

*COMMITTEE ON THE PEACEFUL  
USES OF OUTER SPACE  
(COPUOS)*

*Establishment of a legally  
binding agreement on the  
non-proliferation  
of space weaponry and  
counter-space capabilities*

A faint background illustration of a person holding a globe, standing between two large puzzle pieces.

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## ***I. INTRODUCTION***

The Committee on the Peaceful Uses of outer space (COPUOS) serves as a subsidiary to one of the programs for the United Nations Office for outer space Affairs (UNOOSA, 2025). Created in 1958 by the General Assembly and permanently established in 1959, COPUOS has worked to advance its goals among the Committee's 102 member states (ASLI, 2025). The committee receives administrative support from the Committee, Policy, and Legal Affairs Section of UNOOSA (UNOOSA, 2025). The main purpose of COPUOS is to promote international cooperation in the peaceful uses of outer space, including discussion of technological developments (UNOOSA, 2025). To achieve this, COPUOS has two subcommittees specialized for space collaboration and exploration. The first one is known as the Scientific and Technical Subcommittee, which focuses primarily on the consequences of scientific and technical progress in space. Meanwhile, the Legal Subcommittee focuses on discussing legal questions and concerns related to space exploration and establishing multilateral treaties (Kingdom of Netherlands, 2025).

Since COPUOS promotes international cooperation in the field of space exploration and space safety, the committee oversees the five treaties for International Space Law. These treaties were agreed upon in the first years of COPUOS existing. For starters, the outer space Treaty of 1967 is the foundation of international law. The treaty has key principles all members should abide such as how there is no sovereignty in outer space (no nation can own space, Moon or other bodies); space activities are for the benefit of all nations and all countries are free to explore outer space; weapons of mass destruction are prohibited in outer space (Space Foundation Editorial Team, 2025). The Rescue Agreement of 1968, in which all member states and signatories agree on taking all possible actions to rescue and ensure the safety of astronauts, and recover any space objects falling to Earth (Space Foundation Editorial Team, 2025). The Liability Convention of 1972 refers to how all signatories take full responsibility and liability for any damage their space objects cause and look towards procedures for adjudicating the damage (Space Foundation Editorial Team, 2025). The Registration Convention was established in 1973 and provides the UN Secretary-General power to register all space objects (Space Foundation Editorial Team, 2025). The Moon Agreement of 1979 acknowledges that any celestial body should be used for peaceful purposes and shouldn't be contaminated (Space Foundation Editorial Team, 2025).

Space weaponry and counter-space capabilities have assumed a prominent role in international security, especially within recent years. For instance, during the 1950s, a trend started where various nations tried to militarize space in any shape or form. However, as explained before, these attempts and projects were quickly shut down because of the introduction of the outer space Treaty in 1967 (Sheposh, 2025). Despite the outer space Treaty claiming that no kind of weapon of mass destruction can be used in outer space, nations such as the United States work in a loophole in which “the treaty did not prohibit non-nuclear conventional weapons in space and put no restrictions on military satellites” (Sheposh, 2025). As such, the United States has been looking for ways to continue militarizing space even as the Cold War drew to an end (the war being one of the main motivations for the US government to pursue military action in outer space). In 2019, with an aim of “preserving national security”, the United States created the United States Space Force. (USSF, 2025). Not only has there been a look towards the militarization of space, there has also been an increase in counter-space capabilities as a response to a range of global tensions.

Counter-space capabilities are termed as such because new military technologies and strategies for space aren't exclusively located in space, but rather function to interfere with space technology and communications, specifically towards satellites (Samson, 2024). Concerns over the new technological advances have been most commonly presented in recent years. According to Theresa Hitchens, “Perhaps the most telling indicator of how far and how fast space attack capabilities [...] this year's “Global Counterspace Capabilities” report by the Secure World Foundation. The 2025 edition weighs in at a whopping 316 pages, whereas the first version published in 2018 numbered 148” (2025). Different countries have looked to improve their counter-space capabilities, even during wars they are currently happening. For example, in Ukraine there has been an increasing report of radio jamming activity, coming primarily from Russia (Hitchens, 2025).

