

**FORUM:** Disarmament and International Security - GA1

**QUESTION OF:** Measures to prevent the increased militarization of outer space

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**POSITION:** Co-Chair

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## **INTRODUCTION**

Outer space could transform into a militarized space where nations regularly deploy, test, and use weapons in, whether those weapons be Nuclear or conventional, what the international community viewed as a space for peaceful scientific research and international cooperation is now becoming a battleground for military competition. This trend directly puts international relations and global security at risk, as an arms race in this new “frontier” becomes a more tangible reality day by day. Regardless of the obvious risks associated with the use of conventional or nuclear weapons in space, such as the escalation of conflict and the hindrance of international cooperation in science, including the potential use of anti-satellite weapons, could result in the creation of dangerous space debris, complicating an already tense geopolitical landscape and endangering civilian satellites and missions. Unfortunately, the legislation already in place, such as the 1967 Outer Space Treaty, does not effectively address the problem that is presented. In order to effectively address the problem of the militarization of space, the international community must engage in dialogue, revisit, and introduce international legislation that will ensure the removal of all military assets and threats from space.

When viewed through the lens of "Ethos vs. Progress," space militarization can be seen as a necessary step toward ensuring the security, stability and trust between nations that is required to continue progressing, whether that be technologically or scientifically. Thus, Member States must focus on the fundamental principle that space must remain a beacon of progress and peace, where scientific breakthroughs and international collaboration prevails. Obviously, this has the potential of being achieved through focus on international cooperation, and the creation of international frameworks that specifically outline and monitor the peaceful use of space.

## DEFINITION OF KEY TERMS

### Demilitarisation

“The action of removing military forces from an area.”<sup>1</sup>

### Anti-Satellite (ASAT)

“A weapon whose sole purpose is to destroy or disable satellites in space. They can be launched from the ground, the air, or space, and they represent a serious risk to the operation of scientific research, communication, navigation, and surveillance satellites.”<sup>2</sup>

### Military Tactics

“The art of organizing and employing fighting forces on or near the battlefield”

### Weaponization of space

“The use, deployment, and or use of weapons in space. This can include space-based missile defense systems, anti-satellite (ASAT) weaponry, and other military equipment used for offensive or defensive purposes.”<sup>3</sup>

### Space Debris

“Destroyed, non-functional or abandoned objects in space (e.g., parts of rockets, satellites, and non-useful parts of past space missions). Such debris when they are in an orbit around Earth poses a threat to satellites, space rockets, and the Earth when they enter the atmosphere.”

### Space Domain Awareness (SDA)

“The ability to detect, track, and understand objects and activities in space, particularly those that could threaten space assets.”

### Cislunar Space

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<sup>1</sup>Cambridge Dictionary. “Demilitarization.” @CambridgeWords, 30 Aug. 2023, [dictionary.cambridge.org/dictionary/english/demilitarization](https://dictionary.cambridge.org/dictionary/english/demilitarization).

<sup>2</sup> “ASAT | What Does ASAT Mean?” Www.cyberdefinitions.com, [www.cyberdefinitions.com/definitions/ASAT.html#:~:text=ASAT%20means%20%22As%20Simple%20As%20Possible%20to%20Destroy%20Satellites%20in%20Space%20is%20the%20process%20of%20destroying%20or%20disabling%20satellites%20in%20space%20with%20the%20use%20of%20anti-satellite%20weapons%20or%20other%20military%20equipment%20used%20for%20offensive%20or%20defensive%20purposes%20.”](https://www.cyberdefinitions.com/definitions/ASAT.html#:~:text=ASAT%20means%20%22As%20Simple%20As%20Possible%20to%20Destroy%20Satellites%20in%20Space%20is%20the%20process%20of%20destroying%20or%20disabling%20satellites%20in%20space%20with%20the%20use%20of%20anti-satellite%20weapons%20or%20other%20military%20equipment%20used%20for%20offensive%20or%20defensive%20purposes%20.”)

