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

**GB/T 19531.2-2026**

Replacing GB/T 19531.2-2004

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**Technical requirements for the observation environment of  
seismic stations - Part 2: Electromagnetic observation**

地震台站观测环境技术要求 第2部分：电磁观测

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## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 19531 "Technical Requirements for Seismic Station Observation Environment". GB/T 19531 has already published the following... part.

1.Seismic Measurement;

2.Electromagnetic Observations;

3.Observation of Crustal Deformation;

4.Subsurface Fluid Observation. This document replaces GB/T 19531.2-2004 "Technical Requirements for Seismic Station Observation Environment Part

2.Electromagnetic Observation", and is consistent with... Compared with GB/T 19531.2-2004, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) The technical specifications regarding the impact of non-power frequency electromagnetic interference sources on ground resistivity observations have been revised (see 4.3.1., 2004 version 4.3.1); (b) The minimum distance requirement between DC-powered rail transit systems and electromagnetic observation facilities at seismic stations has been changed (see 5.2., 2004). Version 5.1);

c) The minimum distance requirement between electrified railway transport systems and geomagnetic observation points has been revised (see 5.3.1,

5.2.1 of the 2004 edition);

d) A calculation formula for the minimum distance between the grounding electrode of a high-voltage direct current transmission line and the ground electric field measurement area

has been added (see 5.4.4);

e) The test method for the impact of electromagnetic interference sources on the ground electric field observation environment has been modified (see Appendix A, Appendix A of the 2004 edition);

f) Added the identification of event-based magnetic disturbances (see Appendix B, section B.1);

g) Added identification of short-period magnetic disturbances (see C.1 in Appendix C);

## 1 Scope

GB/T 19531.2-2026 is the Chinese national standard covering the electromagnetic observatory - the separation required from power lines, electrified railways, radio transmitters and buried metal, on measurements of the Earth's field so small that a passing car is an event. It replaces GB/T 19531.2-2004, revised together with Part 1. It was issued on 28 January 2026 and has been in force since 1 August 2026, replacing GB/T 19531.2-2004. The document is under the responsibility of the China Earthquake Administration. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the technical specifications for the electromagnetic observation environment of seismic stations, and the minimum distance between electromagnetic interference sources and the electromagnetic observation facilities of seismic stations. The term "" describes the corresponding testing and calculation methods. This document applies to the site selection of facilities for seismic station observations of geoelectric field, geomagnetic field, and georesistivity, as well as the protection of their electromagnetic environment.

## 2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. 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 917 Rules for Highway Route Signage and National Highway Numbering

GB/T 18207 (all parts) Terminology for Earthquake Prevention and Disaster Reduction

GB/T 28026.2 Electrical safety, grounding and return current of ground installations for rail transit - Part 2: DC traction power supply systems Protective measures against dissipated current DB/T

## 18.1 Seismic Station Construction Specification - Geoelectric Observation Stations - Part

### 3 Terms and Definitions

The terms and definitions defined in GB/T 18207 (all parts) and the following terms and definitions apply to this document.

3.1 Non-natural electromagnetic phenomena that may cause a decrease in the performance of devices, equipment or systems or have adverse effects on living or non-living things.

Note. Electromagnetic interference may be electromagnetic noise, unwanted signals, or changes in the propagation medium itself. [Source: GB/T 4365-2024, 3.1.5, with modifications]

3.2 A relatively stable magnetic field generated by objects containing ferromagnetic materials or a stable direct current and attached to the natural Earth's magnetic field. Changes.

3.3 Sudden changes in magnetic fields caused by non-natural electromagnetic sources.