

# Research Report

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## General Assembly IV

### Promoting international cooperation regarding the peaceful uses of outer space

**MUNISH '14**



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| <b>Forum</b>            | General Assembly 4   |
| <b>Issue:</b>           | Promoting international cooperation regarding the peaceful uses of outer space |
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| <b>Position:</b>        | Deputy Chair   |

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## Introduction

The issue of the peaceful use of outer space may seem a bit far-fetched; a solution to a problem that does not exist. In reality, the peaceful use of outer space has been and still is a key point in guaranteeing international security. During the Cold War, the idea of orbital bombardment was introduced, leading to the idea that nuclear powered states such as the Soviet Union and the United States could mount their weapons onto orbiting satellites, and fire them down onto enemy states.

Not only that, but claims have been laid upon the Moon and other extraterrestrial territories, leading to the need for there to be solutions on how to quell the issues that may arise from this, such as multinational claims on those territories and the potential building of infrastructure in space in the future.

## Definition of Key Terms

### Orbital (Kinetic) Bombardment

The idea of orbital (kinetic) bombardment is that a satellite is launched into orbit over the Earth carrying munitions that can be launched down at any point in time, this method being faster than any missile. Using dense tungsten rods covered in steel shells as the munitions, these rods could hit the Earth at 7km/s, delivering an explosive of about 2.5 gigajoules of kinetic energy (a ton of TNT releases about 4.2 gigajoules).

### Space Law

The term "space law" is most often associated with the rules, principles and standards of international law appearing in the five international treaties and five sets of

principles governing outer space, which have been elaborated under the auspices of the United Nations Organization.

### **Extraterrestrial Object**

A natural object that exists outside of the earth's atmosphere.

### **Militarization of Space**

The placement or development of military technologies in outer space.

### **Ballistic Missile**

A ballistic missile is a missile that follows a specific flight path with the objective of delivering a warhead to a specific target. While it is initially powered for its ascension, it cuts power before falling to the ground, relying on its weight and velocity to inflict the damage.

## **General Overview**

The militarization of space is nothing new; as early as 1927, the Germans were experimenting with liquid-fuelled rockets. In 1932, it was clear that the potential of long-range rockets could be great, so the task of designing these types of rockets was given to the famous German engineer Wernehr von Braun. Despite test-flying the vehicle with a limited capacity for success, the German monarchy saw great potential in this technology, and drafted von Braun to use this technology for military purposes.

This is what started the race for the Ballistic missile and the famous V-2 rockets, which were developed at the end of Word War 2 in a last ditch effort to be the Nazi's secret and game changing weapon against the allies, which, despite having not succeeded, ushered in a brand new age of weapons in the form of Intercontinental Ballistic Missiles (IBM's).

Still in use today, Ballistic Missiles are categorized into many different categories, depending on the flight range that they can achieve. These range from Tactical Ballistic Missiles that can fly around 150 to 300 km, to Intercontinental Ballistic Missiles, which can go greater than 5500 km.

Another interesting concept of the militarization of our atmosphere is Orbital bombardment. This is a concept yet again first experimented with by the Nazis, who

envisioned a satellite being placed in the Earth's orbit and using a 100 meter wide concave mirror to concentrate the sun's light onto a concentrated point on the Earth, creating a sort of laser beam effect. While this is not the modern idea of Orbital bombardment, it did spur the idea of having satellites in orbit used as weapons.

The idea was pushed forward by the Soviets in the Cold War, who developed the Fractional Orbital Bombardment System (FOBS), which was designed to be launched into low orbit around the Earth, and which could later be de-orbited at a moment's notice to inflict damage upon its target. While the Outer Space Treaty banned the use of nuclear ammunition in these types of weapons, the Soviets were careful to not violate the treaty by testing FOBS with non-live warheads. While Orbital Bombardment is not used at the present moment, many are looking toward Kinetic Bombardment as being a sort of spiritual successor of Orbital Bombardment.

As previously mentioned, Kinetic Bombardment entails a satellite being in the Earth's orbit, equipped with tungsten rods, which could be released on command, and which would rely on the velocity they achieve to be the factor that causes the most damage. (Tungsten is chosen due to it being the densest metal available). Nicknamed the "Rods of God", this weapon is banned by neither the Outer Space Treaty nor the Anti-Ballistic Missile Treaty, but the idea laid out by the US military in 2003 was to have this weapon used more as a bunker buster, delivering rods at Mach 10 (hypersonic speeds), but with the potential to be a small tactical nuclear device.

And finally, the last part that is viewed as potentially harmful is the colonisation and claiming of extra-terrestrial territory. As stated in the 1967 Outer Space treaty, one of the five United Nations International ownership treaties, international territories will be for "all of mankind". Its successor was supposed to be the Moon Treaty, which would forbid private ownership or extra-terrestrial real estate, but so far it has only been ratified by 15 countries.

The fear with this is that out of the claims that may come for these territories, there will only be unwanted and unneeded tension between sides, which can easily be resolved by making these grounds international despite attempts by some individuals to privately claim or sell the land.

