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RESEARCH ON TOPOLOGY NETWORK CONSTRUCTION TECHNOLOGY OF UPLINK
CONTROL JOB INFORMATION FOR FLIGHT CONTROL REQUIREMENTS

Abstract

Spacecraft uplink control is a complex task implementation process, which is based on the requirement of flight control, limited by the control mode and data format of spacecraft, and jointly participated by several basic operation units of ground operation and control system. Flight control requirements are the embodiment of flight control decision-makers at the task level, while control operations are the embodiment of the implementation level to achieve the established objectives. The uplink control operation information topology network construction technology for flight control requirements studied in this paper can automatically transform flight control requirements into operation implementation information, achieve a high degree of coordination and effective isolation between highly abstract flight control requirements and specific task implementation, greatly improve the automation and expert level of ground operation control system, and provide reliable, safe and efficient operation control system. The operation lays a technical foundation. The research results have been successfully applied in the Tianzhou-1 mission of the Space Laboratory.