There are four main counter-space capabilities ever present daily. The first is “kinetic physical” which relates to weaponry having a direct impact and physical contact to the objective and destroying. The second is “non-kinetic physical” in which the physical attacks aren't direct impacts (such as electromagnetic pulses). The third is “electronic”, which correlates to frequency jamming and damages to physical components of space systems. Finally, “cyber” is used to intercept data and deploy cyberattacks on space systems (Way, 2022). These tactics reflect increased militarization, both in space and on Earth. A vast

majority of counter-space capabilities are directed and employed towards armed conflicts present today on Earth. An agreement is urgently needed that limits counter-space capabilities and space weaponry, and that allows the international community to appropriately comply such that these agreements are respected and allow for future technologies to continue flourishing.

## **II. HISTORY OF THE PROBLEM**

Space weaponry and counter-space capabilities have been prominent ever since the beginning of the Cold War. In the Cold War, the two main nations looking for the militarization of space were the United States and the Soviet Union. With the rise of nuclear arsenals in both nations, counter-space capabilities started to become relevant on the international stage. The developments of different nuclear weapons led to an attempt to establish a relationship between space and nuclear weaponry. The need to safeguard and have a permanent surveillance and possible target for opposing warheads in the case of a nuclear conflict (Pasco, 2021). Despite the lack of advancements in this field, a grand majority of efforts to weaponize and militarize space came in the form of satellites destined for military purposes. About 70 percent of satellites launched from 1957 through 1990 were destined for military purposes (Harrison et al., 2017). Additionally, the launch of Sputnik 1 by the Soviet Union in 1957 created a shock within the United States and a further need to advance in the space race. Closely enough, various anti-satellite tests by the United States began development (most of the satellites were created with the idea of fitting nuclear warheads as both offensive and defensive measures) (Polyakov, 2024).

In 1958, the High Virgo aircraft-launched anti-satellite missile was launched to test its results, however it failed to lift off and so did the three subsequent launches. Furthermore, the Bold Orion Project was another aircraft tested during 1959, and it demonstrates glimpses of its military capacity to nuclearly attack a satellite. Further development was never adopted, though (Polyakov, 2024). In the following years, the US tried to develop more anti-satellite aircraft to ensure its own safety in the face of a nuclear conflict with the Soviet Union. In 1962, the United States conducted the “Starfish Prime” nuclear test and proved that nuclear warheads were capable of destroying satellites in space even if it wasn’t intended for it to be an ASAT (anti-satellite) test to begin with (Harrison et al., 2017). Yet, the United States wasn’t the only superpower during the Cold War to attempt and develop ASAT.

The Soviet Union began development in 1963 of a co-orbital ASAT system that would allow it to destroy satellites in the system LEO (Harrison et al., 2017). Not only were the developments uniquely based on ASAT, there was also an attempt from the Soviet Union to develop several projects for combat spacecraft from 1963 through 1967 (Polyakov, 2024). The project was ultimately scrapped, despite it being scheduled to be put into service in 1969 and the project being closed to being finished. The rising development of space weaponry led to the Partial Test Ban treaty of 1963. This ban was signed by the United States, Soviet Union, and Great Britain with the objective of banning all nuclear tests in the atmosphere, space, and underwater (Office of the Historian, 2025). This came as a response to the threat of radioactive nuclear material being spread throughout the Cold War (Office of the Historian, 2025). Ultimately, this treaty allowed the outer space Treaty of 1967 to be signed and agreed upon.

By 1967, ASAT nuclear advances came to a halt, in part due to outcry by the international community to avoid an ever probable scenario of a space arms race. In order to prevent any conflict in space to reach a nuclear war, the outer space treaty was signed between the different nations of the Office for outer space Affairs. The objective of the treaty was to promote peaceful space exploration and ban any type of space nuclear proliferation (Sheposh, 2025). However, what wasn't stated in any form of the treaty was the complete ban on the use of space for military purposes. This made the United States and Soviet Union continue to develop ASAT and military programs in outer space, while developing counter-measures to the military expansion of outer space. Countless notable figures in politics and the military pressed for increased space safety and militarization programs, a phenomenon seen in both the USA and the USSR. As stated by Professor Michael Sheehan, "In 1968 General Oris Johnson noted the momentum behind the Soviet military space program and suggested that 'the necessity for effective space defense weapons is both obvious and urgent'" (2020).

