

RESOLUTION 664 (REV.WRC-23)

Studies on a possible new primary allocation to the Earth exploration-satellite service (Earth-to-space) in the frequency band 22.55-23.15 GHz

The World Radiocommunication Conference (Dubai, 2023),

considering

- a)* that the frequency band 25.5-27 GHz, allocated worldwide to the Earth exploration-satellite service (EESS) (space-to-Earth) on a primary basis currently does not have a paired band for potential associated Earth-to-space links;
- b)* that an EESS (Earth-to-space) allocation in the frequency band 22.55-23.15 GHz would allow for uplinks and downlinks on the same transponder, increasing efficiency and reducing satellite complexity;
- c)* that an EESS (Earth-to-space) allocation in the frequency band 22.55-23.15 GHz would allow for its use for satellite tracking, telemetry and command (TT&C) in combination with the existing EESS (space-to-Earth) allocation referred to in *considering a)*,

noting

- a)* that the frequency band 22.55-23.15 GHz is allocated to the fixed, inter-satellite and mobile services on a primary basis;
- b)* that the frequency band 22.55-23.15 GHz is also allocated to the space research service (SRS) (Earth-to-space) on a primary basis, paired with the space research service (SRS) (space-to-Earth) allocation in the frequency band 25.5-27 GHz;
- c)* that the frequency band 22.21-22.5 GHz is allocated to the radio astronomy service (RAS) and EESS (passive) on a primary basis;
- d)* that, for the RAS in the frequency bands 22.81-22.86 GHz and 23.07-23.12 GHz, No. **5.149** applies;
- e)* that the frequency band 23.6-24 GHz is allocated to the EESS (passive) and RAS on a primary basis (No. **5.340** applies),

recognizing

- a)* that the possible development of the EESS (Earth-to-space) in the frequency band 22.55-23.15 GHz should not constrain the use and development of the EESS (passive) operating in the frequency band 23.6-24 GHz;
- b)* that protection of the RAS sites operating in the frequency bands indicated in *noting c)*, *d)* and *e)* may be achieved through sufficient geographic separation from EESS earth stations,

resolves to invite the ITU Radiocommunication Sector to complete in time for the 2031 world radiocommunication conference

studies on spectrum requirements and studies on sharing and compatibility between EESS (Earth-to-space) and the existing services, taking into account *noting a) to e)*, while ensuring the protection of these services, using relevant technical and operational parameters of their current and planned use,

invites administrations

to participate actively in ITU Radiocommunication Sector (ITU-R) studies and provide the technical and operational characteristics of the systems involved by submitting contributions to ITU-R,

invites the 2031 world radiocommunication conference

to consider, based on the results of the studies under *resolves to invite the ITU Radiocommunication Sector to complete in time for the 2031 world radiocommunication conference*, a new worldwide primary allocation to the EESS (Earth-to-space) in the frequency band 22.55-23.15 GHz,

invites the Secretary-General

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