
Strengthening Space and National Security

Relevant to:

The White House
Department of Defense
Department of State



SECURE
WORLD
FOUNDATION



Strengthening Space and National Security

Growing reliance on space for U.S. national security and the proliferation of counterspace capabilities have increased concerns about how to protect and defend U.S. space capabilities. Current U.S. national security space policy focuses on increasing the resilience of space capabilities to deter attacks while also more closely integrating them with commercial and allied capabilities. The United States has also publicly declared space as a warfighting domain and embarked on a large-scale reorganization of military space capabilities with the creation of the U.S. Space Force and the re-establishment of U.S. Space Command. The United States should focus on how effective current resilience and reorganization efforts will be, as well as the role of offensive counterspace capabilities, norms of behavior, and space arms control.

Background

U.S. national security depends heavily on space capabilities. Space-based services such as satellite communications; positioning, navigation, and timing (PNT); and remote sensing are critical force enablers for the U.S. military. Many of these same services are key parts of the United States and the global economy. Space capabilities also provide nuclear command and control and strategic warning that are fundamental to strategic stability. As such, any significant disruption—or even the hint of it—could have serious consequences for national security, as well as societal and economic ripple effects.

Threats to space capabilities have changed over time. During the Cold War, although the threat of nuclear war deterred outright conflict in space, the United

States and the Soviet Union developed both offensive and defensive capabilities. After the fall of the Soviet Union, the United States saw space as a potential “sanctuary”—free from serious hostile threats and optimized space capabilities for performance. Since 2010, the renewed development of offensive counterspace capabilities, particularly by China and Russia, has sparked new concerns about how to best protect U.S. space assets and deter attacks.

Two main strategies exist to deter attacks. One is deterrence by denying the benefits of attacks, which can be done by making space systems more resilient to attacks. The second is by deterrence by threat of force, which can be done by having offensive capabilities to be used against an adversary’s capabilities, in space or elsewhere. Deterrence based on denying benefits of aggression presents



significant bureaucratic and technological challenges, while deterrence by threat needs to overcome the United States' much greater reliance on space than its adversaries. Also, deterrence by threat presents the risk of provoking other countries to mirror U.S. actions, leading to the classic security dilemma, where protective measures by one country are seen as intimidatory by others and lead to an escalating spiral of measures that are ultimately destabilizing.

International diplomacy is also a component of space security. Arms control in space has been a standard part of nearly every U.S. national space policy since the 1950s. The United States has played an active role in shaping global space governance to suit its national interests, including security, with the last major effort being the 1975 Registration Convention. While the 1967 Outer Space Treaty includes a ban on the placement of weapons of mass destruction in outer space, there are generally no specific restrictions on testing or deployment of conventional space weapons. Since the 1980s, there have been repeated UN resolutions aimed toward the prevention of an arms race in outer space (PAROS). Since 2008, Russia and China have proposed initiatives to ban the placement of weapons in outer space, but they have not gained wide international acceptance. Encouragingly, there has been a shift in the past five years at the multilateral level to focus on norms, rules, and principles of responsible behavior in space, resulting in some progress in terms of creating common understandings of what is responsible and irresponsible behavior. U.S. engagement and leadership in these discussions is crucial, lest U.S. adversaries step into the leadership vacuum.

Current Policy and Gaps or Shortcomings

The United States has had a long-running debate about how best to organize its national security space capabilities to meet potential threats. The debate had focused on whether space should have a separate military service or combatant command

Encouragingly, there has been a shift in the past five years at the multilateral level to focus on norms, rules, and principles of responsible behavior in space, resulting in some progress in terms of creating common understandings of what is responsible and irresponsible behavior.

or be integrated into existing organizations, and whether military and intelligence space acquisitions and operations should be integrated or remain separated. In December 2018, President Trump signed a memo directing the Secretary of Defense to re-establish U.S. Space Command (USSPACECOM); it is in charge of day-to-day military space operations. In February 2019, President Trump signed the Space Policy Directive-4 (SPD-4), which called for the creation of a separate U.S. Space Force (USSF) within the Department of the Air Force to oversee the operate, train, and equip functions for military space activities. In December 2021, the Biden administration unveiled its Space Priorities Framework, which outlined efforts to strengthen stability in space and increase the resiliency of U.S. space capabilities. In 2024, both the Department of Defense (DoD) and the USSF released commercial strategies in order to best utilize those capabilities to enhance military space resiliency and deter attacks. International partnerships are also being promoted as having similar results for the U.S. national security space enterprise.

