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Radiocommunication Study Group 7

DRAFT NEW RECOMMENDATION ITU-R SA.[USE 1.7 GHz]*

Use of the band 1 668.4-1 710 MHz by the meteorological aids service and meteorological-satellite service (space-to-Earth)

Summary

This draft new Recommendation provides guidance for operators of MetAids and MetSat systems to allow more efficient use of the commonly shared 1 670-1 700 MHz band, and provides guidance to operators of MetAids systems on transitioning their operations out of the 1 668.4-1 675 MHz band.

* This Recommendation should be brought to the attention of the World Meteorological Organization (WMO).

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Use of the band 1 668.4-1 710 MHz by the meteorological aids service and meteorological-satellite service (space-to-Earth)

Scope

This Recommendation provides guidance for operators of MetAids and MetSat systems to allow more efficient use of the commonly shared 1 670-1 700 MHz band, and provides guidance to operators of MetAids systems on transitioning their operations out of the 1 668.4-1 675 MHz band.

The ITU Radiocommunication Assembly,

considering

- a) that the meteorological aids (MetAids) service has a primary allocation in the band 1 668.4-1 700 MHz with limitations as per provision No. 5.379E of the Radio Regulations (RR), and the meteorological-satellite (MetSat) service has a primary allocation in the band 1 670-1 710 MHz;
- b) that in order to avoid interference from MetAids transmitters to MetSat receiving earth stations, segmentation of the band 1 675-1 710 MHz has been implemented by many administrations;
- c) that the MetAids ground stations and MetSat receiving earth stations can be fixed, mobile or transportable;
- d) that there exist hundreds of MetAids receiving stations and that, moreover, additional similar stations, increasing spectrum usage, are foreseen in the future in the band (see Recommendation ITU-R SA.1165);
- e) that the band 1 683-1 690 MHz is used by hundreds of MetSat direct readout user stations in Regions 2 and 3;
- f) that there exist thousands of MetSat earth stations in the 1 690-1 710 MHz band, many of them using small antennas;
- g) that most MetAids operations in the 1 668.4-1 700 MHz band using currently available transmitters can be accommodated within 8 MHz of spectrum;
- h) that MetSat operators have agreed to segment the band 1 670-1 710 MHz into four sub-bands, which are being used and are expected to continue to be used as follows:
 - 1 670-1 683 MHz: main earth stations at fixed locations for reception of raw image data, data collection and spacecraft telemetry from GSO meteorological satellites (see limitations in Resolution 670 (WRC-03));
 - 1 683-1 690 MHz: main earth stations at fixed locations for reception of raw image data, data collection and spacecraft telemetry from GSO meteorological satellites; user stations for direct readout from GSO meteorological satellites (GVAR and S-VISSR);

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- 1 690-1 698 MHz: user stations for direct readout services from GSO meteorological satellites;
1 698-1 710 MHz: user stations for direct readout services and pre-recorded image data at main earth stations from non-GSO meteorological satellites,

recognizing

- a) that radiosondes are consumable equipment and therefore their cost is of critical importance, hence significant increase of their cost may have an adverse impact on meteorological operations;
- b) that the use of the band 1 668.4-1 700 MHz for MetAids operations varies worldwide and is dependent on regional MetSat operations, meteorological requirements and national spectrum plans;
- c) that data collected by MetAids and MetSat stations benefit all member administrations of the WMO World Weather Watch;
- e) that RR provision No. 5.379E, causes a concentration of MetAids operations in the band 1 675-1 683 MHz,

noting

- a) that most administrations avoid MetAids interference to meteorological-satellite earth station receivers by operating radiosondes at frequencies between 1 675 and 1 683 MHz,

recommends

1 that the band 1 668.4-1 710 MHz should be segmented in the following manner in order to allow the MetAids service and the MetSat service to make efficient use of the band:

1 668.4-1 675 MHz: limited use for the MetAids service (see RR No. 5.379E);

1 670-1 683 MHz: use only by a very limited number of main earth stations (see Resolution 670 (WRC-03)) at fixed locations for reception of raw image data, data collection and spacecraft telemetry from GSO meteorological satellites;

1 675-1 683 MHz: use by the MetAids service worldwide;

1 683-1 690 MHz: use by main earth stations at fixed locations for reception of raw image data, data collection and spacecraft telemetry from GSO meteorological satellites as well as user stations for direct readout from GSO meteorological satellites;

1 690-1 698 MHz: deployment of user stations for direct readout services from GSO meteorological satellites;

1 698-1 710 MHz: deployment of user stations for direct readout services and pre-recorded image data at main earth stations from non-GSO meteorological satellites;

2 that all administrations should strive to implement MetAids systems that limit their operations to the band 1 675-1 683 MHz.