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

GB/T 44381-2024

**Requirements for quality inspection of lunar and planetary
exploration data**

月球与行星探测数据质量检验要求

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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. 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 Chinese Academy of Sciences. This document is under the jurisdiction of the National Technical Committee for Space Science and Its Applications Standardization (SAC/TC312). This document was drafted by: National Astronomical Observatory of the Chinese Academy of Sciences and the 15th Institute of China Electronics Technology Group. The main drafters of this document are. Li Chunlai, Zuo Wei, Shi Xiaoqing, Qi Zhibo,

Liu Yuxuan, Zeng Xingguo, Zhang Zhoubin, Liu Jianjun and Guan Qi. Requirements for quality inspection of lunar and planetary exploration data

1 Scope

GB/T 44381-2024 sets the requirements for inspecting the quality of lunar and planetary exploration data. China now operates a substantial deep space programme, and the scientific return from it depends on data products that other researchers can trust and reuse decades later, which requires the quality of each product to be checked and recorded in a defined way rather than left to the instrument team. The standard identifies the objects of quality inspection, the data products themselves, their formats and structures and the file naming rules that identify them, then sets the general framework of the inspection: what is verified, at which processing level, and by whom. It then specifies the inspection content and methods, the completeness and integrity of the data, the conformance of the format and metadata, the continuity and coverage, the numerical validity and the consistency between products, together with the evaluation of the results and the quality report that accompanies a released product. For anyone working with Chinese lunar or planetary data, it is the document that says what the quality flags mean. It took effect on 23 August 2024.

This document specifies the requirements for lunar and planetary exploration data quality inspection and describes the methods for lunar and planetary exploration data quality inspection. This document applies to the scientific exploration data obtained by lunar and planetary exploration after the test mission and the formal on-orbit exploration. Quality inspection and quality assessment during the creation, processing, archiving, management, publication, exchange and application stages.

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 33996-2017 Classification and naming of lunar exploration data products

GB/T 33998-2017 Lunar information metadata

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Data product data product Effectively use data analysis methods to mine valuable information for users from massive amounts of original information and present it in an

intuitive and effective way. Digital information provided to user applications. [Source: GB/T 30114.1-2013, 4.32]

3.2 scientific data *scientificdata* Data products generated by processing detection data obtained through various scientific detection instruments.

3.3 Auxiliary data *auxiliarydata* Additional data used to support and supplement scientific data and help users better understand and use scientific data.

3.4 dataset Data products within a certain time range are classified and packaged according to detection tasks, payload types, and data product levels to form identifiable Other data sets.

3.5 metadata Data about data.