ISSUE BRIEF

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RUSSIAN ASAT TEST HERALDS HASTENING ARMS RACE IN OUTER SPACE

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Russia conducted an Anti-Satellite Test (ASAT) on November 15, 2021. Russia destroyed one of its inactive satellites the KOSMOS-1408 around 500 km above the earth. While this has raised a host of issues like the creation of 1500 pieces of space debris that will keep endangering space activities for years to come. The test was met with a barrage of protests from the US and its allies, statements from Russian officials with condemnations and counter condemnations. The issue warrants deeper analysis. Russia is one of four countries that have conducted ASAT's over the years. The others are the US, China and India. This comes in the backdrop of an increasing number of ASAT's over the years and a move towards the weaponisation of outer space. Thus, the issues involved warrant a deeper investigation and raise several political and legal questions on increasing threats and regulation of outer space.

The Russian Foreign Ministry confirmed the test but maintained that the test did not violate the 1967 Outer Space Treaty (OST). The OST bans the stationing of nuclear and other weapons of mass destruction in outer space and other celestial bodies but does not prohibit conventional weapons tests. It also claimed that the debris produced did not pose a danger to satellites or International Space Station (ISS). The Russian Defense Minister, Sergei Shoigu, said "We've tested a successful

forward-looking system. It hit the old satellite."[1] The Russian Defense Ministry maintained that it is carrying out planned activities on the reinforcement of the national defence capabilities, given the new US space strategy which aims to "establish a comprehensive military supremacy" in space.[2]

The test was followed by a barrage of condemnation from the US, members of Congress and the US allies. State Department spokesman, Need Price, said the "Russian test had led to space debris that posed a threat to the crew of the ISS."[3] Defense Department spokesperson, John Kirby, said that the US has "been very clear we would like to see norms for space so that it can be used responsibly by all spacefaring nations."[4] Russia also conducted a few ASAT's earlier in 2021 in April and July which also elicited protests and condemnations.

It, thus, raises the question of what are the possible motivations for Russia to conduct an ASAT while Moscow and Beijing have been the most ardent supporters of negotiating arms control in outer space. One possible logic could be that Russia is trying to motivate the US to discuss the Russian-Chinese treaty banning weapons into outer space. However, it may have the opposite effect and might make it easier for the US military to ask for new funds for its offensive space programmes. Also, the likelihood is that having unsuccessfully tried the avenue to negotiate an arms control treaty for outer space, Russia has accelerated its development of offensive space capabilities of its own.

Russia has directed energy weapons. These are terrestrial-based lasers that can blind or destroy satellites, space-based microwave weapons and nuclear-powered electronic warfare satellites. The US and China also possess these weapons. There are reports of a Russian "nesting doll," or "Matryoshka" killer satellites. In November 2019 Russia launched satellite KOSMOS-2542 which in December released a sub-satellite, KOSMOS-2543, which then carried out a series of manoeuvres going close to a US spy satellite. The US and UK have criticised Russia for the test and Dr Christopher Ford, the US Assistant Secretary of State, said: "What would appear to be actual in-orbit anti-satellite weaponry."[5]

China has also joined the race for ASAT capability and offensive space technologies. China conducted its ASAT in 2007. This was followed by protests and condemnations from the US, West and India.

1 Shannon Bugos, "Russian ASAT Test Creates Massive Debris," Arms Control Association, December 2021 https://www.armscontrol.org/act/2021-12/news/russian-asat-test-creates-massive-debris

2 "Russian Anti-satellite Weapon Test not to Affect Cooperation on ISS — NASA head," *Tass*, November, 2021, https://tass.com/science/1365941

3 "The Russian Military Confirmed that they Shot Down a Soviet Satellite during Tests," *Interfax*, November 16, https://www.interfax.ru/russia/803293

4 Bugos, "Russian ASAT Test Creates Massive Debris."

5 David Hambling, "US and UK Accuse Russia of in orbit Test of Nesting Doll Anti-Satellite Weapon," *The Forbes*, https://www.forbes.com/sites/davidhambling/2020/07/24/us-and-uk-accuse-russia-of-testing-in-orbit-anti-satellite-weaponry/?sh=494850c63f3e

Subsequently, China has significantly expanded its counter-space capabilities. They have high-powered lasers, co-orbital satellites, directed-energy weapons, electronic jamming, spoofing and cyber means. China has increasingly developed capabilities to damage enemy satellites through manoeuvring and using mechanical means.

