



Recommendation ITU-R M.2046
(12/2013)

**Characteristics and protection criteria for
non-geostationary mobile-satellite
service systems operating in the
band 399.9-400.05 MHz**

M Series
**Mobile, radiodetermination, amateur
and related 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.

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 M.2046

Characteristics and protection criteria for non-geostationary mobile-satellite service systems operating in the band 399.9-400.05 MHz

(2013)

Scope

This Recommendation provides a description, and the corresponding protection criteria for broadband noise and narrow-band interference, of one mobile-satellite service system that uses the 399.9-400.05 MHz frequency band (Earth-to-space).

The ITU Radiocommunication Assembly,

considering

- a) that the 399.9-400.05 MHz frequency band is allocated to the mobile-satellite service (MSS);
- b) that the use of the 399.9-400.05 MHz frequency band by the MSS is limited to non-geostationary (non-GSO) satellite systems;
- c) that the 399.9-400.05 MHz frequency band is also allocated to the radionavigation-satellite service;
- d) that the allocation of the 399.9-400.05 MHz frequency band to the radionavigation-satellite service shall be effective until 1 January 2015;
- e) that future MSS systems may be deployed in this band;
- f) that the corresponding description of these future systems is needed;
- g) that protection criteria are required to meet the desirable performance objectives in the presence of interference,

recommends

- 1 that the analysis to determine the effect on non-GSO MSS systems in the 399.9-400.05 MHz frequency band should be based on the following protection criteria:
 - $-197.9 \text{ dB(W/(m}^2 \cdot \text{Hz))}$ maximum aggregate acceptable spectral power flux-density (spfd) at the antenna of a non-GSO MSS ARGOS4 system for broadband noise interference (see Annex 1);
 - $-165.4 \text{ dB(W/m}^2\text{)}$ maximum pfd within a resolution bandwidth of 19 Hz at the antenna of a non-GSO MSS ARGOS4 system for each narrow-band interference (see Annex 1);
- 2 that the protection criteria defined in *recommends* 1 should not be exceeded for more than 1% of time in the field of view of the MSS satellite.