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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 48115-2026

**Technical requirements for GNSS radio occultation detection
payload
(English Translation)**

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Foreword

Drafting.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Meteorological Administration.

This document is under the jurisdiction of the National Technical Committee on Standardization of Satellite Meteorology and Space Weather (SAC/TC 347).

1 Scope

This document establishes the payload composition of GNSS occultation detection payloads, specifies the technical requirements for the payloads, and describes...

The corresponding testing methods were developed.

This document applies to the design, production, and acceptance of space-based GNSS occultation detection payloads.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 1804-2000 General tolerances - Tolerances for linear and angular dimensions without specified tolerances
GB/T 34522-2017 Methods for Thermal Vacuum Testing of Spacecraft
GB/T 39267-2020 BeiDou Satellite Navigation Terminology
GB/T 39268-2020 General Specification for Low Earth Orbit Satellite-borne GNSS Navigation Receivers
GB/T 39410-2020 General Specification for Low Earth Orbit Satellite-borne GNSS Measurement Receivers
GB/T 40134-2021 Electromagnetic compatibility requirements for aerospace systems
GB/T 40602.2-2021 Radio Interference with Antennas and Receiving Systems - Part 2: Basic Measurements - Directional Tracing of High-Gain Antennas

Figure 1 Indoor Planar Near-Field Measurement Method

GB/T 44385-2024 General requirements for ensuring the adaptability of spacecraft to the space environment
GB/T 44599-2024 Antenna Measurement Site Inspection Method
GB/T 45086.1-2024 Technical Requirements and Test Methods for Vehicle Positioning Systems - Part 1: Satellite Positioning

3 Terms and Definitions

The terms and definitions defined in GB/T 39267-2020 and GB/T 32452-2025, as well as the following terms and definitions, apply to this document.

Global navigation satellite system (GNSS) A collective term for satellite systems that provide positioning, navigation, and timing services globally.

Note: Global Navigation Satellite Systems include BeiDou Navigation Satellite System (BDS), Global Positioning System (GPS), Galileo Navigation Satellite System, and GLONASS.

GLONASS and other navigation satellite systems.

GNSS radio occultation event process.

Note: Occultation events are divided into atmospheric occultation events and ionospheric occultation events. In this document, "occultation event" refers to "GNSS occultation event".

Acquisition sensitivity the receiving device is powered on when the approximate location, approximate time, ephemeris, and almanac are unknown, and it needs to capture navigation signals and achieve normal positioning.