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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 66-E** |
|  | **15 October 2015** |
|  | **Original: Spanish** |
|  | |
| Cuba | |
| 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 frequency band 5 091-5 150 MHz is allocated to the fixed-satellite service (Earth-to-space) on a primary basis under No. 5.444A, limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and subject to coordination under No. 9.11A.

The conditions established to allow this band to be shared with the aeronautical radionavigation service place a series of restrictions on the fixed-satellite service, including its alteration to a secondary service from 1 January 2018.

The analyses and studies conducted have confirmed that no new developments are foreseen in the aeronautical radionavigation service in this frequency band and that the regulatory conditions contained in Resolution 114 (Rev.WRC-12) and the technical and operational requirements contained in Recommendation ITU-R S.1342 will continue to ensure compatibility between the FSS and MLS systems, meaning it is feasible for the fixed-satellite service to continue operating in a manner compatible with the aeronautical radionavigation service, obviating the need to make the FSS a secondary service.

Moreover, this frequency band is allocated to the aeronautical mobile (R) service limited to surface application at airports, in which respect a certain degree of flexibility could be applied in the relevant regulatory conditions.

Taking into account the above, the Administration of Cuba is submitting the following proposal to WRC-15.

ARTICLE 5

Frequency allocations

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

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4 800-5 570 MHz

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

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5.444 The frequency band 5 030-5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the frequency band 5 030-5 091 MHz, the requirements of this system shall have priority over other uses of this band. For the use of the frequency band 5 091-5 150 MHz, No. 5.444A and Resolution **114 (Rev.WRC‑15)** apply.    (WRC‑15)

**Reasons:** To reflect the modification of Resolution 114 by WRC-15.

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5.444A *Additional allocation:*Use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of non‑geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**. Such use shall be in accordance with Resolution **114 (Rev.WRC‑15)**.     (WRC‑15)**Reasons:** To enable the FSS (Earth-to-space) to be used in the frequency band 5 091-5 150 MHz on a primary basis, eliminating the restrictions that appear in No. 5.444A but maintaining the remaining provisions that ensure coordination with the ARNS, which are supplemented by the modifications proposed to Appendix 7 and Resolution 114.

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5.444B The use of the frequency band 5 091-5 150 MHz by the aeronautical mobile service islimited to:

– systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution **748 (Rev.WRC‑15)**;

– aeronautical telemetry transmissions from aircraft stations (see No. **1.83**) in accordance with Resolution **418 (Rev.WRC‑12)**.    (WRC‑15)

**Reasons:** To reflect the modification of Resolution 748 by 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

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TABLE 10     (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 in the band 5 091-5 150 MHz | Aeronautical radionavigation | 450 |

**Reasons:** To include coordination between the non-GSO FSS and the ARNS in the frequency band 5 091-5 150 MHz in Appendix 7 and to record the corresponding predetermined coordination distance.

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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),

considering

*a)* the allocation of the frequency band 5 000-5 250 MHz to the aeronautical radionavigation service;

*b)* the allocation of the frequency band 5 091-5 150 MHz to the fixed-satellite service (Earth-to-space) (limited to feeder links of non-geostationary satellite (non-GSO) systems in the mobile-satellite service (MSS));

*c)* the requirements of both the aeronautical radionavigation and the fixed-satellite services in the above-mentioned bands,

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;

*b)* that, in accordance with Annex 10 of the Convention of the International Civil Aviation Organization (ICAO) on international civil aviation, it may be necessary to use the frequency band 5 091-5 150 MHz for the MLS if its requirements cannot be satisfied in the frequency band 5 030-5 091 MHz;

*c)* that the FSS provides feeder links for non-GSO systems in the MSS in the frequency band 5 091-5 150 MHz,

noting

*a)* that Recommendation ITU‑R S.1342 describes a method for determining coordination distances between international standard MLS stations operating in the band 5 030-5 091 MHz and FSS earth stations providing Earth-to-space feeder links in the band 5 091-5 150 MHz;

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

resolves

1 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;

2 that to ensure that the aeronautical radionavigation service is protected from harmful interference, administrations, in applying No. **9.11A**, shall effect coordination for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which operate in the frequency band 5 091-5 150 MHz and are separated by less than 450 km from the borders of another country whose administration operates ground stations in 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,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO.

**Reasons:** To update Resolution 114 in line with the changes proposed to the FSS allocation for the frequency band 5 091-5 150 MHz.

MOD CUB/66A7/7

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 this Resolution by giving more flexibility to the AM(R)S.

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