Department of the Air Force
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DEPARTMENT OF THE AIR FORCE
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Space Survivability Study

Abstract

The United States Air Force is vitally dependent on capabilities delivered or enabled by military, Intelligence Community, civil, and some commercially available space assets. Vulnerabilities in our pace systems could result in the loss of critical space-based capabilities, such as communications, positioning, navigation and timing, and ISR that directly support our warfighters. Our ground stations, launch sites, satellites, and the links between them are vulnerable to direct physical attacks, laser weapons, jamming, nuclear detonations and kinetic kill by space-based systems; these threats appear to be increasing. Our ground stations and satellites are difficult and expensive to replace and would require years - sometimes decades - to be fully reconstituted.

This study addresses the spectrum of our military reliance on space systems, the threats to those systems, their vulnerabilities, and appropriate response actions. It also considers the current state of integration of the nation’s ground and space capabilities for rapid detection, assessment of and response to potential attack and offers recommendations on technological and operational options for improving the survivability of current and future U.S. space systems.

This study was conducted in response to a request by the Secretary of the Air Force and the Chief of Staff of the Air Force.

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