In 1968, the USSR developed the Istrebitel Sputnikov (IS), a paramount achievement in the field of ASATs. The idea was for a satellite equipped with an explosive charge launched into low-earth orbit, to approach a target and explode into fragments. Although this concept was a clear militarization of space by the USSR, it didn't violate any existing convention as the outer space Treaty only accounted for nuclear armament in space (Polyakov, 2024). The first test made in 1968 was deemed successful, with further tests performed to improve efficacy. By 1978, the so-called "Satellite Destroyer" became officially

operational, a system which continued on Soviet/Russian duty until 1993 (Polyakov, 2024). Several attempts by the Soviet Union were made to continue developing space weapons; two of the most prominent examples were the 79M6 (Kontakt) anti-satellite missile and the Skif Orbital system. The former wasn't able to achieve full-scale tests and disappeared by the collapse of the Soviet Union. The latter was equipped with a laser to destroy warheads and satellites and was almost deemed successful, however when it was launched in 1987 it failed to reach orbit and fell into the Pacific Ocean (Polyakov, 2024). Although the Soviet Union demonstrated greater success in space weaponry compared to the United States, the continuous fall in economic power within the Soviet Union led to the halt in all of its space related projects and activities. This, along with the fall of the Soviet Union left the United States as the only dominant party within ASAT's and space weaponry.

During the 1980s, the United States continued developments for more ASAT and ballistic missile defense. The two most important government initiatives to continue said developments were the Strategic Defense Initiative (SDI) and the Air-Launched Miniature Vehicle (ALMV) (Harrison et al., 2017). The SDI was proposed by president Donald Reagan in 1983 as a “defense system that could intercept and destroy Soviet missiles before they could strike the United States” (Sheposh, 2025). Lack of funding and inadequate planning ultimately doomed the SDI, however. The technologies suggested for the SDI weren't feasible in the 1980s so it eventually failed and all funding for it was completely removed (Sheposh, 2025). Another technological development that failed was an ASAT launched as a miniature version from an F-15; the reasons for its failure were limited testing, no deployment, and a necessity for big investment in a system that wasn't proven to completely work (Sheehan, 2020). One of the few successful ASATs developed by the United States was the ASM-135A ASAT. This was the only air-launched missile to ever destroy a satellite (National Museum of the United States Air Force, 2025). The missile was developed as a counter-measure to different anticipated developments from the Soviet Union and successfully destroyed a satellite in a pre-planned test (National Museum of the United States Air Force, 2025). Although successful in its objectives, the ASAT was ultimately shut down and was put out of service around 1988 (National Museum of the United States Air Force, 2025).

Although the collapse of the Soviet Union seemed, at first, a break from the momentum of Cold War space competition, it merely remade or reconfigured the playing field in conflicts around the world. An example was the 1991 Gulf War (also known as

Operation Desert Storm). This event highlighted the importance of satellite navigation in the United States military, granting Operation Desert Storm the name of the “first space war” (Vergun, 2021). In 2001, the U.S. “Rumsfeld Space Commission” warned that Americans and their space assets were vulnerable and mentioned an offensive and defensive counter space capability (Boese, 2001). The warnings translated into tests such as Operation Burnt Frost (February 2008), when a Navy SM-3 missile destroyed the malfunctioning USA-193 satellite, showing, and demonstrating a shoot to kill option that skirted the 1967 treaty's nuclear prohibitions but created orbital debris (Day, 2021). The demonstration, which occurred only a year after China's first successful anti-satellite (ASAT) intercept, did not reach the level of other powers that precision kinetic ASAT weapons that were now within reach.

Although the Chinese did not start a full ASAT program until 2007, it did show past interest in counterspace capabilities. In January 2007 China conducted the destruction of their Fengyun-1C weather satellite at 865 km altitude. This was the first kinetic attack in space since 1985, and it has left more than 3,000 trackable debris pieces, many of which still remain in orbit (Bansal, 2023). International outrage did not stop Chinese further tests and didn't shift towards accelerating non-debris-creating systems. Moreover, China developed a test against a defunct weather satellite; it was the first of China's ASAT tests using the SC-19/KT-1 to destroy a weather satellite (Centre for Land Warfare, 2021). It incited international outrage and demonstrated China's continual interest in space. Between 2010 and 2018 China conducted at least five non-destructive-ascent tests of their SC-19 and DN-3 interceptors (Centre for Land Warfare, 2021). More recently, China has also moved into more sophisticated co-orbital capabilities that further demonstrate China's breakthroughs and achievements in their latest technology. In late 2021, the Shijian-21 (“SJ-21”) spacecraft got together with a Beidou satellite, docked, and towed it 3,000 km above the geostationary belt, exactly the kind of grappling, tugging, or “kidnapping” maneuver that could have equally been used against a live “enemy” satellite. These programs, combined with Beijing's extensive electronic and cyber warfare suites, give China a more layered counter-space portfolio that looks into jamming, dazzling, direct-ascent, and co-orbital options (Centre for Land Warfare, 2021).