India is also one of the countries that has developed ASAT capability. On March 27, 2019, it conducted an ASAT test that raised concerns that the resulting debris field may threaten orbiting space objects and that other states will develop similar weapons. Prime Minister Narendra Modi announced that New Delhi had successfully used a ballistic missile interceptor to destroy an orbiting satellite, becoming part of an elite set of countries possession this capability.[6] The Indian Prime Minister called it a "historic feat" and claimed that the country was "an established space power." However, the test directly threatens Pakistan's security that has assets in space that can be targeted by India. Pakistan Foreign Office stated: "This test should be a matter of grave concern for the international community, not only in terms of generation of space debris but also because of its ramifications for the long-term sustainability of peaceful space activities."[7]

The US also has ASAT capability as they can use their BMD interceptors as ASAT weapons. The US is also reported to have secretly developed terrestrially-based mobile laser proximity triggered radio frequency jammers, high-powered microwave systems and an active defence capability to degrade or destroy a target satellite or a spacecraft. They have also worked on microsatellites that are dual-use, which can service other satellites but can also be used to attack enemy satellites.

This ever-accelerating completion in space is not only dangerous, destabilising but also reflects yet another battleground among the world's major powers. This makes it imperative to work on arms control regulation in outer space lest this may also lead to an unchecked arms race.

The current legal framework does not prohibit states from carrying out debris-creating ASAT's. There is only one binding treaty the OST that bans the stationing of weapons of mass destruction in outer space and there is the Partial Test Ban Treaty that prohibits the testing of nuclear devices in the atmosphere or outer space.

There have been some attempts to negotiate arms control in outer space. The dual-use nature of many space-based capabilities including ballistic missile defence systems makes arms control

6 Kelsey Davenport, "Indian ASAT Test Raises Space Risks," Arms Control Association, May 2019, https://www.armscontrol.org/act/2019-05/news/indian-asat-test-raises-space-risks

7 "Pakistan Expresses 'Grave Concern' over Indian Space Weapons Test," *Al Jazeera*, April 3, 2019, https://www.aljazeera.com/news/2019/4/3/pakistan-expresses-grave-concern-over-indian-space-weapons-test

negotiations difficult. States like the US are unwilling to put any limitations on their capabilities. Moreover, Western states tend to prefer voluntary "soft law" instruments while Russia and China want to negotiate legally binding treaties.[8] China and Russia have long sought support for a draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects (PPWT). The EU proposed a code of conduct in 2008. It was revised and rebranded as the International Code of Conduct for Outer Space Activities in 2014. However, it was criticised by many states and the content and negotiations broke down in 2015. Again in 2018, the United Nations Institute for Disarmament Research proposed a set of guidelines for ASAT testing.[9] These were voluntary arrangements as opposed to anything legally binding. In December 2020, a UK led initiative resulted in a UN General Assembly resolution on reducing space threats through norms, rules and principles of responsible behaviour. It is noteworthy that the Western block favours norms and rules rather than any substantive ban on limiting capabilities. Thus, this has been the saga of arms control negotiations in outer space.

The window of opportunity to negotiate meaningful arms control is fast closing. Once all major powers have developed offensive weapons in outer space there will be no room for any state to dominate the final frontier – space. Developing space weapons is a two-edged sword, while it might give a state the power to target and destroy enemy assets, it also leaves its assets vulnerable to attack. Space is a medium that is offence dominated. This means that it is easier to attack assets in space rather than defend them. States like the US that wish to dominate space are the most vulnerable since it has one of the largest assets in space – both military satellites and civilian satellites.

8 Nivedita Raju, "Russia's Anti-satellite Test should Lead to a Multilateral Ban," December 7, 2021, https://www.sipri.org/commentary/essay/2021/russias-anti-satellite-test-should-lead-multilateral-ban

9 Ibid.