<sup>3</sup> Team, ClearIAS. “Space Weaponization: All You Need to Know About.” ClearIAS, 8 Oct. 2022, [www.clearias.com/space-weaponization/#:~:text=Space%20weaponization%20is%20the%20process%20of%20destroying%20or%20disabling%20satellites%20in%20space%20with%20the%20use%20of%20anti-satellite%20weapons%20or%20other%20military%20equipment%20used%20for%20offensive%20or%20defensive%20purposes%20.”](https://www.clearias.com/space-weaponization/#:~:text=Space%20weaponization%20is%20the%20process%20of%20destroying%20or%20disabling%20satellites%20in%20space%20with%20the%20use%20of%20anti-satellite%20weapons%20or%20other%20military%20equipment%20used%20for%20offensive%20or%20defensive%20purposes%20.”)

“The region of space from the Earth out to and including the region around the surface of the Moon.”<sup>4</sup>

### **Hypersonic Weapons**

“Hypersonic weapons travel faster than five times the speed of sound — Mach 5 — covering vast distances in minutes. Hard to stop, they fly and nimbly maneuver to avoid detection and dodge defensive countermeasures.”<sup>5</sup>

## **BACKGROUND INFORMATION**

### **Historical Overview**

#### **The Cold War Space Race: Corona program**

The Soviet Union and the US participated in heated competition in space throughout the Cold War. The U.S.'s late 1950s launch of the Corona program was a turning point. To avoid risky manned operations, it deployed reconnaissance satellites that gathered high-resolution intelligence from orbit. Recognizing the risks associated with manned space missions, the U.S. government sought to gather intelligence from orbit using unmanned satellites. Equipped with high-resolution cameras, the Corona satellites provided valuable information on Soviet military installations, infrastructure, and activities.

The Corona program was a groundbreaking achievement in satellite technology. The satellites were designed to operate autonomously in orbit, capturing detailed images of the Earth's surface. These images provided critical intelligence to U.S. policymakers and military leaders, helping them to assess the Soviet Union's military capabilities and potential threats. The success of the Corona program demonstrated the potential of satellite technology to revolutionize the way nations collected information about their adversaries, paving the way for future advancements in space-based intelligence gathering.<sup>6</sup>

#### **Operation Hardtack 1**

The United States conducted an important series of nuclear tests in the Pacific Ocean during the Cold War, known as Operation Hardtack I, in 1958. These tests were crucial for establishing nuclear strategy and arms control during that time because they evaluated the effects of nuclear weapons on military targets and civilian infrastructure.

Operation Hardtack I significantly advanced the development of nuclear testing technologies and techniques. By testing a range of weapon designs and delivery systems, thus researchers were able to study the varied effects of nuclear explosions. This knowledge

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<sup>4</sup>“Definitions.” Uscode.house.gov, [uscode.house.gov/view.xhtml?req=\(title:42%20section:18302%20edition:prelim\)](https://uscode.house.gov/view.xhtml?req=(title:42%20section:18302%20edition:prelim)).

<sup>5</sup>“Hypersonics.” *Www.rtx.com*, [www.rtx.com/raytheon/what-we-do/hypersonics](https://www.rtx.com/raytheon/what-we-do/hypersonics).

<sup>6</sup>“The Space Race | Miller Center.” *Millercenter.org*, 11 Sept. 2020, [millercenter.org/the-presidency/educational-resources/space-race#:~:text=Following%20World%20War%20II%2C%20the](https://millercenter.org/the-presidency/educational-resources/space-race#:~:text=Following%20World%20War%20II%2C%20the).

improved the safety and reliability of nuclear weapons while also aiding the development of defenses against potential nuclear attacks. The legacy of Operation Hardtack I extends beyond the Cold War, as the data and insights from these tests continue to shape nuclear policy and arms control discussions today. Though the tests underscored the destructive power of nuclear weapons, they also contributed to responsible use by deepening the understanding of their consequences.<sup>7</sup>

## Space in the Modern World

### Space Policy and International Cooperation

In the modern world, international agreements and frameworks are vital for managing orbital congestion, and space debris, and promoting peaceful activities (space governance and regulation). Organizations like the United Nations Office for Outer Space Affairs (UNOOSA) are central to this effort.

