



Recommendation ITU-R SA.1276-5
(07/2017)

**Orbital locations of data relay satellites to
be protected from the emissions
of fixed service systems operating
in the band 25.25-27.5 GHz**

SA Series
Space applications and meteorology

Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Annex 1 of Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at <http://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

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RECOMMENDATION ITU-R SA.1276-5

Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 25.25-27.5 GHz

(Question ITU-R 118/7)

(1997-2003-2009-2011-2013-2017)

Scope

This Recommendation specifies the specific orbital locations of data relay satellites (DRS) to be protected from the emission of fixed service systems operating in the band 25.25-27.5 GHz, based on e.i.r.p. and e.i.r.p. spectral density limits and provisions set forth in Recommendation ITU-R F.1249.

Keywords

DRS, orbital location, orbital position, FS station

Related ITU-R Recommendations and Reports

Recommendations ITU-R SA.510, ITU-R SA.1018, ITU-R SA.1019, ITU-R SA.1155, ITU-R SA.1274, ITU-R SA.1275, ITU-R SA.1414

The ITU Radiocommunication Assembly,

considering

- a) that the 25.25-27.5 GHz band is used, *inter alia*, by the inter-satellite service for transmissions from low-orbiting satellites to receivers onboard geostationary data relay satellites (DRS);
- b) that this frequency band is shared with the fixed service (FS) among others, on a primary basis;
- c) that studies have shown that FS stations that have near-boresight emissions directed towards the orbital location of a DRS may cause interference to the DRS receiver that is in excess of values set forth in Recommendation ITU-R SA.1155;
- d) that the possibility of interference to a DRS receiver depends on the e.i.r.p. density of FS station emissions radiated towards the DRS orbital location;
- e) that Recommendation ITU-R F.1249 sets forth practical limits on the e.i.r.p. and e.i.r.p. spectral density radiated by FS stations in the direction of geostationary DRS;
- f) that a limited number of DRS networks have been either deployed or are in the implementation phase and have not been equipped with adequate interference mitigation capabilities;
- g) that it is desirable to specify particular geostationary orbital locations to be protected in order to provide administrations with the maximum flexibility in the deployment of FS stations in these frequency bands,

recommends

- 1** that receivers onboard DRS that operate in the 25.25-27.5 GHz band which should be protected in accordance with Recommendation ITU-R F.1249 are located at the following geostationary orbital positions (given in the East direction): 9°, 10.6°, 16.4°, 16.8°, 20.4°, 21.5°, 47°,

59°, 77°, 80°, 85°, 89°, 90.75°, 95°, 113°, 121°, 133°, 160°, 167°, 171°, 176.8°, 177.5°, 186°, 189°, 190°, 192.5°, 195.8°, 200°, 221°, 298°, 311°, 314°, 316°, 319°, 328°, 344°, 348°.
