

ITU-R

Radiocommunication Sector of ITU

Recommendation ITU-R S.1899
(01/2012)

**Protection criteria and interference
assessment methods for non-GSO
inter-satellite links in the
23.183-23.377 GHz band with respect
to the space research service**

S Series
Fixed-satellite services



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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.

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RA	Radio astronomy
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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 S.1899

Protection criteria and interference assessment methods for non-GSO inter-satellite links in the 23.183-23.377 GHz band with respect to the space research service

(2012)

Scope

Links in the inter-satellite service (ISS) are used by some systems to interconnect two or more non-GSO satellites together. This Recommendation presents protection criteria and interference assessment methods for such non-GSO ISS links in the 23.183-23.377 GHz band with respect to the space research service (SRS).

The ITU Radiocommunication Assembly,

considering

- a) that the band 22.55-23.55 GHz is allocated on a co-primary basis to the inter-satellite, fixed and mobile services;
- b) that ISS links of non-GSO systems connect satellites providing service in other mobile satellite and fixed satellite bands;
- c) that the band is also shared by systems in the fixed service and other ISS links connecting satellites in the space research service;
- d) that methods exist for analysing the interference from other systems operating in the band allocated to non-GSO ISS links;
- e) that some operational non-GSO systems use ISS links,

recommends

- 1** that the aggregated unwanted emission levels in the band 23.183-23.377 GHz due to earth stations in the space research service operating in the band 22.55-23.15 GHz should not exceed a power density of -155 dBW/MHz at the input to a non-GSO ISS satellite receiver, for a fraction of time greater than 10^{-2} per cent (0.01%);
- 2** that the factors described in Annex 2 should be used to evaluate unwanted emission levels into the non-GSO system from space research service systems in the allocation;
- 3** that the following Note should be considered as part of this Recommendation.

NOTE – A type of system that requires protection and operates in the band 23.183-23.377 GHz is described in Annex 1.