



A Voluntary Kinetic ASAT Test Ban is Merely Symbolic



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Kinetic Anti-Satellite (ASAT) weapons tests have been in the news at fairly regular intervals for the wrong reasons. The Chinese ASAT test of 2007 caught public attention due to the enormous debris it created in space, most of which is still in orbit. During the past decade, Russia and China have conducted multiple ASAT tests, but none of them produced any debris of significant quantity. India conducted an ASAT test in 2019 that produced some debris, albeit at lower altitudes, most of which has decayed. The Russian ASAT test of November 2021, which produced significant debris, was perhaps the turning point that the global space community could have leveraged to broker a multilateral and complete ban on ASAT weapons. An earlier attempt was made by the Outer Space Institute based in Canada through an 'Open-Letter,' urging the United Nations General Assembly (UNGA) to take up consideration of a kinetic ASAT test ban treaty.

On April 18, 2022, US Vice President Kamala Harris announced that "the United States commits not to conduct destructive, direct-ascent anti-satellite missile testing." Through this statement, the US declared a self-imposed moratorium on kinetic ASAT testing and aimed to lead by example and establish a new international norm for responsible behaviour in space.¹ Since then, Australia, Canada, Germany, Japan, New Zealand, South Korea, Switzerland, and the United Kingdom have been quick to join the voluntary moratorium on kinetic ASAT testing.

Kinetic ASAT tests create debris on impact, which jeopardises the long-term sustainability of space and affects the safety of satellites and spacecraft for all nations alike. Accordingly, a draft resolution was introduced by the US in the 77th session of the UNGA first committee on November

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1, 2022, to halt destructive kinetic ASAT tests in outer space. The resolution was adopted by the General Assembly by a recorded vote of 155 in favour to 9 against, with nine abstentions (including India).² Though this is not a legally binding development, it reflects the momentum towards a weapons-free outer space, specifically the chorus for preventing further growth of debris in outer space.

The Indian space community has been divided in its opinion on the issue, and there have been mixed reactions to India's abstention at the UNGA. Having abstained from a vote at the UNGA, India needs to have a firm reason for its stand. Whether it serves India's defence strategy and posture or not may be a secondary issue here, but ostensibly, a voluntary moratorium on kinetic ASAT testing may do little for the sustainability cause in space. This certainly doesn't mean that India is willing to do a kinetic ASAT test. Through its statements on multiple occasions at the UN, India has conveyed that its focus is on "the use of space for 'welfare' and not for 'warfare'. India is opposed to the weaponisation of outer space and India has not and will not resort to an arms race in outer space."³ The reasons why India should keep a distance from such partial bans are enumerated in subsequent paragraphs.

Firstly, what could be the purpose of a voluntary moratorium on kinetic ASAT testing, which has been initiated by the US? Beyond the geopolitics of the issue, the primary concern is to prevent an increase in space debris, which is already a major concern for the safety of satellites and spacecraft. The other possible reason is to make a beginning to prevent the weaponisation of space while negotiations continue for a lasting treaty. However, both of these purposes may not be fulfilled through a voluntary initiative. As for debris, although kinetic ASATs have been a major contributor, they are not the only sources for creating debris. Debris is being generated by other means, like collisions, disintegration or explosions of rocket bodies in orbit, and various other natural and human activity-related causes. Also, destructive ASAT tests have been done on rare occasions, unlike the other debris-generating phenomena, which have a much higher probability of occurrence. As for preventing an arms race, today there are smarter ways to harm satellites. There is an ongoing, invisible arms race in space by way of electronic interference, cyber-attacks, and the repurposing of satellites in orbit for possible military objectives through proximity operations.

Secondly, if we consider space sustainability as being under threat, then just banning a kinetic ASAT may not be enough. It is a moratorium on the testing of a single type of ASAT weapon and on one of the many methods of testing. Effectively, this ban may result in other types of ASAT

weapons and other methods of testing kinetic ASAT gathering momentum. Moreover, the moratorium doesn't preclude tests against simulated targets in space.

The other issue is the relevance of a kinetic direct ascent ASAT weapon in today's scenario, where the option of more efficient and effective means of targeting satellites is available with Directed Energy Weapons (DEW), cyber means, electronic interference, and other in-orbit techniques. These kinetic ASAT weapons are unusable in a hostile situation for two reasons: (a) the debris fallout will render the nearby orbits permanently unusable for all users, irrespective of state affiliations; (b) it will attract global condemnation and isolate the defaulting state. Hence, more likely than not, these types of weapons will not be used and are only meant for deterrent posturing. There is also a changing employment philosophy owing to the diminishing utility and effectiveness of kinetic ASAT weapons in this era of mega-constellations. These constellations of satellites are designed to provide continuous coverage through multiple satellites. Hence, redundancy in services is in-built, and the loss of one or two satellites will not have any impact. The question, therefore, will be whether a state will use multiple kinetic ASATs to take down a network of satellites. It would be a cost-prohibitive exercise and an unachievable task, and therefore other means of targeting will have to be explored. So, by imposing a moratorium on kinetic ASAT testing, it would be an attempt to ban a weapon of yesterday for conditions that do not exist today.

The geopolitics of disarmament in space is rather interesting. The US and the erstwhile USSR have been testing kinetic ASAT weapons since the 1960s. Nuclear weapons have also been detonated in space till the Partial Test Ban Treaty of 1963 banned such tests. It can therefore be said that the US and Russia have achieved a certain level of proficiency in ASAT weapons. This would include China too, which has conducted at least ten kinetic ASAT tests from 2005 till now. Hence, those who have already tested their kinetic ASAT weapons multiple times are unlikely to continue doing the same. Newer space-faring states are unlikely to follow this path due to the shifting focus towards reducing space threats through norms, rules, and principles of responsible behaviours. Most nations do not possess the technological capability to conduct such missile tests. China and Russia, who voted against the UNGA resolution, are most unlikely to join a voluntary ban on ASAT testing. Russia's destructive kinetic ASAT in 2021, prior to its military offensive in Ukraine, demonstrated its capability and could possibly be the reason for a US-led initiative to ban kinetic ASAT testing. It is also worth noting that the resolutions only ban testing, not the actual use of weapons under hostile conditions. This leads one to believe that the US wants to deter other

countries from developing anti-satellite capabilities while protecting its own satellites from space debris.

While the US, through the UNGA, is trying to convince all states to adopt this moratorium on ASAT testing as an urgent, initial measure aimed at preventing damage to the outer space environment. The key question that remains is on the effectiveness of such a ban on controlling the weaponisation of space and containing further growth of harmful space debris. As for India's position, it has kept its options open by abstaining from the vote on the resolution. This has also created strategic ambiguity, which augurs well for India. Here on, India should press for a complete ban on all forms of weapons in space through binding multilateral agreements.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes:

¹ "FACT SHEET: Vice President Harris Advances National Security Norms in Space", *White House*, April 18, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/18/fact-sheet-vice-president-harris-advances-national-security-norms-in-space/>, accessed January 30, 2023.

² "Approving 21 Drafts, First Committee Asks General Assembly to Halt Destructive Direct-Ascent Anti-Satellite Missile Tests in Outer Space", *United Nations*, November 01, 2022, <https://press.un.org/en/2022/gadis3703.doc.htm> and <https://press.un.org/en/2022/ga12478.doc.htm>, accessed January 30, 2023.

³ 'Report of the Secretary-General on reducing space threats through norms, rules and principles of responsible behaviors (2021)', *United Nations*, <https://www.un.org/disarmament/topics/outerspace-sg-report-outer-space-2021/>, accessed January 30, 2023.