RESOLUTION 650 (WRC-12)

Allocation for the Earth exploration-satellite service (Earth-to-space) in the 7-8 GHz range

The World Radiocommunication Conference (Geneva, 2012),

considering

a) that there is limited bandwidth available in the 2 025-2 110 MHz and 2 200-2 290 MHz bands for Earth exploration-satellite (EESS) satellite tracking, telemetry and control (TT&C) due to the fact that hundreds of satellites use these bands;

b) that an EESS (Earth-to-space) allocation in the 7-8 GHz range would allow its use for TT&C in combination with the existing EESS (space-to-Earth) allocation in the band 8 025-8 400 MHz, thereby alleviating the problem mentioned in *considering a)*;

c) that a preliminary sharing analysis indicates that the frequency range 7 145-7 235 MHz may present a favourable sharing scenario with the existing services;

d) that an EESS (Earth-to-space) allocation in the 7-8 GHz range would allow for uplinks and downlinks on the same transponder, increasing efficiency and reducing satellite complexity,

recognizing

that congestion in the 2 025-2 110 MHz and 2 220-2 290 MHz bands increases the probability of harmful interference, which could contribute to deleterious effects on critical environmental data available only through EESS satellite resources,

further recognizing

a) that the number of EESS ground station receivers in the band 8 025-8 400 MHz is small and that they are usually located at high latitudes;

b) that EESS telecommand uplinks and corresponding EESS ground station receivers typically share the same ground station locations;

c) that space research service (Earth-to-space) (deep space) transmitters operate in the 7 145-7 190 MHz band at several locations throughout the world,

resolves to invite ITU-R

1 to study spectrum requirements in the 7-8 GHz range for EESS (Earth-to-space) telecommand operations in order to complement telemetry operations of EESS (space-to-Earth) in the 8 025-8 400 MHz band;

2 to conduct compatibility studies between EESS (Earth-to-space) systems and existing services, with priority to the band 7 145-7 235 MHz, and then within other portions of the 7-8 GHz range only if the band 7 145-7 235 MHz is found not to be suitable;

3 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

to review the results of these studies with a view to providing a worldwide primary allocation to EESS (Earth-to-space) in the range 7-8 GHz with priority to the band 7 145-7 235 MHz,

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 World Meteorological Organization (WMO) and other international and regional organizations concerned.