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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Addendum 14 to Document 44-E** | |
|  | | **13 October 2023** | |
|  | | **Original: English** | |
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| Member States of the Inter-American Telecommunication Commission (CITEL) | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
|  | | | |
| Agenda item 1.14 | | | |

1.14 to review and consider possible adjustments of the existing frequency allocations or possible new primary frequency allocations to the Earth exploration-satellite service (passive) in the frequency range 231.5-252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution **662 (WRC‑19)**;

Background

Within the frequency range 231.5-252 GHz, the frequency bands 235-238 GHz and 250-252 GHz are allocated to the EESS (passive) for the use of passive microwave remote sensing systems. These two allocations were adopted at WRC-2000. However, scientific and technology developments for passive microwave sensor measurements have evolved in the last twenty years and some remote passive sensor systems are under development and could benefit from the ability to operate on some channel(s) within the frequency range 239-248 GHz, given the specific resonance frequency characteristics of ice clouds.

Table 1 below provides a simplified overview of the radiocommunication services that are currently allocated on primary basis in the frequency range 231.5-252 GHz. These services could be impacted by any decisions to make adjustments to and/or extensions of the EESS (passive) allocations. Thus, studies will be conducted to determine the potential impact of making adjustments to and/or extensions of the EESS (passive) allocations within the frequency range 231.5-252 GHz on the primary services in these frequency bands in accordance with Resolution **662** **(WRC-19)**.

Table 1 – List of radio services that are allocated on a primary basis in the frequency range 231.5‑252 GHz

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 231.5-232 GHz | 232-235 GHz | 235-238 GHz | 238-240 GHz | | 240-241 GHz | 241-248 GHz | 248-250 GHz | 250-252 GHz |
|  |  | EESS (passive) |  | Possible EESS (passive) use - cloud ice content | | |  | EESS (passive) |
|  |  | SRS (passive) |  | |  |  |  | SRS (passive) |
| FS | FS |  | FS | | FS |  |  |  |
| MS | MS |  | MS | | MS |  |  |  |
|  | FSS (s-E) |  | FSS (s-E) | |  |  |  |  |
|  |  |  | RLS | | RLS | RLS |  |  |
|  |  |  | RNS | |  |  |  |  |
|  |  |  | RNSS | |  |  |  |  |
|  |  |  |  | |  | RAS |  |  |
|  |  |  |  | |  |  | AMATEUR |  |
|  |  |  |  | |  |  | AMATEUR SAT |  |
|  |  |  |  | |  | No. **5.149** apply – protection of RAS sites | |  |
| EESS | Earth exploration-satellite service | | | | | | | |
| SRS | Space research service | | | | | | | |
| FS | Fixed service | | | | | | | |
| MS | Mobile service | | | | | | | |
| FSS | Fixed-satellite service | | | | | | | |
| RLS | Radiolocation service | | | | | | | |
| RNS | Radionavigation service | | | | | | | |
| RNSS | Radionavigation-satellite service | | | | | | | |
| RAS | Radio astronomy service | | | | | | | |

Proposals

ARTICLE 5

Frequency allocations

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

MOD IAP/44A14/1#1863

200-248 GHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 232-235FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE  Radiolocation | | |
| 235-238 EARTH EXPLORATION-SATELLITE (passive) ADD 5.B114  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE  SPACE RESEARCH (passive)  5.563A 5.563B | | |
| 238-239.2 FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE  RADIOLOCATION  RADIONAVIGATION  RADIONAVIGATION-SATELLITE | | |
| 239.2-240 EARTH EXPLORATION-SATELLITE (passive)  FIXED-SATELLITE (space-to-Earth)  RADIOLOCATION  RADIONAVIGATION  RADIONAVIGATION-SATELLITE | | |
| 240-241 EARTH EXPLORATION-SATELLITE (passive)  RADIOLOCATION | | |
| 241-242.2 EARTH EXPLORATION-SATELLITE (passive)  RADIO ASTRONOMY  RADIOLOCATION  Amateur  Amateur-satellite  5.149 | | |
| 242.2-244.2 RADIO ASTRONOMY  RADIOLOCATION  Amateur  Amateur-satellite  5.138 5.149 | | |
| 244.2-247.2 EARTH EXPLORATION-SATELLITE (passive)  RADIO ASTRONOMY  RADIOLOCATION  Amateur  Amateur-satellite  5.138 5.149 | | |
| 247.2-248 RADIO ASTRONOMY  RADIOLOCATION  Amateur  Amateur-satellite  5.149 | | |

**Reasons:** Provides additional spectrum for EESS (passive) to ensure alignment with more up-to-date remote-sensing observation requirements while at the same time not putting undue burden on incumbent services sharing the same band. This modification is based on Method B, option 1.

ADD IAP/44A14/2#1864

5.B114 The use of the frequency band 235-238 GHz by the Earth exploration-satellite service (passive) is limited to the operation of limb sounding passive sensors.     (WRC‑23)

**Reasons:** To ensure that there will be no potential future impact on FS and MS operating in the frequency band 235-238 GHz.

SUP IAP/44A14/3#1867

RESOLUTION 662 (WRC‑19)

Review of frequency allocations for the Earth exploration-satellite service (passive) in the frequency range 231.5-252 GHz and consideration of possible adjustment according to observation requirements of passive microwave sensors

**Reasons:** Consequential change due to the completion of the work for the agenda item. Therefore Resolution **662 (WRC-19)** is not needed anymore.

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