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Cyber-security threats to space missions and countermeasures to address them (4)

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PREDICTION AND ANALYSIS FOR CYBER-SECURITY THREATS TO FUTURE SPACE  
INFORMATION NETWORK

**Abstract**

Global internet users have surpassed 3 billion in 2016 while the number in 1995 is just 35 million. Predictably, with the expansion of human activities, it is quite possible that anybody can access internet anywhere, anytime in the near future. However, thanks to the existence of remote inland countries, island nations, seas and other untraversed regions (including the outer space), the goal cannot be achieved without the help of space information network. It is a remarkable fact that cyber-security threats have been very serious in ground network. Given the particularity of space information network, how to deal with its cyber-security threats is more significant and necessary. In this paper, firstly, current status of space information network and its characteristics different from ground network are researched; Secondly, cyber-security threats to ground network are introduced and analyzed; Based on the above two parts, prediction and analysis for cyber-security threats to future space information network is done; At last, we give the countermeasures to address these threats.