

RESOLUTION 652 (WRC-12)

Use of the band 410-420 MHz by the space research service (space-to-space)

The World Radiocommunication Conference (Geneva, 2012),

considering

- a) that the band 410-420 MHz is allocated to the fixed, mobile (except aeronautical mobile) and space research (space-to-space) services on a primary basis subject to No. **5.268**;
- b) that No. **5.268** restricts the space research service (SRS) (space-to-space) to operations within 5 km of an orbiting manned space vehicle;
- c) that No. **5.268** further identifies use of the band 410-420 MHz by SRS (space-to-space) for extra-vehicular activities (EVA),

recognizing

- a) that use of the band 410-420 MHz for proximity operations by space vehicles approaching orbiting manned space vehicles, such as the International Space Station (ISS), would be advantageous as the propagation and physical properties of this frequency range enable comparable coverage performance in the highly multipath environment of the ISS;
- b) that space vehicles, whether manned or robotic, operating in the vicinity or approaching the ISS or other orbiting manned space vehicles, need to communicate over distances greater than 5 km to ensure safe operations and docking manoeuvres;
- c) that power flux-density (pfd) limits contained in No. **5.268** ensure the protection of terrestrial stations operating in the fixed and mobile services independent of the distance from, or the source of, space-to-space communications in the SRS,

recognizing further

- a) that administrations operating orbiting manned space vehicles carefully coordinate frequency usage on and in the vicinity of the manned space vehicle to ensure safe operation;
- b) that EVA operations would not be conducted simultaneously with visiting vehicle approach and docking manoeuvres,

resolves to invite ITU-R

- 1 to conduct sharing studies between SRS (space-to-space) systems communicating in proximity with orbiting manned space vehicles and systems operating in the fixed and mobile (except aeronautical mobile) services in the band 410-420 MHz;
- 2 to complete the studies, as a matter of urgency, taking into account the present use of the allocated band, with a view to presenting, at the appropriate time, the technical basis for the work of WRC-15,

resolves to invite WRC-15

- 1 to review No. **5.268**, taking into account the results of ITU-R studies, including the possible removal or relaxation of the 5 km distance limitation without modifying the current pfd limits;

2 to review No. **5.268** to allow more general use of the 410-420 MHz band for SRS (space-to-space) systems beyond extra-vehicular activities,

invites administrations

to participate actively in the studies by submitting contributions to ITU-R,

instructs the Secretary-General

to bring this resolution to the attention of the Space Frequency Coordination Group (SFCG) and other international and regional organizations concerned.