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| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)** | **APG23-3/OUT-25** |
| 8 – 13 November 2021, Virtual/Online Meeting | 13 November 2021 |

Working Party 3

**PRELIMINARY VIEWs on WRC-23 agenda item 9.1 topic d)**

**Agenda Item 9.1 topic d):** *Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations (the 2nd section of the Annex to WRC-19 Document 535)*

**1. Background**

WRC-19 revised the Regulations and Procedures for the operation of non-GSO FSS satellite systems in the frequency bands including 37.5-39.5 GHz (space-to-Earth) under WRC-19 Agenda item 1.6, while ensuring protection of GSO satellite networks in the FSS, MSS and BSS. With the work on WRC-19 Agenda item 1.6, ITU-R Working Party (WP) 4A was developing Preliminary Draft New Report ITU-R S.[50/40 GHz ADJACENT BAND STUDIES] ([Annex 6 to Document 4A/912](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0912!N06!MSW-E.docx)).

Based on the studies of the Preliminary Draft New Report above, WRC-19 invited ITU-R to conduct studies on the issues of 1) interference into the EESS (passive) sensors operating in the frequency band 36-37 GHz from non-GSO FSS space stations operating in the frequency band 37.5-38 GHz, and 2) interference into the cold calibration channel of EESS (passive) from non-GSO FSS constellations operating in the frequency band 37.5-38 GHz.

Accordingly, CPM23-1 assigned ITU-R WP 7C as a responsible group for WRC-23 agenda item 9.1 topic d) for protection of EESS (passive) in the frequency band 36-37 GHz. At its meeting held in September/October 2020, ITU-R WP 7C reviewed relevant studies included in Sections 4.2 and 4.4 of the Preliminary Draft New Report. ITU-R WP 7C also sent a liaison statement to ITU-R WP 4A ([4A/74](https://www.itu.int/md/R19-WP4A-C-0074/en)) on the protection of EESS (passive) in the band 36-37 GHz from unwanted emissions of non-GSO FSS systems operating in the band 37.5-38 GHz.

WP 4A provided information ([7C/221](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP7C-C-0221)) about the interfering issue to WP 7C meeting in September 2021, considering a typical EESS (passive) altitude in the frequency range 36-37 GHz a value of 800 km, into the sensing channel of EESS (passive) from fixed-satellite service non‑GSO constellations operating in the 37.5-38 GHz frequency band at a lower altitude than EESS (passive) sensors. Based on the document, WP 7C developed a working document towards a preliminary draft new report on “Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations” in [Annex 23 to Document 7C/283](https://www.itu.int/dms_ties/itu-r/md/19/wp7c/c/R19-WP7C-C-0283!N23!MSW-E.docx), related to agenda item 9.1, Topic d).

**2. Documents**

***2.1 Input Documents:***

APG23-3/INP-09 (AUS)

APG23-3/INP-26 (KOR)

APG23-3/INP-30 (J)

***2.2 Information Documents:***

APG23-3/INF-01 (WMO)

APG23-3/INF-13 (Chair, DG 9.1 d))

APG23-3/INF-15 (ICAO)

APG23-3/INF-16 (BR, ITU)

APG23-3/INF-20 (CEPT)

APG23-3/INF-39 (ATU)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

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

Australia supports studies being conducted with regard to the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO fixed satellite service space stations in the band 37.5-38 GHz, and development of Recommendations and Reports as appropriate.

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

The Republic of Korea supports studies in ITU-R to develop appropriate unwanted emission power levels for the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO FSS systems in the band 37.5-38 GHz, with due consideration of operational aspects of non-GSO FSS system, leading to Recommendations and/or Reports, as appropriate.

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

Japan supports studies in ITU-R for the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO FSS systems in the band 37.5-38 GHz, with due consideration of operational aspects of non-GSO FSS system, leading to Recommendations and/or Reports as appropriate.

* 1. **Summary of issues raised during the meeting**

None

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

APT Members support studies in the ITU-R on the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO FSS systems in the band 37.5-38 GHz, with due consideration of the operational aspects of non-GSO FSS system, leading to Recommendations and/or Reports as appropriate.

**5. Other View(s) from APT Members**

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 studies in the relevant ITU-R Working Parties, 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 the protection of EESS (passive) sensors operating in the frequency band 36‐37 GHz from NGSO FSS systems operating in the band 37.5‐38 GHz and the determination of relevant conditions that would ensure such protection.

**7.1.2 ATU-** **Document APG23-3/INF-39**

***The APM23-2 agreed to:***

*Part 1: Common position:*

**Support** studies in ITU-R for the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO FSS systems in the band 37.5-38 GHz, with due consideration of operational aspects of non-GSO FSS system, leading to Recommendations and/or Reports as appropriate.

*Part 2: Way forward*

***Request ATU administrations to****:*

Participate in the studies in ITU-R, and to submit their views to the next meetings.

**7.2 International Organisations**

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

WMO supports studies to further evaluate the impact of non-GSO FSS operations in the band 37.5-38 GHz on EESS (passive) sensors in the band 36-37 GHz, in particular the interference impact on the cold-sky calibration of passive sensors.

**7.2.2 ICAO – Document APG23-3/INF-15**

No impact on aeronautical services has been identified from WRC-23 Agenda 9.1 topic d.

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