

RESOLUTION 731 (REV.WRC-23)

**Consideration of sharing and adjacent-band compatibility
between passive and active services above 71 GHz**

The World Radiocommunication Conference (Dubai, 2023),

considering

- a)* that the changes made to the Table of Frequency Allocations by WRC-2000 in frequency bands above 71 GHz were based on the requirements known at the time of that conference;
- b)* that the passive service spectrum requirements above 71 GHz are based on physical phenomena and therefore are well known, and are reflected in the changes made to the Table of Frequency Allocations by that conference;
- c)* that several frequency bands above 71 GHz are already used by the Earth exploration-satellite service (EESS) (passive) and space research service (passive) because they are unique bands for the measurement of specific atmospheric parameters;
- d)* that frequency bands in the frequency range 275-1 000 GHz are identified for use by administrations for passive service applications in No. **5.565**, without precluding the use of this frequency range by active service applications, and urging administrations to take all practicable steps to protect the passive service applications from harmful interference;
- e)* that there is currently only limited knowledge of requirements and implementation plans for the active services that will operate in frequency bands above 71 GHz;
- f)* that, in the past, technological developments have led to viable communication systems operating at increasingly higher frequencies, and that this can be expected to continue so as to make communication technology available in the future in the frequency bands above 71 GHz;
- g)* that, in the future, alternative spectrum needs for the active and passive services should be accommodated when the new technologies become available;
- h)* that, following the revisions to the Table of Frequency Allocations by WRC-2000, sharing studies may still be required for services in some frequency bands above 71 GHz;
- i)* that interference criteria for passive sensors have been developed and are given in Recommendation ITU-R RS.2017;
- j)* that protection criteria for radio astronomy have been developed and are given in Recommendations ITU-R RA.769 and ITU-R RA.1513 and Report ITU-R RA.2189;

k) that several satellite downlink allocations have been made in frequency bands adjacent to those allocated to the radio astronomy service;

l) that sharing criteria for active and passive services in frequency bands above 71 GHz have not yet been fully developed within the ITU Radiocommunication Sector (ITU-R),

recognizing

a) that several frequency bands above 71 GHz are subject to No. **5.340**, and all emissions are prohibited in these bands;

b) that, to the extent practicable, the burden of sharing among active and passive services should be equitably distributed among the services to which allocations are made,

resolves

to invite a future competent world radiocommunication conference to consider the results of ITU-R studies referred to in *invites the ITU Radiocommunication Sector* below with a view to taking the necessary action, as appropriate, in order to accommodate the emerging requirements of active services, taking into account the requirements of the passive services, in frequency bands above 71 GHz,

urges administrations

to note the possibility of changes to Article **5** to accommodate emerging requirements for active services, as indicated in this Resolution, and to take this into account in the development of national policies and regulations,

invites the ITU Radiocommunication Sector

1 to continue its studies to determine if and under what conditions sharing is possible between active and passive services in the frequency bands above 71 GHz, such as, but not limited to, 116-122.25 GHz, 174.8-182 GHz, 185-190 GHz and 235-238 GHz;

2 to study under what conditions passive services operating in allocated frequency bands 100-102 GHz, 148.5-151.5 GHz, 182-185 GHz, 190-191.8 GHz and 226-231.5 GHz are compatible with active services allocated to adjacent bands;

3 to conduct studies to determine the specific conditions to be applied to the land-mobile and fixed-service applications to ensure the protection of EESS (passive) applications in the frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz;

4 to study means of avoiding adjacent-band interference from space services (downlinks) into radio astronomy frequency bands above 71 GHz;

5 to take into account the principles of burden-sharing to the extent practicable in their studies;

6 to complete the necessary studies when the technical characteristics of the active services in these frequency bands are known;

7 to develop Recommendations specifying sharing criteria for those frequency bands where sharing is feasible,

instructs the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned.