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| **U.S. Radiocommunications Sector**  **Fact Sheet** | |
| **Working Party:** 7C | **Document No:** USWP7C/27-040NC |
| **Reference:**  R23-WP7C-C-0142!N11!  WRC-27 AI 1.17 | **Date:**12 February 2025 |
| Document Title: Proposed Draft CPM Text For WRC-27 Agenda Item 1.17 | |
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| Purpose/Objective: To provide updates to a draft CPM text for WRC-27 Agenda Item 1.17. | |
| **Abstract:**  Working Party 7C Meeting (18-27 September 2024) Chair’s Report Annex 11 carried forward a draft CPM text that was proposed by another administration for WRC-27 Agenda Item 1.17. This contribution seeks to provide updates to this proposed draft CPM background text. | |
| **Fact Sheet Preparer:** Philip Sohn | |

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| **Radiocommunication Study Groups** |  |
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| Source: Document 7C/142 Annex 11  Subject: WRC-27 agenda item 1.17 | Document 7C/XXX-E |
| 7 October 2024 |
| English only |
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| PROPOSED DRAFT CPM TEXT FOR wrc-27 AGENDA ITEM 1.17 | |
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**Attachment**: 1

attachment

DRAFT CPM TEXT

Chapter 4, agenda item 1.17

Agenda item 1.17

1.17 to consider regulatory provisions for receive-only space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies, in accordance with Resolution **682 (WRC 23)**;

CHAPTER 4

Satellite issues

(Agenda items 1.15, 1.16, 1.17, 1.18, 1.19, 7)

Agenda item 1.17

**(WP 7C / WP 3L, WP 3M, WP 4A, WP 4C, WP 5A, WP 5B, WP 5C, WP 5D, WP 6A, WP 7B and WP 7D)**

1.17 *to consider regulatory provisions for receive-only space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies, in accordance with Resolution* ***682 (WRC 23)****;*

Resolution **682 (WRC-23)** – *Consideration of regulatory provisions and potential primary allocations to the meteorological aids service (space weather) to accommodate receive-only space weather sensor applications in the Radio Regulations.*

{Editor’s note: Some concerns were raised on the inclusion of methods to satisfy the agenda item and regulatory text before studies have been conducted under Resolution **682 (WRC 23)**.  These concerns are in particular linked with the methods/regulatory considerations that will need to be further reviewed at future meetings as the results of studies become available.}

# 4/1.17/1 Executive summary

This Agenda Item is considering regulatory provisions and potential primary frequency allocations to the MetAids (space weather) service to accommodate receive-only space weather sensor applications such that there will be no interference by these sensors into other services in the same or in adjacent frequency bands. Accordingly, sharing and compatibility studies to assess the impact of receive-only space weather sensors into other services are not required. Instead, studies should focus on the impact of incumbent services on receive-only space weather sensor applications in the frequency bands under WRC-27 AI 1.17.

# 4/1.17/2 Background

Within the past years, the technical and operational characteristics, frequency requirements and appropriate radio service designation for space weather sensors were studied within ITU-R Working Party 7C under Study Question ITU-R 256/7 as well as under WRC-23 agenda item 9.1 topic A (Res. 657 (Rev. WRC-19)). WRC-23 designated space weather sensor operations to the MetAids service in the subset MetAids (*space weather*) allocations, as per RR Article 29B.1. Additionally, WRC-23 adopted RR Article 29B.2 and Resolution 675 (WRC-23) to highlight the importance of space weather observations while providing the definition for space weather, as well as for active and receive-only space weather sensors.

# 4/1.17/3 Summary and analysis of the results of ITU‑R studies

Based on ITU-R Report RS 2456-1, studies on spectrum needs concluded that the 27.5-28.0 MHz, 29.7-30.2 MHz, 32.2-32.6 MHz, 37.5-38.325 MHz, 73.0-74.6 MHz, and 608-614 MHz frequency bands are necessary to cover the receive-only sensors operational usage.

Studies are ongoing in WP7C to elaborate the impact of incumbent services on receive-only space weather sensors in the frequency bands under consideration as well as the development of ITU-R Recommendation on protection criteria for receive-only space weather sensors.

This Agenda Item restricts the studies in the frequency bands listed above to receive-only sensors, meaning that no compatibility study with incumbent services is needed.

# 4/1.17/4 Methods to satisfy the agenda item

## 4/1.17/4.1 Method A

This method proposes new primary allocations to the MetAids (*space weather*) in the 27.5-28.0 MHz, 29.7-30.2 MHz, 32.2-32.6 MHz, 37.5-38.325 MHz, 73.0-74.6 MHz, and 608-614 MHz frequency bands. It also proposes a new footnote in the Table of Frequency Allocations of RR Article **5** stipulating that these new MetAids (*space weather*) allocations shall not claim protection from, nor constrain the future development of, incumbent services in these frequency bands or in adjacent bands.