After the end of the Soviet Union, Russia's ASAT and space programs have continued to expand. Moscow never really abandoned ASAT work after 1991, but rather reoriented it. The PL-19 Nudol, a direct ascent interceptor tested at least eleven times since 2014, became infamous on 15 November 2021 when it shattered the Cosmos 1408 satellite, forcing the

International Space Station astronauts into shelter and adding roughly 1,500 catalogued debris fragments (Polyakov, 2024). Since then, Russia has made ground-launched tests with covert on orbit programs. One of such are the so-called “Levelir” or “Kosmos” satellites, as in the Kosmos 2543 (2020), 2558 (2022), and 2576 (2024). They have been placed into the same orbital planes as U.S. spy satellites and, in at least one case, have been released at high speeds, almost like projectiles. Western analysts assess these as potential co-orbital ASAT prototypes that are capable of stalking or physically damaging adversary spacecraft (Harrison et al., 2017). The U.S. has also warned other allies and countries that Russia is exploring a nuclear-powered, nuclear-armed orbital system, a throw-back to 1960s concepts that would violate both the outer space Treaty and the 1963 Partial Test Ban.

India began a mission on Shakti to combat an emerging space combat doctrine on the 27th of March 2019 that propelled India into the ASAT club when a modified PDV-MK II interceptors struck the Microsat-R satellite at 300 km altitude (Stroikos, 2025). The New Delhi characterised the low-orbit intercept as it deliberately designed a minimum amount of debris. However, it signalled a strategic intent to deter Chinese space threats and ASATs from that nation. In December 2023, the Indian Air Force proposed re-branding itself as an “Air and Space Force” while the tri-service defense Space Agency announced plans to expand to more than 100 dedicated military satellites and create a Space Command by 2030 (Stroikos, 2025). This in turn means that India is looking to continue developing and strategizing within space forces. A formal Indian military space doctrine and a national space-security policy are being looked at for release in 2025, almost codifying the role of ASAT and counter-space measures.

While the U.S. has not carried out a kinetic intercept since 2008, it has dramatically diversified its toolbox. The U.S. Space Force (USSF) was created in 2019; its Space Delta 9 unit operating on orbit with the purpose of “protecting and defending” U.S. satellite capabilities (Harrison et al., 2022). In April 2022 it was announced a unilateral moratorium on destructive direct-ascent ASAT test, and in December 2022 shepherded UN General Assembly Resolution 77/41, calling on all the states to follow suit (Harrison et al., 2022). Momentum for the risk reduction in space development has now shifted to space diplomacy. The Open Ended Working Group (OEWG) on Reducing Space Threats met throughout 2022-23, producing wide but not unanimous support for norms against debris-creating ASAT test, proximity moves without notification, and other harmful laser dazzling. Several states such as the U.S., U.K., Japan, Germany, Australia, and Canada, have formally pledged not to

conduct destructive or direct ascent tests, while China, India, and Russia have so far declined, citing the absence of a comprehensive treaty that also restricts space-based missile-defense systems (Erickson et al., 2024).

