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Space debris collision warning technical requirements

空间碎片碰撞预警技术要求

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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.

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Technical requirements for space debris collision warning

1 Scope

This document establishes the technical process of space debris collision warning, specifies the specific requirements and main models of each process link, and gives Related instructions.

This document applies to collision warnings for spacecraft, launch vehicles and space debris that can be monitored and catalogued, including launch collision warnings and on-orbit collision warning.

2 Normative references

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3 Terms and definitions

The following terms and definitions apply to this document.

3.1 space debris spacedebris

All non-functional man-made objects in Earth orbit or re-entering the Earth's atmosphere.

Note. Includes fragments and components of man-made objects.

3.2 cataloging

The process of determining and registering orbital parameters and other information about space objects from observations and other data sources.

3.3 and assessment, and the process of issuing alerts

Before the launch of spacecraft and launch vehicles, the collision risk between the launch vehicle and other space debris in the early stage after takeoff and orbit entry is predicted.

3.4 on-orbit collision warning

The process of predicting and evaluating the risk of spacecraft on-orbit collision and issuing alerts.

3.5 orbitalconjunction

The process of two space objects in orbit coming into close proximity.

3.6

The process of predicting the specific parameters of two space objects when their orbits meet and assessing the risk of a collision.

Note. Specific parameters include collision probability, intersection distance, intersection angle, etc.