

RESOLUTION 413 (REV.WRC-23)

**Use of the frequency band 108-117.975 MHz
by the aeronautical mobile (R) service**

The World Radiocommunication Conference (Dubai, 2023),

considering

- a)* the current allocation of the frequency band 108-117.975 MHz to the aeronautical radionavigation service (ARNS);
- b)* the current requirements of FM broadcasting systems operating in the frequency band 87-108 MHz;
- c)* that digital sound broadcasting systems are capable of operating in the frequency band at about 87-108 MHz as described in Recommendation ITU-R BS.1114;
- d)* the need for the aeronautical community to provide additional services by enhancing navigation systems through a radiocommunication data link;
- e)* the need for the broadcasting community to provide digital terrestrial sound broadcasting services;
- f)* that this allocation was made by WRC-07 in the knowledge that studies are ongoing with respect to the technical characteristics, sharing criteria and sharing capabilities;
- g)* the need for the aeronautical community to provide additional services for radiocommunications, relating to safety and regularity of flight, in the band 112-117.975 MHz;
- h)* that WRC-07 modified the allocation of the band 112-117.975 MHz to the aeronautical mobile (R) service (AM(R)S) in order to make available this frequency band for new AM(R)S systems, and in doing so enabled further technical developments, investments and deployment;
- i)* that the frequency band 117.975-137 MHz currently allocated to the AM(R)S is reaching saturation in certain areas of the world;
- j)* that this new allocation is intended to support the introduction of applications and concepts in air traffic management which are data intensive, and which could support data links that carry safety-critical aeronautical data;
- k)* that additional information is needed about the new technologies which will be used, the amount of spectrum required, the characteristics and sharing capabilities/conditions, and that therefore studies are urgently required on which AM(R)S systems will be used, the amount of spectrum required, the characteristics and the conditions for sharing with ARNS systems,

recognizing

- a) that precedence must be given to the ARNS operating in the frequency band 108-117.975 MHz;
- b) that, in accordance with Annex 10 to the Convention on International Civil Aviation, all aeronautical systems must meet standards and recommended practices (SARPs) requirements;
- c) that within ITU-R, compatibility criteria between FM broadcasting systems operating in the frequency band 87-108 MHz and the ARNS operating in the frequency band 108-117.975 MHz already exist, as indicated in the most recent version of Recommendation ITU-R SM.1009;
- d) that all compatibility issues between FM broadcasting systems and International Civil Aviation Organization (ICAO) standard ground-based systems for the transmission of radionavigation-satellite differential correction signals have been addressed,

noting

- a) that aeronautical systems are converging towards a radiocommunication data link environment to support aeronautical navigation and surveillance functions, which need to be accommodated in existing radio spectrum;
- b) that some administrations are planning to introduce digital sound broadcasting systems in the frequency band at about 87-108 MHz;
- c) that no compatibility criteria currently exist between FM broadcasting systems operating in the frequency band 87-108 MHz and the planned additional aeronautical systems in the adjacent band 108-117.975 MHz using aircraft transmission;
- d) that no compatibility criteria currently exist between digital sound broadcasting systems capable of operating in the frequency band at about 87-108 MHz and aeronautical services in the band 108-117.975 MHz,

resolves

- 1 that any aeronautical mobile (R) service systems operating in the band 108-117.975 MHz shall not cause harmful interference to, nor claim protection from ARNS systems operating in accordance with international aeronautical standards;
- 2 that any AM(R)S systems planned to operate in the frequency band 108-117.975 MHz shall, as a minimum, meet the FM broadcasting immunity requirements contained in Annex 10 to the Convention on International Civil Aviation for existing aeronautical radionavigation systems operating in this frequency band;
- 3 that AM(R)S systems operating in the band 108-117.975 MHz shall place no additional constraints on the broadcasting service or cause harmful interference to stations operating in the bands allocated to the broadcasting service in the frequency band 87-108 MHz and No. 5.43 does not apply to systems identified in *recognizing d)*;

4 that frequencies below 112 MHz shall not be used for AM(R)S systems excluding the ICAO systems identified in *recognizing d*);

5 that any AM(R)S operating in the frequency band 108-117.975 MHz shall meet SARPs requirements published in Annex 10 to the Convention on International Civil Aviation,

invites the ITU Radiocommunication Sector

to study any compatibility issues between the broadcasting service and AM(R)S in the frequency band 108-117.975 MHz that may arise from the introduction of appropriate digital sound broadcasting systems, described in the most recent version of Recommendation ITU-R BS.1114, and to develop new or revised ITU-R Recommendations as appropriate,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO.