

## RESOLUTION 685 (WRC-23)

**Studies towards frequency allocations for the Earth exploration-satellite service (space-to-Earth) within the frequency range [37.5-52.4 GHz]\***

The World Radiocommunication Conference (Dubai, 2023),

*considering*

- a) that the frequency band 40-40.5 GHz is allocated worldwide to the Earth exploration-satellite service (EESS) (Earth-to-space) on a primary basis;
- b) that a frequency allocation to the EESS (space-to-Earth) above 37.5 GHz would allow its use for payload data transmissions in combination with the existing EESS (Earth-to-space) allocation referred to in *considering a)*;
- c) that a frequency allocation to the EESS (space-to-Earth) above 37.5 GHz would allow for uplinks and downlinks on the same transponder, increasing efficiency and reducing satellite complexity,

*noting*

- a) that the frequency band 37.5-40.5 GHz is allocated worldwide to the EESS (space-to-Earth) on a secondary basis;
- b) that the frequency band 37.5-40.5 GHz is allocated to a number of services on a primary basis,

*recognizing*

- a) the importance of the appropriate regulatory status and certainty to accommodate the requirements of future Earth observation missions;
- b) that, in order to meet those requirements, primary allocation to the EESS (space-to-Earth) in certain frequency bands above 37.5 GHz might be required,

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

1 the review of the existing allocation to the EESS (space-to-Earth) in the frequency band [37.5-40.5 GHz], and sharing and compatibility studies as necessary, in order to determine the feasibility of upgrading this frequency allocation to primary status while ensuring the protection of the primary services;

---

\* The appearance of square brackets around certain frequency bands in this Resolution is understood to mean that WRC-27 will consider and review the inclusion of these frequency bands with square brackets and decide, as appropriate.

**RES685-2**

2 the identification of frequency bands within the frequency range [40.5-52.4 GHz], and sharing and compatibility studies as necessary, in order to determine the feasibility of creating new primary allocations to the EESS (space-to-Earth) in these bands, while ensuring the protection of the primary services,

*invites administrations*

to participate actively in the studies by submitting contributions to the ITU Radiocommunication Sector,

*invites the 2031 world radiocommunication conference*

to consider, based on the results of studies, an upgrade of the secondary allocation to the EESS (space-to-Earth) in the frequency band [37.5-40.5 GHz] or possible new worldwide allocations on a primary basis to the EESS (space-to-Earth) in certain frequency bands within the frequency range [40.5-52.4 GHz],

*instructs the Secretary-General*

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