Additionally, international collaboration among space agencies such as NASA, ESA, and Roscosmos is growing, allowing shared resources and expertise for ambitious missions, shaping the future of space exploration and governance.<sup>8</sup> These space agencies are the primary driving force behind all activities involving space, including exploration and innovation. Most of them are government-funded, but private space agencies such as Blue Origin also exist to explore the commercial potential of space.

### Space Challenges and Sustainability

With thousands of defunct satellites and debris pieces circling the Earth, the challenge of space debris heightens collision risks. Sustainable practices and debris removal tech are vital to mitigate this threat. Simultaneously, the promise of extracting resources from celestial bodies, like Moon water or asteroids, for future space endeavors demands ethical and legal scrutiny to ensure responsible resource utilization.

The challenge of space debris, with thousands of defunct satellites and debris pieces circling the Earth, increases collision risks. Sustainable techniques and debris removal systems are critical to reducing this issue. Simultaneously, the promise of collecting resources from celestial entities, such as Moon water or asteroids, for future space exploration necessitates ethical and legal analysis to ensure responsible resource use. In addition, the environmental impact of space launches and exploratory activities raises long-term concerns. Rocket emissions, the possibility of space-based mining, and energy-intensive missions need a delicate balance between scientific advancement and the preservation of Earth's

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<sup>7</sup> Operation Hardtack I, [www.dtra.mil/Portals/125/Documents/NTPR/newDocs/15-HARDTACK%20I%20-%202021.pdf](http://www.dtra.mil/Portals/125/Documents/NTPR/newDocs/15-HARDTACK%20I%20-%202021.pdf).

<sup>8</sup> United Nations. "United Nations Office for Outer Space Affairs (UNOOSA) | Department of Economic and Social Affairs." [sdgs.un.org/un-system-sdg-implementation/united-nations-office-outer-space-affairs-unoosa-49126#:~:text=more%20integrated%20solutions-](https://sdgs.un.org/un-system-sdg-implementation/united-nations-office-outer-space-affairs-unoosa-49126#:~:text=more%20integrated%20solutions-).

atmosphere and ecosystems, emphasizing the need for long-term developments in the space sector.<sup>9</sup>

## **Militarization and Emerging Space Powers**

### **Proliferation of Emerging Space Powers**

The proliferation of rising space powers, driven by technological advancements, has resulted in an increasing number of countries and private enterprises engaging in space operations, leading to both opportunities and challenges. While this growth offers potential benefits such as scientific discoveries, enhanced communication networks, and new economic opportunities through resource exploitation and commercial ventures, it also brings significant concerns. The surge in space launches, satellite deployments, and in-orbit activities has contributed to a dramatic increase in space debris, which not only threatens operational satellites but also poses risks to future space missions, potentially hindering advancements in space exploration. As orbits become more crowded, the probability of collisions increases, which could create cascading effects, known as the Kessler syndrome, where space debris multiplies uncontrollably, making certain orbits unusable for years.

Additionally, the growing competition for space resources and strategic advantages among spacefaring nations and private companies raises the risk of geopolitical tensions and the militarization of space. The deployment of anti-satellite weapons, military satellites, or other offensive technologies could lead to an arms race in space, with serious implications for global security and stability. This competitive environment highlights the urgent need for international cooperation, transparent regulations, and responsible space governance to ensure that space remains a domain for peaceful exploration and shared scientific progress. Without a robust framework for managing space activities, the long-term sustainability of space operations, including the protection of vital infrastructure and the peaceful use of space, remains uncertain.

### **The Arms Race**

The burgeoning space arms race is a multifaceted global issue characterized by the development of advanced space weaponry such as anti-satellite (ASAT) systems that target and destroy other countries' satellites. Additional threats include the pursuit of space-based missile defense systems, which have the potential to disrupt arms control agreements, as well as the development of offensive capabilities launched from orbit. This growing inclination has resulted in a significant increase in financial investments for space-related military initiatives, raising serious concerns about the weaponization of outer space. These developments raise critical questions about global security and the equitable use of space in an increasingly crowded and contentious celestial realm.

