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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 10 to Document 87-E** | |
|  | | **23 October 2023** | |
|  | | **Original: English** | |
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| African Common Proposals | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
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| Agenda item 1.10 | | | |

1.10 to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC‑19)**;

ARTICLE 5

Frequency allocations

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

MOD AFCP/87A10/1#1658

15.4-18.4 GHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 15.4-15.41 RADIOLOCATION 5.511E 5.511F  AERONAUTICAL RADIONAVIGATION | | |
| 15.41-15.43 AERONAUTICAL MOBILE (OR) ADD 5.I110 ADD 5.J110 ADD 5.K110  RADIOLOCATION 5.511E 5.511F  AERONAUTICAL RADIONAVIGATION | | |
| 15.43-15.63 FIXED-SATELLITE (Earth-to-space) 5.511A  AERONAUTICAL MOBILE (OR) ADD 5.I110 ADD 5.J110 ADD 5.K110  RADIOLOCATION 5.511E 5.511F  AERONAUTICAL RADIONAVIGATION  5.511C | | |
| 15.63-15.7 AERONAUTICAL MOBILE (OR) ADD 5.I110 ADD 5.J110 ADD 5.K110  RADIOLOCATION 5.511E 5.511F  AERONAUTICAL RADIONAVIGATION | | |

**Reasons:** To provide a new allocation in the frequency band 15.41-15.7 GHz to the aeronautical mobile (off-route) service for introduction of new non-safety aeronautical mobile applications (off‑route) in response to WRC-23 agenda item 1.10. Support the inclusion of new draft footnotes RR Nos. **5.I110** and **5.K110** for the protection of RAS and facilitation on new non-safety aeronautical mobile applications.

ADD AFCP/87A10/2#1659

5.I110 Stations in the aeronautical mobile (OR) service operating in the frequency band 15.41-15.7 GHz shall not cause harmful interference to the radio astronomy service operating in the frequency band 15.35-15.4 GHz. The aggregate power flux-density (pfd) received from these stations at any radio astronomy station operating in this band shall be in compliance with the protection criteria provided in Recommendations ITU‑R RA.769‑2 and ITU‑R RA.1513‑2, unless specifically agreed by the affected administration(s).     (WRC‑23)

**Reasons:** Added text to improve the coherence of the sentence and support the protection of RAS in the frequency band 15.35-15.4 GHz by reference to Recommendations ITU‑R RA.769-2 and ITU‑R RA.1513-2.

ADD AFCP/87A10/3#1660

5.J110 In the frequency band 15.41-15.7 GHz, stations operating in the aeronautical mobile (off-route) service shall not cause harmful interference to, or claim protection from, stations operating in the aeronautical radionavigation and radiolocation services.     (WRC‑23)

ADD AFCP/87A10/4#1661

5.K110 The use of the aeronautical mobile (OR) service in the frequency band 15.41-15.7 GHz is limited to non-safety applications.     (WRC‑23)

**Reasons:** The scope of this agenda item is limited for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC-19)**.

MOD AFCP/87A10/5#1662

22-24.75 GHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 22-22.2 FIXED  MOBILE except aeronautical mobile (R) ADD 5.L110 ADD 5.M110 ADD 5.N110 ADD 5.O110  5.149 ADD 5.P110 | | |
| 22.2-22.21 FIXED  MOBILE except aeronautical mobile  5.149 ADD 5.P110 | | |
| 22.21-22.5 EARTH EXPLORATION-SATELLITE (passive)  FIXED  MOBILE except aeronautical mobile  RADIO ASTRONOMY  SPACE RESEARCH (passive)  5.149 5.532 ADD 5.P110 | | |

**Reasons:** To provide a new allocation in the frequency band 22-22.2 GHz to the aeronautical mobile (off‑route) service for introduction of new non-safety aeronautical mobile (off-route) applications.

ADD AFCP/87A10/6#1666

5.N110 Stations in the aeronautical mobile (OR) service operating in the frequency band 22‑22.2 GHz shall not cause harmful interference to the radio astronomy service operating in the frequency band 22.21-22.5 GHz. The aggregate power flux-density (pfd) received from these stations at any radio astronomy station operating in this band shall be in compliance with the protection criteria provided in Recommendations ITU‑R RA.769‑2 and ITU‑R RA.1513‑2, unless specifically agreed by the affected administration(s).     (WRC‑23)

**Reasons:** The 10 MHz guard band will ensure adequate protection of RAS operating in the frequency band 22.21-22.5 GHz.

ADD AFCP/87A10/7#1665

5.M110 In order to protect stations of the Earth exploration-satellite (passive) service operating in the frequency band 22.21-22.5 GHz, out-of-band e.i.r.p. of stations operating in the aeronautical mobile (OR) service shall not exceed −23 dBW in any 100 MHz band in the frequency band 22.21-22.5 GHz.     (WRC‑23)

**Reasons:** The limitation of out-of-band emission will ensure adequate protection of EESS operating in the frequency band 22.21-22.5 GHz.

ADD AFCP/87A10/8#1663

5.L110 The use of the aeronautical mobile (OR) service in the frequency band 22-22.2 GHz is limited to non-safety applications.     (WRC‑23)

**Reasons:** The scope of this agenda item is limited for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC-19)**.

Option 1 for 5.O110:

ADD AFCP/87A10/9#1667

5.O110 In order to protect stations of the fixed service operating in the frequency band 22-22.2 GHz, the following power flux-density (pfd) values shall be used as a threshold for coordination under No. **9.21** for any station in the aeronautical mobile (off-route) service visible from the territory of another administration, unless otherwise agreed between the notifying and the concerned administration(s):

0.88 θ − 130 for 0° ≤ θ ≤ 8°

2.86 θ − 146 for 8° < θ ≤ 15°

0.87 θ − 116 for 15° < θ ≤ 30°

0.067 θ − 92 for 30° < θ ≤ 90°

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees.     (WRC‑23)

Option 2 for 5.O110:

ADD AFCP/87A10/10#1668

5.O110 In order to protect stations of the fixed service operating in the frequency band 22‑22.2 GHz, the following power flux-density (pfd) values shall be used as a threshold for coordination under No. **9.21** for any station in the aeronautical mobile (off-route) service visible from the territory of another administration, unless otherwise agreed between the notifying and the concerned administration(s):

−110 dB(W/(m2 ‧ MHz)) for 0° ≤ θ ≤ 10°

50log(θ/10) − 110 for 10° ≤ θ ≤ 30°

50log(3) − 110 for 30° ≤ θ ≤ 90°

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees.     (WRC‑23)

ADD AFCP/87A10/11#1669

5.P110 Due to the physical properties of the frequency band 22-22.5 GHz, passive ground-based water-vapour radiometers are operated under national arrangements in this band.     (WRC‑23)

**Reasons:** Passive ground-based water vapour radiometers, supporting a large variety of applications all over the world, are an important helper application for different radiocommunication services to calibrate signals that travel through Earth’s atmosphere and are subject to attenuation and phase shifts caused by water molecules in the troposphere.

SUP AFCP/87A10/12#1670

RESOLUTION 430 (WRC-19)

Studies on frequency-related matters, including possible additional allocations, for the possible introduction of new non-safety aeronautical mobile applications

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