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| **World Radiocommunication Conference (WRC-15)Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 13 toDocument 66-E** |
|  | **15 October 2015** |
|  | **Original: Spanish** |
|  |
| Cuba |
| Proposals for the work of the conference |
|  |
| Agenda item 1.13 |

1.13 to review No. **5.268** with a view to examining the possibility for increasing the 5 km distance limitation and allowing space research service (space-to-space) use for proximity operations by space vehicles communicating with an orbiting manned space vehicle, in accordance with Resolution **652 (WRC‑12)**;

Introduction

No. 5.268 of the Radio Regulations limits the use of the band 410-420 MHz by the space research service to communications within five km from an orbiting manned space vehicle.

This frequency band is currently needed for communications at distances of more than five km, and without the restriction to extravehicular activities, in order to meet communications requirements during proximity operations in the space-to-space communications environment.

Aspects relating to the protection of the fixed and mobile services are determined by the power-flux density limits that cannot be exceeded at the Earth’s surface, the values of which are stipulated in No. 5.268 and should be maintained. Report ITU-R SA.2271 has analysed this situation and concluded that these limits can be satisfied by using different modulation, spreading technologies, and power control schemes by proximity operations beyond 5 km.

In the light of the above the Cuban Administration proposes the amendments to RR No. 5.268 shown below.

Proposals

ARTICLE 5

Frequency allocations

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

MOD CUB/66A13/1

410-460 MHz

|  |
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| Allocation to services |
| Region 1 | Region 2 | Region 3 |
| 410-420 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) MOD 5.268 |

MOD CUB/66A13/2

5.268 Use of the frequency band 410-420 MHz by the space research service is limited to space-to-space communications with an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from transmitting stations of the space research service (space-to-space) in the frequency band 410-420 MHz shall not exceed −153 dB(W/m2) for 0° ≤ δ ≤ 5°, −153 + 0.077 (δ − 5) dB(W/m2) for 5° ≤ δ ≤ 70° and –148 dB(W/m2) for 70° ≤ δ ≤ 90°, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. In this frequency band stations of the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. No. **4.10** does not apply.     (WRC-15)

**Reasons:** To remove the restrictions that allow use of the band 410-420 MHz by the space research service only for communications within a maximum radius of five km of a manned orbiting space vehicle, thereby allowing communications (space-to-space) that are not limited to extravehicular activities.

SUP CUB/66A13/3

RESOLUTION 652 (WRC‑12)

Use of the band 410-420 MHz by the space research service (space-to-space)

**Reasons:** No longer necessary.

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