



**Recommendation ITU-R SA.1275-3**  
(02/2011)

**Orbital locations of data relay satellites  
to be protected from the emissions  
of fixed service systems operating  
in the band 2 200-2 290 MHz**

**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
<b>BO</b>	Satellite delivery
<b>BR</b>	Recording for production, archival and play-out; film for television
<b>BS</b>	Broadcasting service (sound)
<b>BT</b>	Broadcasting service (television)
<b>F</b>	Fixed service
<b>M</b>	Mobile, radiodetermination, amateur and related satellite services
<b>P</b>	Radiowave propagation
<b>RA</b>	Radio astronomy
<b>RS</b>	Remote sensing systems
<b>S</b>	Fixed-satellite service
<b>SA</b>	<b>Space applications and meteorology</b>
<b>SF</b>	Frequency sharing and coordination between fixed-satellite and fixed service systems
<b>SM</b>	Spectrum management
<b>SNG</b>	Satellite news gathering
<b>TF</b>	Time signals and frequency standards emissions
<b>V</b>	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.1275-3\*

**Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 2 200-2 290 MHz**

(Question ITU-R 118/7)

(1997-2003-2009-2011)

**Scope**

This Recommendation specifies the specific orbital locations of data relay satellites to be protected from the emission of fixed service systems operating in the band 2 200-2 290 MHz, based on e.i.r.p. and e.i.r.p. spectral density limits set forth in Recommendation ITU-R F.1247.

The ITU Radiocommunication Assembly,

*considering*

- a) that the 2 200-2 290 MHz band is used by the space research, space operation service and Earth exploration-satellite services 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.1247 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 2 200-2 290 MHz band which should be protected in accordance with Recommendation ITU-R F.1247 are located at the following geostationary orbital positions (given in the East direction): 10.6°, 16.4°, 16.8°, 21.5°, 47°, 59°, 77°, 80°, 85°, 89°, 90.75°, 95°, 113°, 121°, 133°, 160°, 171°, 176.8°, 177.5°, 186°, 189°, 190°, 200°, 221°, 281°, 298°, 311°, 314°, 316°, 319°, 328°, 344°, 348°.

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\* This Recommendation should be brought to the attention of Radiocommunication Study Group 5.