### **III. CURRENT SITUATION**

As of 2025, there has been a significant increase in the number of counter-space capabilities present on a variety of countries; according to Theresa Hitchens in an article published by the Breaking Defense, “Perhaps the most telling indicator of how far and how fast space attack capabilities—ranging from stun to kill—have grown over the past decade is simply the size of this year’s “Global Counterspace Capabilities” report by the Secure World Foundation. The 2025 edition weighs in at a whopping 316 pages, whereas the first version published in 2018 numbered 148” (2025). Countries most prominent in advancing counter-space capabilities and space weaponry are the United States, China, Russia, and India. As of today, the United States holds a vast majority of technological advancements in counter-space capabilities and space weaponry both in constant testing, or in active service (Cesari et al., 2024). The continual growth of counter-space capabilities led to a United Nations resolution in 2024 seeking to reaffirm the Outer Space Treaty of 1967. Russia vetoed the resolution, arguing that it failed to include a comprehensive ban on all types of space weaponry, including counter-space systems (Lederer, 2024). As a direct consequence of this vetoing, Russia, India, and China have begun a look towards implementing nuclear weaponry for anti-satellites or placing them on celestial bodies (Cesari et al., 2025).

Although the United States has always been interested in investing and continuing to develop their counter-space capabilities, since the resolution was vetoed there has been an even more prominent look towards counter-space capabilities. In 2024 (after the UN Resolution), the Chief of Space Operations General B. Chance Saltzman, “the United States needs to field “counter-targeting capabilities” both to ensure its ability to operate in space and to maintain its ability to protect the United States and U.S. forces from a space-enabled attack” (DiMascio, 2024). Additionally, since the same year, the Space Force present in the United States has been urging for more budgetary aid to test and develop new counter-space capabilities (particularly offensive and defensive) (DiMascio, 2024). The current example of an offensive counter-space present in the United States is the Counter Communication System; this offensive weapon is used to jam the communication of

adversaries during any type of conflict (belical, technological, etc.) and is still in continual use as of 2025 (L3Harris, 2025). Moreover, development of new capabilities has become more and more important in the current ideals from the United States since the increasing threat posed by China and Russia has become ever-present since 2007. According to Theresa Hitchens, “the new “Space War fighting Framework,” released April 17, issues a strong caution against tying Guardian hands with ROE. “Overly restrictive ROE can be contrary to decentralized execution and may lead Guardians to rely on ever-increasing levels of oversight and approval, potentially leading to situations where Guardians hesitate to act. Such a scenario may increase risk, both to the mission and to the Joint Force” the framework says” (2025). This, in turn, heightens U.S. awareness of the growing threat posed by counter-space capabilities and influences future decisions aimed at combating these risks.

Alongside the United States, Russia, and China have the most advanced counter-space capabilities and technology directed towards space weaponry, leading the three nations to use a vast majority of resources on the continuous militarization of space and its new technologies. For instance, Space News has reported that, “China has implemented a sustained effort to develop a broad range of offensive counters pace capabilities, and details a number of activities in the areas of direct-ascent anti-satellite (ASAT) systems, co-orbital ASAT, rendezvous, and proximity operations (RPO), directed energy weapons and electronic warfare (EW)” (Jones, 2025). The continuous effort to develop these offensive counter-space capabilities has become really prominent specifically in the testing side of things as seen in figure 1

## China Overall 2025 Assessment

|                             | R&D | Testing | Operational | Use in Conflict |
|-----------------------------|-----|---------|-------------|-----------------|
| LEO Direct Ascent           | ▲   | ▲       | ▲           | ●               |
| MEO/GEO Direct Ascent       | ■   | ■       | -           | ●               |
| LEO Co-Orbital              | ▲   | ?       | -           | ●               |
| MEO/GEO Co-Orbital          | ■   | -       | -           | ●               |
| Directed Energy             | ▲   | ■       | -           | ●               |
| Electronic Warfare          | ▲   | ▲       | ▲           | ■               |
| Space Situational Awareness | ▲   | ▲       | ▲           | ?               |

Legend: none ● some ■ significant ▲ uncertain “?” no data “-”

**(Jones, 2025)**

It is important to note that only one type of counter-space capability is currently in use, and even this is less active than expected. The vast majority of capabilities remain in testing and R&D phases, with very few operational and even fewer employed in conflict. Aside from China, Russia has also been on the look for developments and improvements in their own space weaponry, specifically nuclear weaponry. As explained previously, Russia vetoed the reaffirmation of the outer space Treaty of 1967 that explicitly banned any type of nuclear weapons being used in space weaponry. As such, Russia has been looking to develop a satellite capable of carrying multiple nuclear weaponry; additionally, Russia has been thoroughly looking to expand their nuclear weapons capabilities after the resolution's veto (Defense Industry Europe, 2025). Moreover, in the ensuing war from Russia against Ukraine, multiple counter-space capabilities (non-kinetic) have been used to jam communications and ensure control towards Ukraine from Russia's part (Lederer, 2024). As a consequence, Russia's new developments have been continuously directed towards "a sustained attempt to undermine the space-based infrastructure of potential adversaries" according to the Defense Intelligence Agency (Defense Industry Europe, 2025).

