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

GB/T 30114.2-2014

**Terminology for space science and applications - Part 2: Space
physics**

空间科学及其应用术语 第2部分：空间物理

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Foreword

GB/T 30114 "term space science and its applications" is divided into eight sections.

--- Part 1. General basis;

--- Part 2. Space Physics;

--- Part 3. space astronomy;

--- Part 4. Lunar and Planetary Science;

--- Part 5. space life sciences and biotechnology;

--- Part 6. Aerospace Medicine;

--- Part 7. microgravity science;

--- Part 8. Space Earth Science. This section GB/T Part of 230,114. This section drafted in accordance with GB/T 1.1-2009 given rules. This part of the National Standardization Technical Committee on Space Applications and Science (SAC/TC312) centralized. This section drafted by: Peking University, Institute of Geology and Geophysics, Chinese Academy of Space Science and Applied Research Center, National Astronomical Observatories, the National Space Weather Monitoring and Warning Center. The main drafters of this section. Zhang Dong and Fu Yan Sui, Wei Yong, Cai Lei, Hu Zhongmin, Li Ling Osmanthus fragrans, Liu Libo, a certain Chen, Xu sent away, Liu, Chen Guangming, division Liqin, Li Tao, Lvjian Yong, Zhao found that Wang Huaning, HE Han. Space Science and Its Application term Part 2. Space Physics

1 Scope

China's national terminology standard for space physics. It is Part 2 of GB/T 30114 and defines the common technical terms of space physics and the terms whose definitions need to be harmonised for its applications. Space physics is the study of the plasma environment between the Sun and the planets: the solar wind, the magnetosphere, the ionosphere and the coupling between them. It is an unusual field to write a vocabulary for, because it grew from three separate traditions - solar astronomy, geomagnetism and upper atmosphere research - which developed their own terms for the same phenomena and continued to use them after the fields merged. A magnetic storm, a substorm, a sudden commencement and a geomagnetic disturbance are related and distinct, and the relationships are not obvious from the names. And the field has an applied side that has grown far beyond the scientific one: space weather affects satellite operations, communications, navigation, power grids and aviation, and the people acting on space weather information are engineers and operators rather than researchers. A satellite operator deciding whether to postpone a manoeuvre, a grid operator watching for geomagnetically induced currents, an airline rerouting a polar flight and a navigation service assessing ionospheric error all consume the same products and need the terms in them to mean one thing. That is the harmonisation the scope refers to. The part defines the terms across the domain - the Sun and the solar wind, the magnetosphere and its regions and boundaries, the ionosphere, the radiation environment, the disturbances and indices, and the measurement and modelling vocabulary. Issued on 5 December 2014 and in force since 1 April 2015.

GB/T 30114 in this section defines the common technical terms and definitions of space physics and applications need to harmonize definitions. This section applies to space physics and application of relevant standards, technical documentation preparation, and related engineering and scientific exchanges application.

2 Solar physics terms

2.1 Photosphere photosphere Located in the bottom of the solar atmosphere, corresponding to the visible surface of the sun seen.

2.2 Chromosphere chromosphere Solar spectral lines H α , helium and calcium lines K and H lines enhanced source region.

2.3 Corona corona The outermost layer of the solar atmosphere, extending from the surface to the chromosphere millions of kilometers of interplanetary space.

2.4 Coronal hole coronalhole Low density region in the solar atmosphere. NOTE. On the coronal soft X-ray and extreme ultraviolet image can be observed in large irregular dark areas.

2.5 Filament filament Gas clumps suspended by magnetic fields to confine the solar atmosphere above the chromosphere to the brighter day surface is presented as a dark background bands.

Note. When the filament at the edge of the sun, they also called prominences.

2.6 Sunspot sunspot Dark spots of sunlight on the ball, has a strong magnetic field and low temperature properties.

2.7 Solar rotation week solarrotationperiod The time required for one rotation of the sun.

Note. an average of about 27 days.

2.8 Solar flares solarflare Sudden release of energy in the solar atmosphere process, the performance of some local region face daily band of radiation flow suddenly increased.

2.9 Optical Flares opticalflare Local area day surface of the optical band radiation flow suddenly increased.