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**Real-time service of international GNSS monitoring and
assessment system (iGMAS) - Part 2: Product format**

全球连续监测评估系统 (iGMAS) 实时服务 第2部分：产品格式

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document is Part 2 of GB/T 44175 "Global Continuous Monitoring and Assessment System (iGMAS) Real-time Services". GB/T 44175 has been The following parts have been published.

1. Data stream format;

2. Product format. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the 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: Wuhan University, China Satellite Navigation Engineering Center, Institute of Precision Measurement Science and Technology Innovation, Chinese Academy of Sciences, Chang'an University, Space Information Innovation Research Institute of Chinese Academy of Sciences, China Aerospace Times Electronics Co., Ltd., and Wuhan University of Technology. The main drafters of this document are. Hu Zhigang, Jiao Wenhai, Yuan Yunbin, Huang Guanwen, Liu Ying, Chen

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Real-time service is one of the featured services of the Global Continuous Monitoring and Assessment System (iGMAS). GNSS users provide high-precision real-time navigation and positioning application basic data and products. GB/T 44175 "Implementation of the Global Continuous Monitoring and Assessment System (iGMAS)" was formulated to meet the exchange and processing requirements of data and precise positioning service corrections. Real-time Service" is planned to consist of two parts.

1.Data stream format. The purpose is to specify the real-time data stream provided by the global continuous monitoring and evaluation system to GNSS users format.

2.Product format. The purpose is to specify the format of real-time products provided by the global continuous monitoring and assessment system to GNSS users. Format. Global Continuous Monitoring and Assessment System (iGMAS) Real-time Services Part

1 Scope

GB/T 44175.2-2024 defines the product format for the real-time service of the international GNSS monitoring and assessment system, iGMAS. Where Part 1 fixed the format of the raw observation data stream coming in from the tracking stations, this part fixes the format of the corrections going out, which is what a user actually consumes: the orbit corrections, clock corrections, code and phase biases and the other real-time products that turn a broadcast ephemeris into a precise position. It sets the general principles, the information types, the information structure, the data fields and the mount point naming format used to subscribe to a stream, and then the format of each product in turn, with separate definitions for BeiDou, GPS, GLONASS and Galileo throughout, beginning with the orbit correction messages. It is aligned with the RTCM state space representation conventions the international community uses, which is what makes the Chinese real-time service usable by ordinary GNSS receivers. It took effect on 24 July 2024, and for anyone building or operating precise point positioning services that draw on Chinese real-time corrections, this is the format specification.

This document specifies the information types, structure and format of the global continuous monitoring and assessment system real-time service products. This standard applies to the generation of real-time service products of the global continuous monitoring and assessment system, as well as GNSS high-precision static and dynamic navigation and The research, production and testing of positioning and other application equipment are also applicable to the generation and application of GNSS real-time service products by other service providers.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 39267 Beidou Satellite Navigation Terminology

3.1 Terms and Definitions The terms and definitions defined in

GB/T 39267 and the following apply to this document.

3.1.1 real-time service After receiving observation data or completing processing, the global continuous monitoring and evaluation system provides data flow to GNSS users in the form of information flow. and product process.

3.1.2 Product The global satellite navigation system observation data obtained by the tracking station is used to generate a series of high-precision Static and dynamic navigation and positioning data stream.

Note. The real-time service products of the global continuous monitoring and assessment system mainly include orbit correction, clock correction, code deviation correction, user ranging accuracy, phase deviation, Stratum delay correction information, etc.

3.2 Abbreviations The following abbreviations apply to this document. APC. Antenna Phase Center DF. Data Field