
Focus Issue: Continuing the Destructive DA-ASAT Missile Test Moratorium

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The White House
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In April 2022, the United States announced that it was making a commitment not to conduct destructive direct-ascent anti-satellite (DA-ASAT) missile tests and that it seeks to establish this as a new international norm for responsible behavior in space. To date, 37 other countries have also made this commitment. The destructive DA-ASAT missile test moratorium was made with the strong support of the Department of Defense (DoD) because space is a key national security enabler, and the deliberate creation of debris on orbit impedes the United States' ability to access and use its space capabilities. The United States should continue its support of this moratorium and encourage more countries to make this pledge.

An air-to-air left side view of an F-15 Eagle aircraft releasing an anti-satellite (ASAT) missile during a test in 1985. Image credit: National Archive.

Background

Destructive DA-ASAT missile tests have created some of the largest increases in space debris in the last two decades, are still resulting in problems for operational satellites today, and will make operating in low Earth orbit more dangerous for years to come. To date, four countries have held these tests: the United States, Russia, China, and India. Given the growing global reliance on satellites and space applications, many space actors perceive that responsible space behavior includes avoiding deliberately creating long-lived debris, such as the kind that results from a destructive DA-ASAT missile test. In April 2022, the United States became the first country to declare a commitment to no longer conduct destructive DA-ASAT missile tests. The United States' pledge was prompted in large part by the destructive DA-ASAT missile test conducted

by Russia in November 2021, which created more than 1,800 pieces of trackable orbital debris. This declaration was soon followed by similar ones by many other countries. As of January 2025, 37 other countries have followed the United States' lead and made this declaration.¹

There is no way to remove debris from destructive DA-ASAT missile tests from space and depending on the altitude of the interception, the debris can remain in orbit for years, if not decades to come. For example, China's January 2007 destructive DA-ASAT missile test created over 3,500 pieces of trackable debris, of which over 2,500 pieces are still in orbit 18 years later. This is not only an issue for government actors: the commercial sector is increasingly affected by interruptions to space security and stability caused by these debris-producing events. This concern can be seen in the industry statement of

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



support² for the DA-ASAT missile test moratorium that SWF coordinated and which, as of January 2025, has been signed by 54 companies from 17 countries (including 22 U.S. companies).

Destructive DA-ASAT missiles have limited military utility compared to other options. They are unlikely to be useful as weapons, given that they are immediately attributable (unlike other nondestructive counterspace capabilities, like jamming or cyberattacks) and the resulting debris makes the domain more difficult to operate for everyone, including the United States. Additionally, it should be clarified that the moratorium on testing does not prevent the development and even use of such weapons in an actual conflict, should the decision be made to do so. Debris is agnostic in terms of whose satellites it threatens: it does not matter if the country that held the test is a geopolitical ally or not. Furthermore, as more countries shift to proliferated satellite networks, the tactical benefit of taking out just one satellite in a broad network drops. These types of tests also can establish a precedent that these sorts of tests are acceptable and thus encourage more countries to conduct them. That in turn runs the risk of inadvertent escalation or even possible deliberate use of destructive ASAT weapons during a conflict if this proliferation becomes more prevalent. Finally, destructive DA-ASAT missile tests are a threat to human spaceflight. Debris from those tests pose a collision risk to the International Space Station (ISS) as well as future commercial space activities; in June 2022, the ISS had to maneuver in order to avoid debris from Russia's November 2021 test.

Current Policy and Gaps or Shortcomings

This commitment not to conduct destructive DA-ASAT missile tests is well in line with DoD thinking on the issue. It was foreshadowed in Secretary of Defense Lloyd Austin's July 2021 memo that spelled out five tenets of responsible behavior in DoD space operations, one of which was to "[l]imit the generation of long-lived debris." In January 2024, the U.S. Space Force's Chief of Space Operations, General Chance Saltzman, released his thoughts on how the Space Force should operate in a white paper titled, "Competitive Endurance, a proposed theory of success for the U.S. Space Force." One of the three core tenets is to "Undertake Responsible Counterspace Campaigning." In it, he warns that "if we find it necessary to destroy the adversary's space-enabled kill web and the result is a full-scale destructive conflict in space, the loss of satellites and resultant debris would destabilize the space domain in a way that endangers the space capabilities the Joint Force depends on for success." Therefore, he argues that "space forces must preserve U.S. advantages by campaigning through competition without incentivizing rivals to escalate to destructive military activities in space." Creating an international norm that regards destructive DA-ASAT missile tests as irresponsible behavior and discourages their usage serves this goal.

Moreover, the United States has been working in multilateral fora to both generate more support for the concept of a destructive DA-ASAT missile test moratorium and to encourage more countries to make this commitment not to conduct those types of tests. By establishing agreed-upon norms of behavior in space and generating restrictions on destructive DA-ASAT missile testing, the United States is able to work with the international community to delegitimize the testing of these weapons in orbit. The United States, along with partner nations, has been injecting this idea into multilateral discussions

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/>.



on responsible behavior in space, where it has seen a groundswell of support at the country level. Additionally, on December 12, 2022, the United Nations General Assembly adopted Resolution 77/41,³ which called upon all States to commit not to conduct destructive DA-ASAT missile tests and to continue discussions in the relevant bodies to enhance space security. This is how global norms of behavior are established: have numerous countries indicate (through national commitments, voting on UN resolutions, incorporating them into international discussions of behavior that would strengthen space security) that they find this effort irresponsible and something truly against the international community's interest. ●

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³ United Nations General Assembly, “Destructive Direct-Ascent Anti-Satellite Missile Testing,” resolution adopted on 7 December 2022, A/RES/77/41, 12 December 2022, <https://undocs.org/en/A/RES/77/41>.



Policy Recommendations

→ Continue to support the destructive DA-ASAT missile test moratorium as a matter of U.S. policy.

The United States should continue to demonstrate leadership in norm-building by continuing to support the commitment not to conduct destructive DA-ASAT missile tests, both in terms of a policy that the United States will hold itself to and to promote more countries making this commitment themselves. The United States benefits from the stable, predictable space environment resulting from this moratorium.

→ Maintain a policy of not deliberately creating debris during military space activities and missions.

Deliberately creating debris on orbit will hamper the United States' ability to use and operate through space, ultimately harming U.S. national security. If the United States sets the precedent that this sort of action is acceptable, rival countries will follow, and ultimately the United States will comparatively suffer the most and thus be worse off than its adversaries.

→ Provide leadership in multilateral space security fora to shape norms of responsible behavior in space.

In April 2025, the United Nations is starting a four-year process of discussing issues related to space security called an "Open-ended working group on the prevention of an arms race in outer space in all its aspects." This is an excellent opportunity to generate momentum for international support of the idea that responsible space actors do not deliberately create debris on orbit through destructive DA-ASAT missile tests. Active participation in this forum would send a strong signal to the international community that the United States will continue to show leadership in being committed to the safety, security, stability, and long-term sustainability of space activities. Furthermore, it will provide a way to counter the influence of adversary nations in this forum; otherwise, in the absence of United States engagement and leadership, the discussions and outcome will be shaped to its adversaries' advantage.