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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 12 to Document 107-E** |
|  | **19 October 2015** |
|  | **Original: English** |
|  | |
| India (Republic of) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.12 | |

1.12to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz, in accordance with Resolution  **651 (WRC‑12)**;

Introduction

Considering the need for higher resolution radar images using the satellites for environmental monitoring applications, India recognizes the need for additional spectrum for EESS (active) service. Studies have shown that the amount of spectrum required for next generation EESS (active) synthetic aperture radar in the spectrum range of 9 600 MHz is contiguous 1 200 MHz. Considering that the currently 600 MHz (9 300-9 900 MHz) is already allocated to EESS (active) in the Radio Regulations, there is a requirement of allocating additional 600 MHz by WRC-15.

India supports the allocation of additional 600 MHz for EESS (active) on a global primary basis in the bands 9 200-9 300 MHz and 9 900-10 400 MHz along with the regulatory provisions as described in Method B2 of the CPM Report.

ARTICLE 5

Frequency allocations

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

MOD IND/107A12/1

8 500-10 000 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 9 200-9 300 EARTH EXPLORATION-SATELLITE (active) ADD 5.A112  RADIOLOCATION  MARITIME RADIONAVIGATION 5.472  5.473 5.474 ADD 5.B112 ADD 5.C112 ADD 5.D112 | | |
| ... | | |
| 9 900-10 000 EARTH EXPLORATION-SATELLITE (active) ADD 5.A112  RADIOLOCATION  Fixed  5.477 5.478 5.479 ADD 5.C112 ADD 5.E112 | | |

**Reasons:** Provides an additional 600 MHz allocation to theEESS (active) for high resolution SARs as requested by Resolution **651 (WRC-12)** and justified in Report ITU-R RS.2274.

MOD IND/107A12/2

10-11.7 GHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 10-10.4  EARTH EXPLORATION-SATELLITE (active) ADD 5.A112  FIXED  MOBILE  RADIOLOCATION  Amateur | 10-10.4  EARTH EXPLORATION-SATELLITE (active) ADD 5.A112  RADIOLOCATION  Amateur | 10-10.4  EARTH EXPLORATION-SATELLITE (active) ADD 5.A112  FIXED  MOBILE  RADIOLOCATION  Amateur |
| 5.479 ADD 5.C112 ADD 5.E112 ADD 5.F112 | 5.479 5.480 ADD 5.C112 ADD 5.E112 ADD 5.F112 | 5.479 ADD 5.C112 ADD 5.E112 ADD 5.F112 |
| 10.4-10.45  FIXED  MOBILE  RADIOLOCATION  Amateur | 10.4-10.45  RADIOLOCATION  Amateur | 10.4-10.45  FIXED  MOBILE  RADIOLOCATION  Amateur |
|  | 5.480 |  |

**Reasons:** Provides an additional 600 MHz allocation to theEESS (active) for high resolution SARs as requested by Resolution **651 (WRC-12)** and justified in Report ITU-R RS.2274.

ADD IND/107A12/3

5.A112 The use of the frequency bands 9 200-9 300 MHz and 9 900-10 400 MHz by the Earth exploration-satellite (active) service is limited to systems requiring a necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the 9 300-9 900 MHz frequency band.     (WRC‑15)

**Reasons:** To limit the number of systems as well as the duration of transmission of SAR systems in the extension frequency band.

ADD IND/107A12/4

5.B112 In the frequency band 9 200-9 300 MHz, stations in the Earth exploration-satellite (active) service shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services.     (WRC‑15)

**Reasons:** The EESS (active) primary allocation is made secondary with regard to the radionavigation and radiolocation services allocations in these frequency bands, to ensure protection of stations of these services from harmful interference.

ADD IND/107A12/5

5.C112 Space stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU‑R RS.2066‑0.     (WRC‑15)

**Reasons:** It ensures protection of RAS stations in the frequency band 10.6-10.7 GHz.

ADD IND/107A12/6

5.D112 Space stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU‑R RS.2065‑0.     (WRC‑15)

**Reasons:** It ensures protection of SRS systems in the frequency band 8 400-8 500 MHz.

ADD IND/107A12/7

5.E112 In the frequency band 9 900-10 400 MHz, stations in the Earth exploration-satellite (active) service shall not cause harmful interference to, nor claim protection from, stations of the radiolocation service.     (WRC‑15)

**Reasons:** The EESS (active) primary allocation is made secondary with regard to the RDS allocations in these frequency bands, to ensure protection of stations of these services from harmful interference.

ADD IND/107A12/8

5.F112 In order to protect the systems of the fixed service the power flux-density values produced on the surface of the Earth by a space station of the Earth exploration-satellite (active) service shall not exceed the following values:

−113 dB(W/m2) in 1 MHz, for 0° ≤ α ≤ 5.7°;

−109 + 25 ⋅ log(α − 5) dB(W/m2) in 1 MHz, for 5.7° < α ≤ 53°;

−66.6 dB(W/m2) in 1 MHz, for α > 53°;

in any 1 MHz of the frequency band 9 900-10 400 MHz for the indicated angle of arrival α, assuming free-space propagation conditions.     (WRC‑15)

**Reasons:** It ensures protection of FS stations in the frequency band 9 900-10 400 MHz.

SUP IND/107A12/9

RESOLUTION 651 (WRC‑12)

Possible extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz   
and/or 9 900-10 500 MHz

**Reasons:** The extension by 600 MHz has been approved by WRC-15. The studies under this Resolution have been completed.

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