China, Russia, and the United States may hold the most significant power in counter-space capabilities, but the test conducted in 2019 by India has created a new competitor in the militarization of space. As an example, in 2024 India conducted a new test for their multiple independently targetable re-entry vehicle (MIRV); these MIRV's can be used for counter-space missions, particularly on neutralizing or disrupting adversary's space assets (Masood, 2024). Although MIRV's aren't in active duty on counter-space capabilities, the new tests presented by India may create a new space for weapon innovation and capabilities on counter-space missions. Additionally, it creates a precedent in which regional stability of a variety of countries may be affected, particularly in Pakistan and the ongoing conflicts between both nations (Masood, 2024). According to Air Marshal Anil Chopra, "Clearly, the USA and China are racing ahead in space exploration and capability building. India has all the building blocks in place, but needs to invest more to become a significant space power" (2024). This statement urges the Indian government to continue looking towards developing more counter-space and space weaponry, ones that can be beneficial in future conflicts the nation may face. India continues to pursue new capabilities, while the United States, China, and Russia remain at the forefront of space militarization. Together,

these developments underscore that counter-space capabilities technologies are an international concern requiring urgent worldwide attention.

#### **IV. UN ACTIONS**

The United Nations has long acknowledged the strategic and peaceful importance of outer space, and it also has seen various efforts to prevent its militarization and weaponization. However, as technology evolves and space becomes more contested, the scopes for international responses need to adapt. One of the most important UN actions towards space weaponry is the outer space Treaty, which looks for peaceful purposes and prohibits/forbids military bases, installations, and fortifications. It prohibits nuclear weapons and weapons of mass destruction in orbit or on celestial bodies, including the Moon (UNGA Res. 2222 (XXI)). While the treaty still remains a cornerstone for international space law, it is not very comprehensive regarding modern military technologies such as anti-satellite (ASAT) weapons or other dual-use technologies. It sometimes lacks clear prohibitions on the deployment or even development of kinetic or non-kinetic counter space weapons, allowing for ambiguity that many nations have exploited.

Since 1981, following the treaty's adoption, the General Assembly has passed many annual resolutions under the title “Prevention of an Arms Race in outer space (PAROS),” beginning with Resolution 36/97C. These resolutions strongly reaffirm the importance of preventing the militarization of outer space, and some type of stress that further measures are essential to ensure the peaceful use of space. The PAROS initiative has broad international support, especially from non-aligned countries and other major powers like China and Russia. However, these resolutions are non-binding, and some progress has stalled due to the disagreements within it, particularly between the United States (which views many proposals as constraining missile defense systems) and countries seeking broader prohibitions on space.

A significant and diplomatic step occurred in 2013, when the UN established a Group of Governmental Experts (GGE) to develop norms for the transparency and confidence-building in all space activities. The GGE report (A/68/189) emphasized measures such as launch notifications, satellite registry updates, and behavior codes to prevent any type of misunderstanding and reduce the conflicts, notifying them over complex arms treaties like the (United Nations Office for Disarmament Affairs, 2013).

More recently, the UN General Assembly adopted Resolution 76/231 in late 2021, starting an Open-Ended Working Group (OEWG) on reducing space threats by implementing norms, rules, and responsible behaviors. Through four sessions between 2022 and 2023, its participation by more than 60 countries that were supported by Japan, Germany, and Canada generated consciousness on banning debris-causing ASAT tests, this established a notification mechanism for the close-proximity operations, and the accounting for electronic/(cyber interference. Although Russia blocked the adoption of a consensus report, the chair's summary in (A/78/189) marked a diplomatic turning point, emphasizing behavior-based regulations over the treaty's constraints (Wired, 2022).

