



Recommendation ITU-R BO.1443-3
(12/2013)

**Reference BSS earth station antenna
patterns for use in interference assessment
involving non-GSO satellites in frequency
bands covered by RR Appendix 30**

BO Series
Satellite delivery



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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.

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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.

Electronic Publication
Geneva, 2013

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RECOMMENDATION ITU-R BO.1443-3

Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30*

(Question ITU-R 280/4)

(2000-2002-2006-2013)

Scope

This Recommendation intends to provide tri-dimensional reference earth station antenna patterns for the broadcasting-satellite service (BSS) that can be used for the calculation of interference generated by non-GSO FSS satellites into BSS earth station antennas.

Keywords

Gain pattern, GSO, BSS.

Abbreviations/Glossary

The gain pattern is defined in the form:

$$\text{Gain} = G(\varphi, \theta)$$

where:

φ : off-axis angle of the antenna relative to boresight (degrees)

θ : planar angle of the antenna (degrees) (0° azimuth is the horizontal plane).

Related ITU Recommendations, Reports

- | | |
|-------------------------------|---|
| Recommendation ITU-R S.672-4 | Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites |
| Recommendation ITU-R S.1428-1 | Reference FSS earth-station radiation patterns for use in interference assessment involving non-GSO satellites in frequency bands between 10.7 GHz and 30 GHz |
| Recommendation ITU-R S.1503-1 | Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite system networks with limits contained in Article 22 of the Radio Regulations |

* The basis for the patterns contained in this Recommendation, including the methodology for analysing and plotting the data which measures the goodness of fit of the data sets to the recommended pattern are contained in Report ITU-R BO.2029 – Broadcasting-satellite service earth station antenna pattern measurements and related analyses. This Report along with the raw data sets and the spread sheets used to perform the graphical analysis are contained on a CD-ROM available from ITU.