Recently, in addition to focusing on improving the resiliency of U.S. military space programs, government officials and policy documents have increasingly acknowledged interest in and development of offensive counterspace capabilities. There has been a focus on what is being termed "responsible counterspace campaigning," which strives to achieve both offensive and defensive space operational needs while avoiding destruction of satellites that would create large amounts of orbital debris. In April 2022, the United States announced



SPACE SUSTAINABILITY AND POLICY

A Strategic Briefing for U.S. Leadership

its commitment not to conduct destructive direct-ascent anti-satellite (DA-ASAT) missile tests, largely because of the danger debris presents to all space actors, including the U.S. military and the U.S. space industry. In total, 38 countries¹ have since made this commitment, underlining the willingness of many countries to take official steps in order to mitigate this threat. The commercial sector is also wary of the danger that debris from these sorts of tests pose to their investment: as of January 2025, 52 companies from 16 countries (including 21 U.S. companies) have signed an industry statement of support² that SWF coordinated for the DA-ASAT missile test moratorium. Officials have also been discussing the need for “space fires,” which refers to systems capable of attacking an adversary’s space capabilities. This discussion of more offensive counterspace capabilities for the United States is being accompanied by an increased focus on understanding what is happening in the space domain (i.e., space situational awareness).

In February 2024, reports emerged about the existence of a new kind of Russian space-based anti-satellite (ASAT) program. U.S. officials have clarified that this capability is still in development and not yet deployed in orbit, but if done so, it would constitute a breach of the Outer Space Treaty. Although details still remain scarce, it appears the capability in question would utilize a nuclear weapon to generate an electromagnetic pulse (EMP) that could indiscriminately damage or disable large swaths of satellites. Last fall, the United States successfully led a UN General Assembly resolution urging Member States not to develop nuclear weapons or any other kinds of weapons of mass destruction specifically designed to be placed in outer space.

U.S. government agencies are also increasing their focus on resiliency and norms of behavior as a way to ensure continued access to and use of space. In July 2021, Secretary of Defense Austin released the first “Tenets of Responsible Behavior in Space,” a set of norms that USSPACECOM would use to guide its military space operations. DoD released its Space Policy Review and Strategy of Protection of Satellites in September 2023, which noted, “In collaboration with the Department of State, the Department of Defense is committed to promoting standards and norms that ensure the domain remains secure, stable, and accessible.”

This focus on norms of behavior has also been the center of U.S. efforts in multilateral fora discussing space security topics. Since the Eisenhower administration, U.S. national policy has largely supported space arms control discussions that were verifiable, equitable, and in the U.S. interest. The United States played a critical role in established arms control principles in the Outer Space Treaty and bilateral nuclear treaties during the Cold War. In recent decades, the United States has stepped back from support for legally binding initiatives, preferring to promote nonbinding agreements instead. Over the past five years, there have been international discussions on norms, rules, and principles of responsible behavior in space that have begun to yield results, in terms of actionable steps, to make space stable and predictable for all. ●

¹ Secure World Foundation, “Multilateral Space Security Initiatives,” last updated November 5, 2024, <https://swfound.org/multilateral-space-security-initiatives/>.

² Secure World Foundation, “Space Industry Statement in Support of International Commitments to Not Conduct ASAT Tests,” last updated March 3, 2025, <https://swfound.org/industryasatstatement/>.



Policy Recommendations

→ Refer to space as an “operational” domain rather than a “warfighting” domain.

By referring to space as a “warfighting” domain, the United States has handed its adversaries an easy diplomatic win by allowing them to use that phrasing as evidence that the United States is the one increasing tensions and weaponizing space. Referring to space as an operational domain would be an acknowledgment of how the military needs to continue to operate in and through space, would be in line with how others refer to it (including NATO), but would not hamper U.S. diplomatic efforts required to meet national security space concerns and goals.

→ Discourage the deliberate creation of debris.

The United States should maintain its current policy of committing not to conduct destructive DA-ASAT missile tests, as well as continuing to promote this during multilateral discussions in order to stigmatize this sort of testing and also encourage others to commit to this as an emerging international norm of responsible behavior in space.

→ Establish international norms of behavior for military space activities.

The United States should work with other countries to establish common understandings for what is considered responsible behavior in space, particularly for military activities that could cause misperceptions or increase tensions, such as rendezvous and proximity operations in orbit. The United States should use space situational awareness in order to help verify such actions.

→ Redouble efforts to improve resilience.

The United States needs to continue working to ensure the resiliency of its space assets via more responsive space launch, proliferated satellite architectures across multiple orbits and payloads, and more use of U.S. commercial capabilities, as well as the capabilities of U.S. allies.