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RESEARCH ON INTERACTIONS BETWEEN NEAR-EARTH SPACE ENVIRONMENTS AND
HUMAN SPACE EXPLORATION ACTIVITIES

Abstract

The emphases of this article lie on the discussions on the research progress in near-earth space environments and interactions between near-earth space environments and human space exploration activities. Unlike the climates in atmosphere, space environments won't change as obviously and violently as that in atmosphere. But, space environments, such as electromagnetic environment variety, solar storm, etc can also influence human space activities obviously. Even these influences can decide the tasks will success or not. On the other side, the situation of space environments influences the protection design against the hostile open space environments, the launch window selection, and orbital design and so on. Meanwhile, the human space activities influence the space environments on the contrary and some of these influences can be acceptable in some tolerance, but some others can not. In this article, a classification method will be tried to put forward to decide the influence can be acceptable or not, and make out several hypotheses to make the space environment better to provide more friendly relationship between human, space systems and space environments.