

MOD

RESOLUTION 217 (REV.WRC-23)

Implementation of wind profiler radars

The World Radiocommunication Conference (Dubai, 2023),

having noted

a request to ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars,

considering

- a)* that wind profiler radars are vertically-directed Doppler radars exhibiting characteristics similar to radiolocation systems;
- b)* that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;
- c)* that it is necessary to use frequencies in different ranges in order to have options for different performance and technical characteristics;
- d)* that, in order to conduct measurements up to a height of 30 km, it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km);
- e)* that some administrations have either already deployed, or plan to expand their use of, wind profiler radars in operational networks for studies of the atmosphere and to support weather monitoring, forecasting and warning programmes;
- f)* that the Radiocommunication Study Groups have studied the technical and sharing considerations between wind profiler radars and other services allocated in bands near 50 MHz, 400 MHz and 1 000 MHz,

considering further

- a)* that some administrations have addressed this matter nationally by assigning frequencies for use by wind profiler radars in existing radiolocation bands or on a non-interference basis in other bands;
- b)* the work of the Voluntary Group of Experts on the Allocation and Improved Use of the Radio-Frequency Spectrum and Simplification of the Radio Regulations supports increased flexibility in the allocation of frequency spectrum,

noting in particular

- a) that wind profiler radars operating in the meteorological aids service in the frequency band 400.15-406 MHz interfere with satellite emergency position-indicating radio beacons operating in the mobile-satellite service in the frequency band 406-406.1 MHz under No. **5.266**;
- b) that in accordance with No. **5.267**, any emission capable of causing harmful interference to the authorized uses of the frequency band 406-406.1 MHz is prohibited,

resolves

1 to urge administrations to implement wind profiler radars as radiolocation service systems in the following bands, having due regard to the potential for incompatibility with other services and assignments to stations in these services, thereby taking due account of the principle of geographical separation, in particular with regard to neighbouring countries, and keeping in mind the category of service of each of these services:

46-68 MHz in accordance with No. **5.162A**

440-450 MHz

470-494 MHz in accordance with No. **5.291A**

904-928 MHz in Region 2 only

1 270-1 295 MHz

1 300-1 375 MHz;

2 that, in case compatibility between wind profiler radars and other radio applications operating in the frequency band 440-450 MHz or 470-494 MHz cannot be achieved, the frequency bands 420-435 MHz or 438-440 MHz could be considered for use;

3 to urge administrations to implement wind profiler radars in accordance with the most recent versions of Recommendations ITU-R M.1226, ITU-R M.1085 and ITU-R M.1227 for the frequency bands around 50 MHz, 400 MHz and 1 000 MHz, respectively;

4 to urge administrations not to implement wind profiler radars in the frequency band 400.15-406 MHz;

5 to urge administrations currently operating wind profiler radars in the frequency band 400.15-406 MHz to discontinue them as soon as possible,

instructs the Secretary-General

to bring this Resolution to the attention of the International Civil Aviation Organization, International Maritime Organization and WMO.