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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 1 to Document 66-E** |
|  | **15 October 2015** |
|  | **Original: Spanish** |
|  | |
| Cuba | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.1 | |

1.1 to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **233 (WRC‑12)**;

Introduction

The Administration of Cuba has examined the various frequency bands identified as candidates based on the studies conducted by ITU-R, along with the provisions of Resolution 233 (WRC-12) as it relates to “taking into account the bands currently identified for IMT, the technical conditions of their use, and the possibility of optimizing the use of these bands with a view to increasing spectrum efficiency”.

In analysing the various options, account has been taken of the need to ensure adequate protection for existing services, the degree to which those services are used, and the requirement that it must be possible to combine bands identified for IMT into harmonized frequency bands at global level.

Based on the above, the Administration of Cuba is submitting to the Conference the following proposals, which set out its preferences for introducing new frequency bands allocated to the mobile service on a primary basis, as identified in the Radio Regulations for the introduction of IMT, along with those bands in which the need to provide due protection for existing radiocommunication services means that changes cannot be made to the current allocations in those bands.

**Proposals**

ARTICLE 5

Frequency allocations

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

NOC CUB/66A1/1

460-890 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
|  | 470-512  BROADCASTING  Fixed  Mobile  5.292 5.293 |  |
| 512-608  BROADCASTING  5.297 |
| 608-614  RADIO ASTRONOMY  Mobile-satellite except aeronautical mobile-satellite (Earth-to-space) |
| 614-698  BROADCASTING  Fixed  Mobile  5.293 5.309 5.311A |

**Reasons:** The frequency bands 470-608 MHz and 614-698 MHz are the main bands used to provide the television broadcasting service. Once the transfer from analogue to digital television is complete, these frequency bands will still see high-density usage by this service intended for the public and will also continue to be necessary in order to ensure the evolution and development of the broadcasting service for transmitting television signals. Studies conducted indicate that the broadcasting service and mobile systems made up of IMT systems are incompatible, highlighting the fact that wide geographical separations are needed to ensure that they can coexist.

The 608-614 MHz band is allocated on a primary basis to the radio astronomy service, the requirements of which do not allow for sharing with mobile broadband services.

MOD CUB/66A1/2

890-1 300 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
|  | 902-928  FIXED  MOBILE except aeronautical mobile 5.317A  Amateur  Radiolocation  5.150 5.325 |  |

**Reasons:** The frequency band 698-960 MHz is a high-importance segment for the development of mobile services (IMT), especially for developing countries, in view of propagation characteristics that allow wider coverage for service provision in rural areas. The 902-928 MHz band enables the whole frequency band 890-960 MHz to be made available for use in mobile broadband communications, thereby achieving harmonization among the three regions of part of the spectrum that has great utility and potential for this service.

SUP CUB/66A1/3

5.325A

SUP CUB/66A1/4

5.326

**Reasons:** The services mentioned in these two Nos have been included in the Table.

NOC CUB/66A1/5

1 300-1 525 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 1 350-1 400  FIXED  MOBILE  RADIOLOCATION  5.149 5.338 5.338A 5.339 | 1 350-1 400  RADIOLOCATION 5.338A  5.149 5.334 5.339 | |

**Reasons:** This band is allocated exclusively to the radiolocation service in regions 2 and 3, and the amount it is used would make sharing between this service and IMT services very difficult. It would not allow for a harmonized allocation that would enable proper development of mobile broadband technology in this frequency band. Moreover, use of this frequency band is subject to the application of Resolution 750 (Rev.WRC-12), which places restrictions on unwanted emissions produced in the band 1 400-1 427 MHz.

MOD CUB/66A1/6

1 300-1 525 MHz

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| --- | --- | --- | --- |
| Allocation to services | | | |
| Region 1 | Region 2 | | Region 3 |
| 1 452-1 492  FIXED  MOBILE except aeronautical mobile ADD 5.A11  BROADCASTING  BROADCASTING-SATELLITE 5.208B  5.341 5.342 5.345 | | 1 452-1 492  FIXED  MOBILE 5.343 ADD 5.A11  BROADCASTING  BROADCASTING-SATELLITE 5.208B  5.341 5.344 5.345 | |

ADD CUB/66A1/7

5.A11 The band 1 452-1 492 MHz is intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC‑15)**. Such use does not preclude the use of this band for other applications in the services to which it is allocated and does not imply any priority under the Radio Regulations.     (WRC‑15)

**Reasons:** It is proposed to identify the frequency band 1 452-1 492 MHz as a harmonized band for the introduction of IMT on a worldwide basis.

NOC CUB/66A1/8

1 710-2 170 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 2 025-2 110 SPACE OPERATION (Earth-to-space) (space-to-space)  EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space)  FIXED  MOBILE 5.391  SPACE RESEARCH (Earth-to-space) (space-to-space)  5.392 | | |

NOC CUB/66A1/9

2 170-2 520 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 2 200-2 290 SPACE OPERATION (space-to-Earth) (space-to-space)  EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space)  FIXED  MOBILE 5.391  SPACE RESEARCH (space-to-Earth) (space-to-space)  5.392 | | |

**Reasons:** These frequency bands cannot be shared by mobile broadband services (IMT). Guarantees of due protection for the space services that use them (SRS, EESS and SOS) is required.

NOC CUB/66A1/10

2 700-4 800 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 2 700-2 900 AERONAUTICAL RADIONAVIGATION 5.337  Radiolocation  5.423 5.424 | | |
| 2 900-3 100 RADIOLOCATION 5.424A  RADIONAVIGATION 5.426  5.425 5.427 | | |

**Reasons:** The bands 2 700-2 900 MHz and 2 900-3 100 MHz are widely used by radar systems. The radionavigation service is a safety services and the provisions of No. 4.10 of the Radio Regulations, which establishes the need to ensure that it is free from harmful interference, apply. Furthermore, in the 2 700-2 900 MHz band, meteorological radar networks that provide services linked to the safety of human life and property and that are used with the characteristics of a primary service in line with the provisions of No. 5.423 operate in the radiolocation service. These systems must be able to detect atmospheric phenomena such as large hurricanes and heavy rain from distances of more than 300 km.

NOC CUB/66A1/11

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 500-4 800 FIXED  FIXED-SATELLITE (space-to-Earth) 5.441  MOBILE 5.440A | | |

**Reasons:** The band 4 500-4 800 MHz corresponds to the Plan for the fixed-satellite service set out in Appendix 30B to the Radio Regulations and must be kept for that purpose. The main aim of the Plan is to ensure that all Member States of ITU, especially developing countries, have access to a share of the orbital/spectrum resource.

NOC CUB/66A1/12

4 800-5 570 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 990-5 000 FIXED  MOBILE except aeronautical mobile  RADIO ASTRONOMY  Space research (passive)  5.149 | | |

**Reasons:** The use of services with allocations in this band and the protection of passive services that operate in it mean that it cannot be shared with IMT systems.

SUP CUB/66A1/13

RESOLUTION 233 (WRC‑12)

Studies on frequency-related matters on International Mobile   
Telecommunications and other terrestrial   
mobile broadband applications

**Reasons:** These studies have been completed.

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