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Cyber-security threats to space missions and countermeasures to address them (2.D5.4)

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CYBERSECURITY OF SPACE CAPABILITIES: A MULTI-PRONGED APPROACH TO ENSURE THE CONTINUED ACCESS TO AND USE OF SPACE

Abstract

Cyber is being seen as an increasingly viable option for interfering with the use of space and could result in a highly unstable domain. But while multiple countries likely possess cyber capabilities that could be used against space systems, actual evidence of cyber attacks in the public domain are limited. Additionally, a growing number of non-state actors are actively probing commercial satellite systems and discovering cyber vulnerabilities that are similar in nature to those found in non-space systems.

Yet there is a clear trend toward lower barriers to access, and widespread vulnerabilities coupled with reliance on relatively unsecured commercial space systems create the potential for effective and damaging cyber attacks. This threat deserves attention and will likely only continue to grow in severity.

This paper will examine the relationship between space and cyber from the viewpoints of commercial, policy, and international actors, and discuss ways in which stakeholders can ensure that their space capabilities will be reliable and accessible over the long-term.