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

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**Specification for the levels of data products from space science
experiments**

空间科学实验数据产品分级规范

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Quarantine;
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Foreword

This standard is based on GB/T 1.1-2009 given rule drafting. This standard and its application by the National Standardization Technical Committee on Space Sciences (SAC/TC312) centralized. This standard is drafted by: Institute of Space Applications Engineering and Technology Center. The main drafters of this standard. Li Shengyang, black Bao Qin, LI Xu Zhi. Space science experimental data classification product specifications

1 Scope

China's national specification for the levels of data products produced by space science experiments. It specifies the definitions and the division into levels of the data products from space science experiments, the general naming convention for data product and raw data files, and the format of each type of data product. It applies to the data products of space science experiment satellites and of manned space science experiments; it does not cover the data products of meteorological, oceanographic, resource and other Earth observation satellites, which may nonetheless refer to it. Space experiment data arrives as a stream of frames and packets from a spacecraft, and what a scientist eventually analyses is several transformations away from it. Between the two lie the steps that every mission performs and that every mission used to name differently: the raw telemetry as received; the same data with the transmission artefacts removed and the packets reassembled in time order; the instrument counts converted to physical units with the calibration applied; the data placed in a geometric and temporal frame; and the derived products built from all of that. Numbering those stages is what a level scheme does, and its value is entirely in being shared. A dataset described as level 2 by one mission and level 1B by another cannot be compared, combined or archived together, and a scientist receiving a file has to ask what has been done to it - which for data that will be reanalysed decades later is a question with no one left to answer it. So the standard fixes the levels, the definitions of the data frame, the packet and the products at each level, the file naming convention that carries the level and the provenance in the name itself, and the format of each product type. Issued on 5 November 2012 and in force since 15 February 2013.

This standard specifies the definitions and the level of division of space science experiments data products, general product data and the original data file naming convention. The format of various types of data products. This standard applies to space science experimental satellite and manned space science experiments data products, not including meteorological, oceanographic, and other resources Earth observation satellite data products, other satellite data products can refer to use.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 Data frame dataframe Data link layer protocol data unit type standard, consists of a fixed structure and data packets.

2.2 Packet datapacket Oriented applications suitable for single-standard data protocol type from the source (application process) to the terminal (data system) data transmission. Yuan, by the application header and data plus check word composition.

2.3 Dataset dataset Stored together a collection of related data.

2.4 Space science data products spacesciencedataprodukt Raw scientific data space science experiments and space exploration and post-processing of the acquired data sets generated (see 2.3).

2.5 Service data products housekeepingdataprodukt Payload and spacecraft platform operating status and post-processing of raw data generated data sets.

3 Abbreviations

The following abbreviations apply to this document. CCSDS. Advisory Committee for Space Data Systems (ConsultativeCommitteeforSpaceDataSystems) CDF. Universal Data Format (CommonDataFormat) CSV. Comma Separated Values
 \u200b(CommaSeparatedValue) FITS. flexible image transmission system
 (FlexibleImageTransportSystem) HDF. Hierarchical Data Format (HierarchyDataFormat) PDS. Planetary Data System (PlanetaryDataSystem) XML. Extensible Markup Language (ExtensibleMarkupLanguage)