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# Space Operations

By WILLIAM L. SHELTON

**T**he commander, U.S. Strategic Command (USSTRATCOM), established the Joint Functional Component Command for Space (JFCC SPACE) to optimize planning, execution, and force management of Department of Defense space operations. The commander, 14<sup>th</sup> Air Force, was designated as the commander, JFCC SPACE, to conduct space operations, exercise operational control of designated space and missile warning forces on behalf of the USSTRATCOM commander, and act as the Global Space Coordinating Authority. As coordinating authority, the commander of JFCC SPACE ensures unity

of effort by developing, coordinating, and conducting operational-level space campaign planning and strategy development in support of U.S. Strategic Command and other combatant commands.

Through the planning and execution of space control, support, and force enhancement operations, the JFCC SPACE commander produces effects for combatant commanders, such as providing positioning, navigation, and timing for military and civil use; providing communications to remote locations beyond the line of sight of terrestrial communication systems; and supporting battlespace awareness and characterization



**Titan IV-B rocket launches carrying a National Reconnaissance Office satellite**



Accessing satellite information at the Space and Missile Systems Center

U.S. Air Force (Jose Hernandez)



U.S. Air Force (Pamela Taubman)

through space systems. The desired JFCC SPACE endstate is unity of command and effort in the unimpeded delivery of full-spectrum joint space effects to supported commanders and the ability to deny the benefits of the space medium to adversaries for purposes hostile to the United States. In order to reach this desired endstate, the United States must have robust, efficient, and effective space-based capabilities. Also, our operations centers (the Joint Space Operations Center and the Air Operations Centers) must

work closely together to deliver the space effects that combatant commanders demand.

To ensure that the United States and its allies have the freedom to operate in space, the JFCC SPACE commander focuses first and foremost on attaining more persistent, predictive space situational awareness that is integrated with all-source intelligence. By extending battlespace awareness into the medium of space, this space situational awareness gives the commander access to the indications and warnings that can characterize an adversary's

capability and intent. With improved space situational awareness as a foundational capability, the commander can build a campaign plan, based on combatant command objectives, to execute tactical-level operations related to satellite operations, missile warning, defensive space control, and offensive space control. Space situational awareness thus enables command and control of space resources to achieve desired space effects.

The successful integration of space-based capabilities into U.S. military operations increases reliance on, and demand for, those capabilities. The 2006 National Space Policy highlights the fact that the Nation "is critically dependent on space capabilities, and this capability will grow." Growth in the use

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*space situational awareness gives the commander indications and warnings that can characterize an adversary's capability and intent*

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and exploitation of space increases the threat in the space medium, following the historical precedent of the use of ground, air, and cyberspace media. Protecting space assets against attack and characterizing and assessing anomalous events as potential attacks on space assets are extremely complex undertakings. But they are absolute prerequisites for ensuring that space capabilities are available to further U.S. national security, homeland security, and foreign policy objectives.

With an eye to the future, the JFCC SPACE commander's priorities include improving space situational awareness capabilities, strengthening Defense Department partnerships, and developing tactics, techniques, and procedures to execute defensive space control operations, thereby protecting our vital space capabilities. Near-term milestones include collocating the Space Control Center, currently located at Cheyenne Mountain, Colorado, with the Joint Space Operations Center at Vandenberg Air Force Base, California; advocating upgrades to improve space situational awareness; and providing the command and control capability that produces timely space effects for combatant commanders. **JFQ**

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