Finally, Resolution **682 (WRC-23)** would be consequentially suppressed.

4/1.17/5 Regulatory and procedural considerations

3/1.17/5.1 For Method A

ARTICLE 5

Frequency allocations

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

MOD

27.5-40.98 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 27.5-28 METEOROLOGICAL AIDS  METEOROLOGICAL AIDS (space weather) ADD 5.117  FIXED  MOBILE | | |
| 28-29.7 AMATEUR  AMATEUR-SATELLITE | | |
| 29.7-30.005 FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117 | | |
| 30.005-30.01 SPACE OPERATION (satellite identification)  FIXED  MOBILE  SPACE RESEARCH  METEOROLOGICAL AIDS (space weather) ADD 5.117 | | |
| 30.01-30.2 FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117 | | |
| 30.2-32.2 FIXED  MOBILE | | |
| 32.2-32.6 FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117 | | |
| 32.6-37.5 FIXED  MOBILE | | |
| 37.5-38.25 FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117  Radio astronomy  5.149 | | |
| 38.25-38.325 FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117 | | |
| 38.325-39  FIXED  MOBILE | 38.325-39.986  FIXED  MOBILE | 38.325-39.5  FIXED  MOBILE |
| 39-39.5  FIXED  MOBILE  Radiolocation 5.132A  5.159 |  |  |
| 39.5-39.986  FIXED  MOBILE |  | 39.5-39.986  FIXED  MOBILE  RADIOLOCATION 5.132A |

MOD

47-75.2 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 68-73  FIXED  MOBILE except aeronautical mobile | 68-72  BROADCASTING  Fixed  Mobile  5.173 | 68-73  FIXED  MOBILE |
| 5.149 5.175 5.177 5.179 | 72-73  FIXED  MOBILE | 5.149 5.176 5.179 |
| 73-74.6  FIXED  MOBILE except aeronautical mobile  METEOROLOGICAL AIDS (space weather) ADD 5.117  5.149 5.175 5.177 5.179 | 73-74.6  RADIO ASTRONOMY  METEOROLOGICAL AIDS (space weather) ADD 5.117  5.178 | 73-74.6  FIXED  MOBILE  METEOROLOGICAL AIDS (space weather) ADD 5.117  5.149 5.176 5.179 |
| 74.6-74.8  FIXED  MOBILE except aeronautical mobile  5.149 5.175 5.177 5.179 | 74.6-74.8  FIXED  MOBILE | 74.6-74.8  FIXED  MOBILE  5.149 5.176 5.179 |

MOD

460-890 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 470-608  BROADCASTING  5.149 5.291A 5.294 5.295A 5.296 5.300 5.304 5.306 5.307A 5.307B 5.312 | 470-512  BROADCASTING  Fixed  Mobile 5.292  5.293 5.295 | 470-585  FIXED  MOBILE 5.296A  BROADCASTING  5.291 5.298 |
| 512-608  BROADCASTING  5.295 5.297 |
| 585-608  FIXED  MOBILE 5.296A  BROADCASTING  RADIONAVIGATION  5.149 5.305 5.306 5.307 |
| 608-614  BROADCASTING  METEOROLOGICAL AIDS (space weather) ADD 5.117 | 608-614  RADIO ASTRONOMY  Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)  METEOROLOGICAL AIDS (space weather) ADD 5.117 | 608-610  FIXED  MOBILE 5.296A  BROADCASTING  RADIONAVIGATION  METEOROLOGICAL AIDS (space weather) ADD 5.117  5.149 5.305 5.306 5.307 |
| 5.149 5.291A 5.294 5.295A 5.296 5.300 5.304 5.306 5.307A 5.307B 5.312 |  | 610-614  FIXED  MOBILE 5.296A  BROADCASTING  METEOROLOGICAL AIDS (space weather) ADD 5.117  5.149 5.305 5.306 5.307 |
| 614-694  BROADCASTING  5.149 5.291A 5.294 5.295A 5.296 5.300 5.304 5.306 5.307A 5.307B 5.312 | 614-698  BROADCASTING  Fixed 5.309  Mobile 5.308  5.293 5.308A | 614-890  FIXED  MOBILE 5.296A 5.313A 5.314A 5.317A  BROADCASTING  5.149 5.305 5.306 5.307 5.320 |

4/1.17/5.2 For Method A

ADD

[5.A117 Stations operating in the Meteorological Aids (*space weather*) service shall not claim protection from, nor adversely affect, the future development of incumbent services with primary allocations at the time of WRC-27 in this frequency band or in adjacent bands.     (WRC‑27)]

Editor’s note: this footnote needs to be reviewed

4/1.17/5.3 For Method A

SUP

RESOLUTION 682 (WRC-23)

Consideration of regulatory provisions and potential primary allocations to the meteorological aids service (space weather) to accommodate receive-only space weather sensor applications in the Radio Regulations