



**World Radiocommunication Conference (WRC-23)**  
Dubai, 20 November - 15 December 2023



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**PLENARY MEETING**

**Addendum 10 to  
Document 6058-E  
4 October 2023  
Original: English**

## **African Common Proposals**

### **PROPOSALS FOR THE WORK OF THE CONFERENCE**

#### **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/6058A10/1**

15.4-18.4 GHz

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

**Reasons:** To provide a new allocation in the 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 agenda item 1.10. Support the inclusion of new draft footnotes Nos. **5.I110** and **5.K110** for the protection of RAS and facilitation on new non-safety aeronautical mobile applications.

**ADD AFCP/6058A10/2**

**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 band 15.35 – 15.4 GHz by reference to ITU-R RA.769-2 and ITU-R RA.1513-2.

**ADD AFCP/6058A10/3**

**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/6058A10/4**

**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/6058A10/5**

**22-24.75 GHz**

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

**Reasons:** To provide a new allocation in the 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/6058A10/6**

**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)

**ADD AFCP/5937A10/7**

**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/5937A10/8**

**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 OoB emission will ensure adequate protection of EESS operating in the frequency band 22.21 – 22.5 GHz.

**ADD AFCP/5937A10/9**

**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).

**ADD AFCP/6058A10/10**

**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):

$-110 \text{ dB(W/(m}^2 \cdot \text{MHz))}$	for	$0^\circ \leq \theta \leq 10^\circ$
$50 \log(\theta/10) - 110$	for	$10^\circ \leq \theta \leq 30^\circ$
$50 \log(3) - 110$	for	$30^\circ \leq \theta \leq 90^\circ$

where  $\theta$  is the angle of arrival of the incident wave above the horizontal plane, in degrees. (WRC-23)

**ADD AFCP/6058A10/11**

**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):

$0.88 \theta - 130$	for	$0^\circ \leq \theta \leq 8^\circ$
$2.86 \theta - 146$	for	$8^\circ < \theta \leq 15^\circ$
$0.87 \theta - 116$	for	$15^\circ < \theta \leq 30^\circ$
$0.067 \theta - 92$	for	$30^\circ < \theta \leq 90^\circ$

where  $\theta$  is the angle of arrival of the incident wave above the horizontal plane, in degrees. (WRC-23)

**ADD AFCP/6058A10/12**

**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/6058A10/13**

**RESOLUTION 430 (WRC-19)**

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