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**Resolution SFCG 19-6R1**

**EESS ACTIVE SENSING REQUIREMENTS ABOVE 100 GHz**

The SFCG,

CONSIDERING

- a) that active sensors operating in the Earth exploration-satellite service (EESS) are an increasingly important tool for many scientific and operational applications;
- b) that new technology for such sensors is becoming available and will allow them to operate at frequencies above 100 GHz;
- c) that WRC-2000 has allocated the band 130-134 GHz to EESS (active) with RR No. **5.562E** indicated that this allocation is limited to the band 133.5-134 GHz;
- d) that WRC-2000 has allocated the band 237.9-238 GHz to EESS (active) and SRS (active) for spaceborne cloud radars only through RR No. **5.563B**;
- e) that the use of a 500 MHz band by EESS(active) in the 133.5-134 GHz range will allow the operation of radar altimeters with a high horizontal and vertical resolution required to measure the thickness of snow and ice over land;
- f) that the use of a band of 100 MHz by EESS(active) and SRS (active) in the 237.9-238 GHz range will allow the operation of cloud radars aimed at complementing the measurements made in the range 94-94.1 GHz by detecting thinner and higher-altitude clouds, characterized by a reflectivity of  $-40$  dBZ;
- g) that Resolution 731 (WRC-2000) indicates in its *resolves* that a future competent conference should consider the results of ITU-R studies with a view to revising the Radio Regulations, as appropriate, in order to accommodate the emerging requirements of active services, taking into account the requirements of the passive services, in bands above 71 GHz;
- h) that studies at lower frequencies have demonstrated that EESS(active) can, in general, share with the radiolocation service,

RESOLVES

- 1. that member agencies urge their respective administration to give due consideration to the possibility of proposing new allocations to EESS(active) and SRS (active) under *resolves* of Resolution 731 (WRC-2000) as indicated in *considering* g);
- 2. that these allocations should preferably be proposed in bands where the sharing constraints are minimal.