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<sup>9</sup> “Badalian, Vartan. “The Space Industry Has a Sustainability Problem.” *Trellis*, Trellis, Aug. 2023, [trellis.net/article/space-industry-has-sustainability-problem/](https://trellis.net/article/space-industry-has-sustainability-problem/).

## **MAJOR COUNTRIES AND ORGANISATIONS INVOLVED**

### **United States of America**

The United States was one of the first to establish a space presence and has been eager to explore and utilize space. It has rejected the idea of using a standardized and comprehensive framework to ensure proper space utilization. It has made significant investments in the development of space technologies, making space the next field of global competition, and potentially a battleground, given the United States' growing presence in space militarization. Countries such as China have expressed significant concern about the United States' space militarization activity.

### **China**

China is currently the world's second-largest space power, trailing only the United States, and maintains a strong presence. It has militarized space for its own national interests, as well as developed counter-space measures that threaten the United States' position in space and national security. China has created potential laser weapons and ground-based anti-satellite weapons. It carried an ASAT in 2007, which alarmed the United States and India. It has repeatedly expressed concern about the United States' 'offensive' militarization of space and other strategic decisions. China has been rapidly developing hypersonic weapons capable of exceeding Mach 5. These high-speed, maneuverable systems present novel challenges and concerns in modern warfare, reshaping global security dynamics.

### **Russia**

Russia recognizes the importance of militarizing space as a potential battleground, since its space expenditures in the Soviet era. One of their prime interests is counterbalancing the space domination of the United States. Russia's main principle regarding space military assets is to integrate them with existing aerospace forces, rather than having a separate branch. Surveillance plays a key role, along with ballistic missiles that depend on communication from space to coordinate. Russia has been consistent with its flexibility to reform existing militaries, yet its primary focus is not on space militarisation, but rather more on the defensive aspects of anti-satellite weapons.

### **India**

As an emerging global superpower, India is set up to be a key player on the stage of future space militarization. It has consistently advocated for the establishment of regulatory frameworks to ensure space does not become a hazardous testing ground for dangerous weapons. India has signed and ratified all treaties regarding the safe and transparent usage of space, adopting several Transparency and Confidence Building Measures (FCBMs). However, India continues to consider the development of space for national advancement a key policy within its agenda, utilizing space as a means of deterring its neighbors.

### **United Nations Office for Outer Space Affairs (UNOOSA)**

Encourages global collaboration for the exploration and peaceful use of space, alongside the practical use of space research and technology in the advancement of sustainable economic development.<sup>10</sup>

### **United Nations Office for Disarmament (UNODA)**

The United Nations Office for Disarmament Affairs (UNODA) actively works to prevent space militarization by promoting international treaties such as the Outer Space Treaty of 1967 and advocating for the Prevention of an Arms Race in Outer Space (PAROS). It supports UN General Assembly resolutions, works with the Committee on the Peaceful Uses of Outer Space (COPUOS), and takes part in the Conference on Disarmament. UNODA also supports the Groups of Governmental Experts (GGE) on space security, promotes transparency and confidence-building measures (TCBMs), and collaborates with organizations such as the International Telecommunication Union (ITU) to ensure the peaceful use of outer space.<sup>11</sup>

### **European Union**

The EU Space Strategy for Security and Defence is a comprehensive framework designed to strengthen Europe's ability to protect its space assets while maintaining strategic autonomy. The strategy addresses emerging threats such as space debris, cyberattacks, and

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<sup>10</sup> United Nations. "United Nations Office for Outer Space Affairs (UNOOSA) | Department of Economic and Social Affairs." Sdgs.un.org, [sdgs.un.org/un-system-sdg-implementation/united-nations-office-outer-space-affairs-unoosa-49126#:~:text=more%20integrated%20solutions-](https://sdgs.un.org/un-system-sdg-implementation/united-nations-office-outer-space-affairs-unoosa-49126#:~:text=more%20integrated%20solutions-).