In April 2022, the U.S. announced a unilateral suspension of destructive direct-ascent ASAT tests, promoting similar commitments by Germany, Japan (September 2022), the UK (October 2022), Lithuania (July 2023) and a growing list of other states like (Sweden, Austria, Italy) to refrain from such actions (MOFA Japan, 2022; GOV.UK, 2022; turn0search4; turn0search5). These all joined in the UN General Assembly Resolution 77/41 on December 7, 2022, which formally called upon the UN member states to refrain from other destructive direct-ascent ASAT testing. The resolution passed with 155 votes in favor, nine against (including Russia and China), and nine abstentions (including India and Pakistan) (UN Digital Library, 2022; Arms Control Today, 2022).

Following the Resolution 77/41, though it was non-binding, it was significant as the first UN sanction aimed at a specific counter-space activity-the debris-generating destruction of satellites. The 2021 Russian ASAT test that shattered the Kosmos-1408 into more than 1,500 trackable pieces (The Verge, 2021) that threatened not only the International Space Station but also became a pivotal case, reinforcing the need for UN action. At the OEWG's 2023 session in Geneva, hosted by Japan, Germany, and Canada, the diplomatic momentum increased. This led to discussions specifically emphasizing the resilience, norms, verification, and the need for broader multilateral commitments. Still, major geopolitical divisions stand tall: China, India, and Russia still continue to resist the binding of moratoria absent with the restrictions on missile-defense and space-based interceptors (WIRED, 2022). Until this day, UN actions have evolved from founding treaties and annual resolutions to multi-year norm-building exercises, voluntary state pledges, and many narrowly focused General Assembly resolutions. However, the UN has yet to make or produce legally binding enforcements that serve as mechanisms or verifications for regimes and their critical elements for managing modern space threats.

## **V. POSSIBLE SOLUTIONS**

As explained thoroughly throughout this background paper, counter-space capabilities and space weaponry are having a consistent tendency of presence throughout the international community and the individual proliferation of each nation. The veto on the reaffirmation of the outer space Treaty in April 2024 has led to massive concern over new features being developed by the main competitors in this new arms race in outer space. The concerns over weapons of mass destruction being present in orbit has significantly increased due to this veto from Russia's part. Furthermore, the continuous implementation of counter-space capabilities in ongoing military conflicts such as the Russo-Ukrainian War and Israeli-Palestinian conflict leads to a precedent in which these new weaponry is employed for strategic self-advancement. In the states that have access to the technology. Additionally, in past resolutions none of them actually banned space weaponry completely, only gave limits to it that directly facilitated the proliferation for the development of these new technologies. Finally, a new establishment towards the limitation and reinforcement of the outer space Treaty needs to be addressed as well as establishing an agreement within the members of COPUOS that benefits all (specifically Russia, China, the United States, and India). With the previous points in mind, the following solutions could be implemented in the face of this international issue:

### **1) Strengthen and expand the Outer Space Treaty of 1967**

- a) The Outer Space Treaty has and is the basis in which the international community approaches the topic of space weaponry and counter-space capabilities. Despite its importance, the Outer Space Treaty doesn't completely ban conventional weapons in space and its militarization contradicts the purpose of the treaty to use space for peaceful purposes.
- b) An outright ban on all space-based weaponry is currently unfeasible (counter-space and ASATs) because of the international community disagreement towards banning them all together; however, the limit of their use can be discussed and applied on ASATs.
- c) The destruction of satellites, particularly during armed conflicts, has the most significant impact. ASATs are an aspect of space militarization that needs to

be limited because of its impact on the lives of many people throughout the world.

**2) Establish legal frameworks that penalize use of counter-space capabilities**

- a) Counter-space capabilities are in continuous use in belic conflicts and affect the lives of thousands of people because of their effects in communication systems.
- b) The legal framework should be aimed to penalize the use of these capabilities during conflicts with another nation, especially when used against nations with underdeveloped space infrastructure that is essential to daily civilian functions.

**3) Encourage transparency with the development of Confidence-Building Measures (CBM)**

- a) The CBM would allow for the information sharing and transparency of new technologies being developed for counter-space and space weaponry purposes that are currently developed.
- b) The CBM would also need more clarification and expansion in the UN Register of Objects Launched into Outer Space. The register should include technologies capable of counter-space capabilities outside their main purpose and systems that are aimed towards military applications.

