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

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**Requirements for remote sensing data distribution and user
services for land observation satellites**

陆地观测卫星遥感数据分发与用户服务要求

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed by China Aerospace Science and Technology Corporation. This standard is under the jurisdiction of the National Aerospace Technology and Application Standardization Technical Committee (SAC/TC425). This standard was drafted. China Resources Satellite Application Center, 21st Century Space Technology Application Co., Ltd. The main drafters of this standard. Chen Weirong, Wen Qiang, Liu Guodong, He Jianjun, Zeng Yong, Li Yutang, Qin Jingfang, Zhu Hua. Land observation satellite remote sensing data distribution and User service requirements

1 Scope

China's national standard for how land observation satellite data reaches its users. It specifies the requirements for data distribution, the service requirements, the service procedures, the user management requirements and the associated technical support and services. The value of an Earth observation programme is realised at this step and nowhere else. A satellite that works perfectly and whose data nobody can find, order, understand or afford has returned nothing. That is not a hypothetical failure - it has been the normal condition of many national programmes, whose archives sat behind catalogues nobody could search and licences nobody could accept. What this standard covers is unglamorous

by design: what the catalogue must let a user do, how an order is placed and fulfilled, what metadata travels with a product, how users are registered and their entitlements managed, and what support they can expect. It is the difference between an archive and a service.

6.1.2 Archive data retrieval conditions The search conditions should pay attention to the user's search habits, and place the search conditions commonly used by users in a prominent position. Search conditions include but do not Limited to.

c) collection time;

f) product level;

6.1.3 Requirements for displaying archived data retrieval results The retrieval results should visually show the information that the user is most concerned about, and meet the following requirements.

a) Display the search results in the form of entries, and display the total number of entries in the search results;

b) display the location information in the form of a map, and the location information is displayed on the map in the form of a vector;

c) The information that should be clearly displayed in the search results includes satellites, sensors, acquisition time, latitude and longitude information, etc.

2 Programming data service process

6.2.2 Programming data service requirements For satellites in orbit, the data provider shall provide programming data services according to user requirements and meet the following requirements.

a) Provide satellite orbit calculation services and satellite programming services in accordance with users' requirements for area, time and resolution;

b) The user should submit a programming application 7 working days before the implementation of the programming task;

c) timely feedback on satellite transit and satellite programming to users, generally feedback within 3 working days;

d) If the user has a request to cancel the satellite programming service, it should be submitted at least 3 working days before the implementation of satellite programming;

e) Satellite programming should take full account of weather factors, and in the case where weather forecast information does not meet imaging requirements, it should be determined in consultation with the user Whether to implement programming.

3 Terms and definitions

The terms and definitions defined in GB/T 14950, GB/T 17694, GB /Z 28586, and GB/T 32453 as well as the following apply to this document In order to facilitate the use, certain terms and definitions in GB/T 17694 are repeatedly listed below.

3.1 Dataproduct A data set or series of data sets consistent with a data product specification. [GB/T 17694-2009, definition B.107]

3.2 Datadistribution The process by which a data provider provides satellite data products to users.

3.3 Archived data Satellite data collected and archived.

3.4 Programming data Plan the collected satellite data according to user needs.

3.5 Recording time The moment when the satellite collects data from the ground target.

3.6 Rational polynomial coefficient RPC A sensor-independent general-purpose imaging geometry model is a fitting form of the sensor's strict geometric model.

3.7 Emergency requirement To meet the demand for time-sensitive satellite data such as natural disasters and emergencies.

4 Acronyms

The following abbreviations apply to this document. BigTIFF. BigTagImageFileFormat GeoTIFF. Georeferenced TagImageFileFormat JPEG. Joint PhotographicExpertsGroup XML. Extensible Markup Language

5 Data distribution requirements

5.1 Data Product Type Satellite remote sensing data products should mainly include the following products.

a) Optical remote sensing data products.

--- Full color data products;

--- Multispectral data products;

--- Hyperspectral data products;

--- Infrared data products;

--- Other optical remote sensing data products.

b) Microwave remote sensing data products.

--- Active microwave data products;

--- Passive microwave data products.

c) Other remote sensing data products. such as geophysical data products.

5.2 Data Product Classification The products are classified according to the processing level of satellite data products, and are divided into 0 to 6 products. details as follows:

a) Level 0 (L0) is the original data product obtained by processing the data received by the ground station through de-formatting, etc .;

b) 1 (L1) and 2 (L2) products are basic data products that are widely used in various industries and fields. Division of processing levels for geometric correction;

5.3 Distribution

5.3.1 Optical Remote Sensing Data Products The distribution of optical remote sensing data products should generally include the following.

--- Optical image data;

--- Metadata files, including auxiliary data such as radiation calibration coefficients, satellite attitude orbit information, and image geographic location;

--- thumbnail (quick view);

--- RPC parameter file (optional for L1 products).

5.3.2 Microwave Remote Sensing Data Products The distribution of microwave remote sensing data products should generally include the following.

--- Microwave data;

--- Metadata files, including auxiliary calibration data such as radiation calibration coefficients, satellite attitude orbit information, polarization mode, and geographic location

--- Thumbnails (quick view).

5.3.3 Other remote sensing data products The distribution content of other remote sensing data products such as geophysics should generally include remote sensing data and metadata files.

5.4 Distribution format Image-type remote sensing data products are usually distributed in scenes, frames or designated areas.

a) Image data is in standard GeoTIFF format, JPEG2000 format or BigTIFF format;

b) the metadata file is in XML format;

c) The thumbnails are in JPEG format. Non-image-type remote sensing data products are distributed as uncompressed raw files. Advanced products and user-defined products can be customized according to user requirements. Format for distribution.