<sup>11</sup> UNODA. "Outer Space Treaty." Wwww.unoosa.org, [www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html#:~:text=The%20establishment%20of%20military%20bases](https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html#:~:text=The%20establishment%20of%20military%20bases).

hostile actions by other nations or non-state actors, emphasizing the importance of enhanced space situational awareness. This includes improving the ability to detect, monitor, and respond to potential risks in real time. The EU also emphasizes the importance of strengthening cooperation among its member states, NATO, and international partners in order to respond to space-related challenges in a coordinated manner. Furthermore, developing dual-use technologies that meet both civilian and military purposes is critical to guaranteeing the EU's space resiliency. Overall, the policy represents the EU's desire to become a more powerful global actor, defending its interests and contributing to the peaceful use of outer space in a fast-changing geopolitical landscape.<sup>12</sup>

## TIMELINE OF EVENTS

Date	Description of Event
1960	The U.S. launches its first successful spy satellite under the CORONA program. <sup>13</sup>
1962	The U.S. launches a missile containing a nuclear warhead to intercept and destroy a satellite in orbit as a component of the first successful anti-satellite (ASAT) test.
1963	Partial Test Ban Treaty, formally titled the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water
1967	The Outer Space Treaty or the "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies"
1968	Rescue Agreement or the Agreement on the Rescue of Astronauts and the Return of Objects Launched into Outer Space
1972	Liability Convention
1975	Convention on Registration of Objects Launched into Outer Space

<sup>12</sup> "EU Space Strategy for Security and Defence." Defence Industry and Space, [defence-industry-space.ec.europa.eu/eu-space/eu-space-strategy-security-and-defence\\_en#:~:text=T he%20EU%20is%20committed%20to,and%20principles%20of%20responsible%20behaviours.](https://defence-industry-space.ec.europa.eu/eu-space/eu-space-strategy-security-and-defence_en#:~:text=T he%20EU%20is%20committed%20to,and%20principles%20of%20responsible%20behaviours.) Accessed 19 Sept. 2024.

<sup>13</sup> "CORONA: America's First Imaging Satellite Program - CIA." *Wwww.cia.gov*, [www.cia.gov/legacy/museum/exhibit/corona-americas-first-imaging-satellite-program/](https://www.cia.gov/legacy/museum/exhibit/corona-americas-first-imaging-satellite-program/).

1979	Agreement Governing the Activities of States on the Moon and Other Celestial Bodies
1970-1980	The development and testing of several ASAT missiles by the US and the former Soviet Union (USSR) during the Cold War sparked concerns about the militarization of space.
24/05/1985	The USSR deploys an ASAT missile to bring down Cosmos 1855, one of its own satellites, which significantly increases the volume of space debris.
05/12/1991	The START Treaty, which includes measures to limit and decrease strategic offensive arms, including space-based weapons of mass destruction, was signed by the United States and the Soviet Union (later Russia).
11/01/2007	The Chinese Government carries out its first successful ASAT test, destroying Fengyun-1C, one of its own decommissioned meteorological satellites, causing a significant amount of space debris and causing worry worldwide.
20/02/2008	The US government uses a ship-based missile defense system to shoot down the malfunctioning intelligence satellite USA 193, claiming security concerns thanks to the spacecraft's potentially dangerous cargo.
23/03/2014	The United States is accusing Russia of testing an anti-satellite missile (ASAT), leading to increased tensions and raising questions about space security.
20/12/2020	The sixth branch of the U.S. armed forces, the United States Space Force, was created to assemble, prepare, and supply space forces for both defensive and offensive missions.
07/12/2021	The UN General Assembly approves a resolution brought up by Russia that calls for negotiations to get underway on a treaty to prevent an arms race in outer space (PAROS).

**UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES AND EVENTS**

## Outer Space Treaty

The 1967 Outer Space treaty<sup>14</sup> was one of the first pieces of international legislation that directly addressed the militarization of space and directly prohibited any nation from placing “any objects carrying nuclear weapons into space or any celestial bodies”. Originally, two versions of the same treaty were submitted by both the United States and the Soviet Union, but the two eventually agreed to a common treaty. It has been signed and ratified by all of the permanent members of the security council and the majority of the international community. As of now, the Outer Space treaty is one of the most valuable pieces of legislation that protects space and other celestial bodies from being directly militarized. However, even though it does address the placement and usage of nuclear weapons, it fails to address the placement of all types of weapons, including anti-satellite and conventional weapons. This drawback makes the treaty inefficient in the modern landscape of conflict, and makes it in need of an overhaul.<sup>15</sup>

## Prevention of an Arms Race in Space (PAROS)

The Prevention of an Arms Race in Space (PAROS) treaty is a proposed piece of international legislation which would build upon the already existing “Outer Space Treaty” in order to stop any nation from placing any type of weapon into orbit<sup>16</sup>.

