

|  |  |  |
| --- | --- | --- |
| Frequency sharing situation | | Coordination distance (in sharing situations involving services allocated with equal rights) (km) |
| Type of earth station | Type of terrestrial station |
| Non-GSO MSS feeder‑link earth stations (all bands) | Mobile (aircraft) | 500  (see Note 2) |

...

NOTE 2 – For the coordination distance in the band 5 091-5 150 MHz vis-à-vis stations in the aeronautical radionavigation service, see No. **5.444A**.     (WRC-15)

**Reasons:** In order to avoid any confusion, the coordination distance vis-à-vis a specific service determined by a specific footnote (i.e. No. 5.444A) needs to be specified.

MOD EUR/9A7/4

RESOLUTION 114 (Rev.WRC‑15)

Compatibility between the aeronautical radionavigation service and the fixed-satellite service (Earth-to-space)   
(limited to feeder links of the non-geostationary mobile-satellite   
systems in the mobile-satellite service) in the   
frequency band 5 091-5 150 MHz

The World Radiocommunication Conference (Geneva, 2015),

...

recognizing

*a)* that priority must be given to the microwave landing system (MLS) in accordance with No. **5.444** and to other international standard systems of the aeronautical radionavigation service in the frequency band 5 030-5 091 MHz;

*...*

*c)* that the FSS providing feeder links for non-GSO systems in the MSS will need continuing access to the frequency band 5 091-5 150 MHz,

noting

*...*

*b)* the small number of FSS stations to be considered,

resolves

that administrations authorizing stations providing feeder links for non-GSO systems in the MSS in the frequency band 5 091-5 150 MHz shall ensure that they do not cause harmful interference to stations of the aeronautical radionavigation service,

invites administrations

when assigning frequencies in the band 5 091-5 150 MHz to stations of the aeronautical radionavigation service or to stations of the FSS providing feeder links of the non-GSO systems in the MSS (Earth-to-space), to take all practicable steps to avoid mutual interference between them,

...

**Reasons:** Consequential changes as a result of removing of the time limitation to the fixed-satellite service allocation (limited to feeder links of non-geostationary systems in the mobile-satellite service).

MOD EUR/9A7/5

RESOLUTION 748 (REV.WRC‑15)

Compatibility between the aeronautical mobile (R) service and the fixed-satellite service (Earth-to-space) in the band 5 091-5 150 MHz

The World Radiocommunication Conference (Geneva, 2015),

considering

*…*

*f)* that ITU-R studies have examined potential sharing among aeronautical applications and the FSS in the band 5 091-5 150 MHz;

*…*

recognizing

*…*

*c)* that Resolution **114 (Rev.WRC‑15)** applies to the sharing conditions between the FSS and ARNS in the 5 091-5 150 MHz band,

…

resolves

…

2 that any AM(R)S systems operating in the frequency band 5 091-5 150 MHz shall meet the SARPs requirements published in Annex 10 of the ICAO Convention on International Civil Aviation and the requirements of Recommendation ITU‑R M.1827-1, to ensure compatibility with FSS systems operating in that band;

…

**Reasons:** To improve the operational flexibility of the aeronautical-mobile (R) service and to reflect the revision of Recommendation ITU-R M.1827.

NOTE: Resolution 748 (Rev.WRC-12) is referred to in *recognizing c)* of Resolution 418 (Rev.WRC-12). Should WRC-15 revise Resolution 748 (Rev.WRC-12), a consequential update of the reference would be needed in Resolution 418 (Rev.WRC-12).

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