

## RESOLUTION 748 (REV.WRC-19)

**Compatibility between the aeronautical mobile (R) service and the fixed-satellite service (Earth-to-space) in the frequency band 5 091-5 150 MHz**

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

*considering*

- a)* that the allocation of the frequency band 5 091-5 150 MHz to the fixed-satellite service (FSS) (Earth-to-space) is limited to feeder links of non-geostationary-satellite (non-GSO) systems in the mobile-satellite service (MSS);
- b)* that the frequency band 5 000-5 150 MHz is currently allocated to the aeronautical mobile-satellite (R) service (AMS(R)S), subject to agreement obtained under No. **9.21**, and to the aeronautical radionavigation service (ARNS);
- c)* that WRC-07 allocated the frequency band 5 091-5 150 MHz to the aeronautical mobile service (AMS) on a primary basis subject to No. **5.444B**;
- d)* that the International Civil Aviation Organization (ICAO) is in the process of identifying the technical and operating characteristics of new systems operating in the AM(R)S in the frequency band 5 091-5 150 MHz;
- e)* that the compatibility of one AM(R)S system, to be used by aircraft operating on the airport surface, and the FSS has been demonstrated in the frequency band 5 091-5 150 MHz;
- f)* that ITU Radiocommunication Sector (ITU-R) studies have examined potential sharing among the separate AMS applications and the FSS in the frequency band 5 091-5 150 MHz;
- g)* that the frequency band 117.975-137 MHz currently allocated to the AM(R)S is reaching saturation in certain areas of the world, and therefore that frequency band would not be available to support additional surface applications at airports;
- h)* that this new allocation is intended to support the introduction of applications and concepts in air traffic management which are data intensive, and which will support data links that carry safety-critical aeronautical data,

*recognizing*

- a)* that in the frequency band 5 030-5 091 MHz priority is to be given to the microwave landing system (MLS) in accordance with No. **5.444**;
- b)* that ICAO publishes recognized international aeronautical standards and recommended practices (SARPs) for AM(R)S systems;
- c)* that Resolution **114 (Rev.WRC-15)** applies to the sharing conditions between the FSS and ARNS in the frequency band 5 091-5 150 MHz,

**RES748-2**

*noting*

- a) that the number of FSS transmitting earth stations required may be limited;
- b) that the use of the frequency band 5 091-5 150 MHz by the AM(R)S needs to ensure protection of the current or planned use of this frequency band by the FSS (Earth-to-space);
- c) that ITU-R studies describe methods for ensuring compatibility between the AM(R)S and FSS operating in the frequency band 5 091-5 150 MHz, and compatibility has been demonstrated for the AM(R)S system referred to in *considering e*),

*resolves*

- 1 that any AM(R)S systems operating in the frequency band 5 091-5 150 MHz shall not cause harmful interference to, nor claim protection from, systems operating in the ARNS;
- 2 that any AM(R)S systems operating in the frequency band 5 091-5 150 MHz shall meet the SARPs requirements published in Annex 10 of the ICAO Convention on International Civil Aviation and the requirements of Recommendation ITU-R M.1827-1, to ensure compatibility with FSS systems operating in that frequency band;
- 3 that, in part to meet the provisions of No. **4.10**, the coordination distance with respect to stations in the FSS operating in the frequency band 5 091-5 150 MHz shall be based on ensuring that the signal received at the AM(R)S station from the FSS transmitter does not exceed  $-143$  dB(W/MHz), where the required basic transmission loss shall be determined using the methods described in Recommendations ITU-R P.525-4 and ITU-R P.526-15,

*invites*

- 1 administrations to supply technical and operational criteria necessary for sharing studies for the AM(R)S, and to participate actively in such studies;
- 2 ICAO and other organizations to participate actively in such studies,

*instructs the Secretary-General*

to bring this Resolution to the attention of ICAO.