The Proposed Prevention of an Arms Race in Space treaty was first taken into consideration in the thirty sixth session of the General Assembly, in 1981<sup>17</sup>. However, even if it was one of the first pieces of international legislation that directly addressed the militarization of space, it suffered from a lack of quantifiable solutions that would ensure accountability between the nations that were attempting to militarize space. However, it did ensure that any future negotiations around the topic of space militarization would be based

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<sup>14</sup>NTI. “PAROS Treaty.” *The Nuclear Threat Initiative*, 2 June 2022,

[www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty](http://www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty).

<sup>15</sup> <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html>

<sup>16</sup>“Paros Treaty.” *The Nuclear Threat Initiative*, 2 June 2022, [www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/#:~:text=A%20PAROS%20treaty%20would%20complement,any%20nation%20from%20gaining%20a](http://www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/#:~:text=A%20PAROS%20treaty%20would%20complement,any%20nation%20from%20gaining%20a).

<sup>17</sup> <https://documents.un.org/doc/resolution/gen/nr0/407/23/pdf/nr040723.pdf>

on the commonly accepted principle that the “exploration and use of outer space should be for peaceful purposes”.<sup>18</sup>

## **POSSIBLE SOLUTIONS**

### **Establishment of a comprehensive multilateral framework for responsible usage of space.**

Currently, there are no existing frameworks that fully tackle the issue holistically with multilateral collaboration, with regulations in place to ensure a responsible and transparent use of space. The establishment of such an agreement supported by nations with a space presence and without alike, would not infringe upon a nation’s sovereignty but rather help reach a consensus regarding this unique shared space. Such a framework would need to tackle different aspects of space militarisation, such as data privacy, responsible handling of space debris, and compliance with the terms. This framework would include the establishment of periodic arms inspections by a neutral third party or a joint committee, place caps on the range a weapon related to space can have, and regulate the amount of military presence in space by each member state.

### **The creation of a stronger PAROS treaty through multilateral collaborations**

The PAROS treaty of 1981 is the main space treaty preventing full weaponization of space, specifically in place to prevent an arms race in space. Certain clauses explicitly bans weapons in orbit or a military installation on celestial bodies such as the moon, but there is not enough enforcement regarding the weaponization of space junk or continued extensive military presence in space. The PAROS treaty could also be reworked to include more compliance measures, such as periodic assessments of signatory countries’ space activities and adding clauses limiting the use of satellites for military espionage. In order to ensure a fair consensus is reached within these difficult discussions, countries need to increase communication and cooperation with each other through diplomatic dialogues.

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<sup>18</sup> “Paros Treaty.” The Nuclear Threat Initiative, 2 June 2022, [www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/#:~:text=A%20PAROS%20treaty%20would%20complement,any%20nation%20from%20gaining%20a.](http://www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/#:~:text=A%20PAROS%20treaty%20would%20complement,any%20nation%20from%20gaining%20a.)

## Establishment of a Neutral UN Body for Monitoring Space Militarization

The formation of a specialized UN body composed primarily of neutral states is proposed. This body would be tasked with conducting annual inspections to monitor the stockpiles of space weapons held by countries, ensuring transparency and accountability in their supply and use. The body would remain impartial by not including major space powers in its membership, avoiding geopolitical biases. Additionally, the body would compile annual reports detailing the development, deployment, and usage of space weapons, making the data publicly accessible to promote global awareness and informed decision-making. This initiative could act as a cornerstone for future international arms control agreements and help maintain space as a domain for peaceful exploration and cooperation, rather than conflict.

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