## **VI. COUNTRIES INVOLVED**

### **1. United States of America**

The United States of America is the main competitor and main developer in counter-space, space weaponry and ASATs. Ever since the Cold War, the United States has continuously looked towards the militarization and continuous arms race in space. Holding one of the few active offensive counter-space capabilities, the United States holds the most important place in the arms race and proliferation in outer space. Furthermore, The United States has consistently leaned towards more development in the military of outer space; this is demonstrated by not accepting Russia's and China's resolutions of banning completely any sort of weapon in outer space during the reaffirmation of the Outer Space Treaty (UN, 2024). As the main figure in this new arms race in space, the United States has consistently demonstrated its interest in space as a military advancement. New technologies being developed towards the militarization of outer space, taking advantage of the clear loopholes in the Outer Space Treaty.

### **2. Russian Federation**

As the second main competitor, Russia has continuously developed and implemented ASATs and counter-space tools throughout different conflicts and, more recently, the Russo-Ukrainian War. Electronic warfare has mainly been used to jam different communication systems throughout the Russo-Ukrainian War; in turn, Russia has also impelled other nations to apply the same tactics in their own wars and conflicts, such as Israel (Hitchens, 2025). The advancements on electronic warfare from Russia have been successful at blocking communications from Ukraine and jamming them, allowing for a controlled battleground in the ongoing conflict. However, Russia has expressed concern over the use of space weaponry and ASATs in orbit. The principal reason explained by Russia for vetoing the reaffirmation of the Outer Space Treaty was because of the resolution not completely banning all space weaponry and ASATs, despite the nation using them in their continuous war efforts (UN, 2024). Russia aims to be a continuous participant, as was the Soviet Union during the Cold War.

### 3. People's Republic of China

Alongside Russia and the United States, China holds major power in the arms race in outer space and the proliferation of set militarization. Ever since 2007, China has continuously developed different ASAT tests and technologies that aim to have a counter-reaction in the increase of the United States power over counter-space and space weaponry. Additionally, China is also an important ally with Russia, meaning that their ideologies align and the developments of these technologies and weapons develop in parallel, allowing for both nations to counteract the United States. Furthermore, during Russia's veto of the reaffirmation of the Outer Space Treaty, the resolutions presented by Russia were also backed up by China, and the nation ended up abstaining from the voting process (UN, 2024). Both nations demonstrate the ongoing advancement and cooperation in both the development and active seek towards demilitarizing outer space.

### 4. Republic of India

Despite entering the development of ASATs and counter-space capabilities relatively late, India has demonstrated its compromise on developing these capabilities and technologies. This should allow the nation to stay safe in the face of a future space conflict and/or terrestrial conflicts. Since 2019, India has developed different systems that aren't directly linked towards counter-space capabilities, however their use can also be carried for ASAT roles (Masood, 2024). The development of their own counter-space capabilities has raised concern, since now there are even more countries continuously being a part of an arms race towards space, even if these countries have actively tried to fight against it. India is another

example of the growing interest the international community has in developing new counter-space capabilities and technologies that are used in electronic warfare and belic conflicts internationally. India's movement towards developing these capabilities and ASATs comes from a concern that the international community itself has raised towards these capabilities.

#### 5. French Republic

Despite France not being as prominent in the competition of counter-space and space weaponry, it has begun to develop different counter-space capabilities in the face of the ever-growing international tensions. A new French startup began development of a spacecraft designed to dispose and capture objects in orbit (Erwin, 2025). Although the company doesn't have the complete means of acting accordingly with their new technology until 2027, this demonstrates a clear sign of shift towards space weaponry more than ever before. Nations not previously interested in counter-space and space weaponry have experienced a rapid shift in development to respond to threatening satellites (Hitchens, 2025). The developments of France are still in the long term, however they are also in active development and search for these same technologies. France also aims to develop new space technologies that can counteract those present in the United States, Russia and China.

#### 6. State of Japan

#### 7. Kingdom of Australia

#### 8. State of Israel

#### 9. Islamic Republic of Iran

#### 10. Democratic People's Republic of Korea

#### 11. Republic of Korea

#### 12. United Kingdom of Great Britain and Northern Ireland

#### 13. Swiss Confederation

#### 14. Federal Republic of Germany

#### 15. Dominion of Canada

#### 16. New Zealand

#### 17. Kingdom of the Netherlands

#### 18. Kingdom of Spain

#### 19. Republic of Italy

#### 20. Republic of Turkey

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