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| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)** | **APG23-3/OUT-23** |
| 8 – 13 November 2021, Virtual/Online Meeting | 13 November 2021 |

Working Party 3

**preliminary views on WRC-23 agenda item 1.14**

**Agenda Item 1.14:**

*to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (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)****;*

# 1. Background

The scientific and technology developments for passive microwave sensor measurements have evolved over the last 20 years. WRC-2000 were agreed under the AI 1.16 to assign the frequency bands of 235-238 GHz and 250-252 GHz within the frequency range of 231.5-252 GHz for the earth exploration satellite service (EESS) (passive) for the use of passive microwave remote sensing systems. It is appropriate to ensure that the frequency allocations to the EESS (passive) agreed in 2000 correspond to up-to-date observation requirements for passive microwave sensing. Some passive sensor systems under development plan to operate on some channels in the frequency range 239-248 GHz, given the specific characteristics of this frequency band for ice‑cloud analysis. As a result, it may be necessary to consider some adjustment/extension of the EESS (passive) allocations within the frequency range 231.5-252 GHz and the effect on the other primary services in the frequency range 231.5-252 GHz would have to be studied and the EESS (passive) allocations possibly adjusted.

# 2. Documents

-Input Documents: INP-09(AUS), INP-26(KOR), INP-30(J), INP-43(CHN)

- Information Documents: INF-01(WMO),INF-20 (CEPT),INF-17(IARU),

**3. Summary of Discussions**

**3.1 Summary of Members’ view**

**3.1.1 Australia- APG23-3/INP-09**

Australia support studies into the EESS (passive) in the frequency range 231.5-252 GHz that review the existing primary allocations, study the impact that any changes might have on other primary services in these bands, and consider possible adjustments to the allocations. Subject to the outcome of the studies, Australia can consider the adjustment of existing allocations or adding possible new allocations, as appropriate, to the EESS (passive) in 231.5-252 GHz, according to observation requirements of passive microwave sensors.

**3.1.2 Korea (Republic of)- APG23-3/INP-26**

The Republic of Korea is of the view that impact that any change to the EESS (passive) allocations in the frequency range 231.5-252 GHz might have on the other primary services in the frequency range should be carefully studied in order not to adversely affect the operation of other primary services allocated in this frequency band.

**3.1.3 Japan-****APG23-3/INP-30**

Japan supports the consideration of possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz in accordance with Resolution 662 (WRC-19) subject to the outcome of the study results. Any changes to the EESS (passive) allocations in the frequency range 231.5-252 GHz shall not adversely affect the operation of other primary services allocated in this frequency band.

**3.1.4** **China (People’s Republic of)- APG23-3/INP-43**

China supports the consideration of possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz in accordance with Resolution 662 (WRC-19) subject to the outcome of the study results. Any changes to the EESS (passive) allocations in the frequency range 231.5-252 GHz shall not unduly constraining the operation of other primary services currently allocated in this frequency range.

**4. APT Preliminary View(s)**

APT Members support the consideration of possible adjustments to the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz in accordance with Resolution **662 (WRC-19)** subject to the outcome of study results. Any changes to the EESS (passive) allocations in the frequency range 231.5-252 GHz shall not adversely affect the operation of other primary services.

**5. Other Views**

None

**6. Issues for Consideration at Next APG Meeting**

APT preliminary view(s) on this topic should be reviewed and revised in accordance with the progress of studies in ITU-R Working Parties and Contributions from APT Members. APT Members are encouraged to participate the studies in ITU-R, and to submit their views to the next APG meetings.

**7. Views from Other Organizations**

**7.1 Regional Groups**

**7.1.1 CEPT** - **Document APG23-3/INF-20**

CEPT supports to cover relevant requirements of passive microwave sensor measurements within the frequency range 231.5‐252 GHz with frequency allocations to EESS (passive) without unduly constraining the other primary services currently allocated in this frequency range. In line with the scientific observation requirements identified so far, CEPT supports the assessment of the frequency bands 239.2‐242.2 GHz and 244.2‐247.2 GHz for a possible primary allocation to the EESS (passive), including the relevant sharing and compatibility studies with the services to which these and the adjacent bands are already allocated

**7.2 International organizations**

**7.2.1 WMO** - **Document APG23-3/INF-01**

WMO supports conducting studies to align or add possible new allocations to the EESS (passive) in the 231.5-252 GHz frequency range with current and future operational requirements. For covering ice cloud measurements, the assessment of the bands 239.2-242.2 GHz and 244.2-247.2 GHz is supported.

**7.2.1 IARU- Document APG23-2/INF-17**

The IARU supports retention of the 248-250 GHz primary allocations and the 241 – 248 GHz secondary allocations to the amateur and amateur-satellite services. Within this frequency range there is ongoing experimentation by amateur service stations, which is expected to grow as technology and equipment availability improves. Any introduction of EESS into the 241-250 GHz frequency range should not unduly constrain the ongoing experimental use by the amateur and amateur satellite services in their secondary and primary allocations or their future development.