Question ITU-R 237/1[[1]](#footnote-1)\*, [[2]](#footnote-2)\*\*

**Technical and operational characteristics of the active services   
operating in the range 275-1 000 GHz**

(2013)

The ITU Radiocommunication Assembly,

considering

*a)* that the World Radiocommunication Conference 2012 (WRC-12) has modified No. **5.565** of the Radio Regulations and identified the use of the range 275-1 000 GHz by the passive and active services;

*b)* that administrations wishing to make frequencies in the 275-1 000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference;

*c)* that studies on technical and operational characteristics of networks of the fixed-satellite service operating above 275 GHz are addressed by Study Group 4;

*d)* that studies on technical and operational characteristics of applications of science services operating above 275 GHz are addressed by Study Group 7;

*e)* that studies on propagation data required for the planning of radiocommunication systems operating above 275 GHz are addressed by Study Group 3;

*f)* that at frequencies above 275 GHz, sharing between services is not precluded;

*g)* that IEEE 802 LAN/MAN Standard Committee created the terahertz interest group within IEEE 802.15 Working Group to standardize terahertz communications and related network applications operating in the terahertz frequency bands between 275-1 000 GHz,

recognizing

*a)* that Recommendation ITU-R P.676 provides propagation characteristics of attenuation by atmospheric gases;

*b)* that Recommendation ITU-R P.838 provides specific attenuation model for rain for use in prediction methods;

*c)* that Recommendation ITU-R P.840 provides propagation characteristics of attenuation due to clouds and fog;

*d)* that Report ITU-R RA.2189 provides the technical information and protection criteria for any sharing studies between active services and the radio astronomy service in the frequency range 275-3 000 GHz,

decides that the following Question should be studied

What are the technical and operational characteristics of active services in the frequency range   
275-1 000 GHz?

further decides

1that sharing studies between active and passive services, as well as among active services be carried out taking into account the service characteristics mentioned in *decides*;

2that the results of studies in the range 275-1 000 GHz should be brought to the attention of the other Study Groups;

3 that the results of the above studies should be included in Recommendations and/or Reports;

4 that initial results of the studies should be available by 2027.

Category: S3

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1. \* This Question should be brought to the attention of Study Groups 3, 4 and 7. [↑](#footnote-ref-1)
2. \*\* In the years 2017, 2019 and 2023, Radiocommunication Study Group 1 extended the completion date of studies for this Question, and in the year 2019, Radiocommunication Study Group 1 also changed the category. [↑](#footnote-ref-2)