ICS 49.140
CCS A 76

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 47327.2-2026

Measurement and service of Earth Orientation Parameters (EOP) - Part 2: Products and services

地球定向参数（EOP）测量与服务 第2部分：产品与服务

Issued on: March 31, 2026 **Implemented on: July 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

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 47327 "Earth Orientation Parameters (EOP) Measurement and Services". GB/T 47327 has been published. The following section.

2.Products and Services 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 Equipment Development Department of the Central Military Commission. This document is under the jurisdiction of the National BeiDou Satellite Navigation Standardization Technical Committee (SAC/TC544). This document was drafted by: National Time Service Center of the Chinese Academy of Sciences, Shanghai Astronomical Observatory of the Chinese Academy of Sciences, China Satellite Navigation Engineering Center, and Xi'an... Surveying and Mapping Institute, and Unit

96901 of the Chinese People's Liberation Army. The main drafters of this document are. Zhang Shougang, Jiao Wenhai, Sun Zhongmiao, Li Xiaohui, Yang Xuhai, Wang Xiaoya, Yang Haiyan, Liu Ying, and Wu Yuanwei. Li Xishun, Cheng Xuan, Yin Dongshan, Sun Baoqi, Gao Shuaihe, Zeng Anmin, Shi Lei, Zhang Zhe, Hu Xiaogong, Wang Ge.

Earth orientation parameters describe the Earth's rotational motion and include Universal Time, polar motion, precession, and nutation. Universal Time is related to the Earth's rotation angle. A linear relationship is often found, and another parameter usually corresponds to it. the change in day length, which reflects the Earth's rotational angular velocity. Earth's orientation parameters are spatiotemporal... A crucial component of the reference system, used to achieve interoperability between the International Earth Reference System and the Geocentric Celestial Reference System when determining the orbits of satellites/space targets. Conversion. Earth orientation parameters are indispensable in fields such as satellite navigation, deep space exploration, long-range weapons, geodesy, astronomical measurement, and timing services. The lack of data provides crucial support for the implementation of major tasks and technological development in these fields. This is due to the influence of the solid Earth, ocean, atmosphere, etc. Due to the influence of large-mass motion, the Earth's rotation is not uniform, and the Earth's orientation parameters change in real time, requiring long-term measurement. Earth orientation parameters measurement techniques include Very Long Baseline Interferometry (VLBI), Global Navigation Satellite System (GNSS), and satellite laser. Range finding (SLR), digital zenith telescope (DZT), etc. Different technologies contribute significantly to the determination of different parameters; VLBI technology, for example, contributes considerably more. The contribution of Universal Time measurement is significant; GNSS makes a significant contribution to the measurement of polar motion and diurnal variation; the calculated values of precession and nutation given by theoretical models are... The corrections measured by VLBI are summed to obtain the optimal solution. Therefore, multi-technology network observation and data fusion are usually employed to obtain the optimal solution. Earth orientation parameters. GB/T 47327 "Measurement and Services of Earth Orientation Parameters (EOP)" is proposed to consist of two parts.

1.Measurement. The purpose is to clarify the technical requirements for measuring Earth orientation parameters, primarily for Earth orientation parameter measurement. Work.

2.Products and Services. This section aims to specify the quality and service requirements for geoorientation parameter products, primarily used for geoorientation... To provide parameter services and applications. Earth Orientation Parameters (EOP) Measurement and Services Part

1 Scope

GB/T 47327.2-2026 is the Chinese national standard covering the Earth orientation parameters - polar motion and the difference between UT1 and atomic time, measured

continuously because the planet's rotation is neither uniform nor about a fixed axis, and required by every satellite navigation and space tracking system. Part 2 covers the products and the service that delivers them. First edition, in force since 1 July 2026. It was issued on 31 March 2026 and has been in force since 1 July 2026, as a first edition. 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 content, type, accuracy, format, and service requirements for geoorientation parameter product documentation. This document applies to the generation, service, and application of Earth orientation parameter products.

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 17159 Terminology for Geodesy

GB/T 39267 BeiDou Satellite Navigation Terminology

GB/T 47327.1 Earth Orientation Parameters (EOP) Measurement and Services Part

3 Terms and Definitions

The terms and definitions defined in GB/T 39267, GB/T 17159 and GB/T 47327.1 apply to this document.

4.Abbreviations The following abbreviations apply to this document. MAE. Mean Absolute Error RMS. Root Mean Square UT. Universal Time WEB. World Wide Web