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STUDY ON EVALUATION METHODS FOR SPACE INFORMATION NETWORK RESILIENCE

**Abstract**

Resilience in the face of network failures, environmental challenges or hostile actions is one of the core competencies to be considered in space information network construction. Considering the unique periodic dynamic change of network topology, the onboard network equipment is difficult to be replaced on demand, and the space environment security threats are complex and diverse, many space information network capability adaptive approaches in order to maintain the network resilience when the space information network is attacked by the outside are put forward. At this time, it is of great significance to evaluate the network resilience after adopting various capability adaptive approaches. Based on the introduction of a three-dimensional resilience analysis model including time, probability and system capability, this paper proposes a quantitative evaluation method for space information network resilience and completes the network resilience evaluation through an example considering the impact of various adverse events and various capability adaptation approaches. The paper's achievement can provide a useful reference for space information network's selection of various capability adaptation approaches.