In more recent times, technology specifically made for outer space has not seen much progress due the amount of treaties set in place. This does not only apply to the use of weapons in outer space, but also for the use of Weapons of Mass Destruction, WMD's, which are chemical, biological and nuclear weapons.

However, due to recent tensions in Ukraine, the United States has taken up a policy of stricter monitoring when it comes to the Russian Federation. This led to President Obama publicly accusing Russia of breaking a cold-war era arms control missile by testing a cruise missile. Russia said that this treaty was “unfair and unsuitable for Russia”, and is now believed to be on the brink of walking out of the 1987 treaty that limited nuclear arms. If that were the case, then the potential for ICBMs (intercontinental ballistic missiles) being equipped becomes a possibility. Although this has a substantially small change of happening, it should not be forgotten.

On the other side, the United States are testing the X-37B Orbital Test Vehicle (OTV), a reusable small spaceship-like craft that was developed by the United States Air Force. Though only in the testing stages now, if the capabilities of it are truly reached, it will have countless possibilities including launch on demand, which gives it a greater range of flexibility. Not only that, but it is also stated that this new craft could be outfitted with a weapon capable of dropping tungsten rods, the aforementioned “Rods from God”, which are completely legal in space. This could give new meaning to the capabilities in which these types of weapons could go into orbit and be launched, giving the enemy little to no time to respond.

## Major Parties Involved and Their Views

### United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)

Set up in 1959 by the General Assembly, this is a committee that was “to review the scope of international cooperation in peaceful uses of outer space, to devise programmes in this field to be undertaken under United Nations auspices, to encourage continued research and the dissemination of information on outer space matters, and to study legal problems arising from the exploration of outer space”, as stated on their official website. It has 76 member states in the committee so far.

### European Space Agency

The European Space Agency (ESA) is an agency whose members are some of the most technologically advanced in the world. The European space agency has made it clear that its member states are all in favor of the continued international cooperation happening now in projects such as the International Space Station and support the idea of working towards the peaceful use of outer space.

## United States/ NASA

The National Aeronautics and Space Administration (NASA) has been a very important advocate of international relations in the field of space exploration and engineering, as well as the preservation of its nature to be used for the betterment of science. The United States has been a big advocate of a disarmament process in order to quell the tensions that might arise with the possibilities of Ballistic missiles and other similar weapons, but with the 2001 withdrawal from the Anti-Ballistic Missile Treaty, it is still clear that they are also looking out for the safety of their own state.

## Timeline of Events

| Date                           | Description of event  |
|--------------------------------|---|
| 1927                           | Experimentation with liquid fuelled rockets                                 |
| 1930's-40's                    | Creation and experimentation of the A series rockets and the V-2            |
| December 12 <sup>th</sup> 1959 | Creation of the United Nations Committee on the Peaceful use of Outer Space |
| 1960's – 1983                  | Soviet Union implements FOBS  |
| January 27 <sup>th</sup> 1967  | The Outer Space Treaty is signed  |
| May 1972                       | The Anti-Ballistic Missile Treaty is signed                                 |
| December 18 <sup>th</sup> 1979 | The Moon Treaty is signed   |
| 2001                           | The US withdraw from the Anti-Ballistic Missile Treaty; it becomes void.    |
| 2003                           | American military study done on the potential of Kinetic bombardment        |

## UN involvement, Relevant Resolutions, Treaties and Events

- Creation of the United Nations Committee on the Peaceful use of Outer Space, 12 December 1959, **(A/RES/14/72)**
- The Outer Space Treaty, 27 January 1967
- Anti-Ballistic Missile Treaty, May 22-30 1972
- The Moon Treaty, 18 December 1979



## Evaluation of Previous Attempts to Resolve the Issue

To look at the situation as it is right now, and to say that someone has failed would be false. In fact, compared to other issues, previous attempts at trying to resolve it have been relatively successful. The biggest milestone regarding this issue is the Outer Space Treaty, which can be seen as one of the biggest steps forward by the international community in solving a territorial dispute, especially for one of such a scale.

With the creation of the COPUOS, there was a definitive step forward in member UN states trying to progress towards the peaceful use of outer space, with all of the major space-affiliated countries being members of the committee.

The only real step back in the creation of a solution to the de-escalation of the situation is that of the somewhat failure of the Moon Treaty, which would allow jurisdiction of all extra-terrestrial bodies to be given over to the international community. Thus, all activities would have to conform to international law, including the United Nations Charter. However, only 16 countries have signed and ratified it, with an additional 4 having only signed it. To push the point even further, none of the countries currently engaged in self-launched manned space exploration or that plan to do so have ratified this treaty (e.g. the United States, some member states of the European Space Agency, Russia, People's Republic of China, Japan, and India).

The United States backing out of the Anti-Ballistic Missile Treaty in 2001 could also be considered somewhat of a setback. With the treaty in effect, there was a certain amount of Anti-Ballistic missiles that the United States or the Soviet Republics could have. Now, after the withdrawal of the United States, that has become void, leaving the amount up to the state.

## Possible Solutions

As previously mentioned, there is no real solution to this issue at the present moment; there is only the need to prevent the situation from escalating. What the international community should do is come together and try to relieve the tension that might be present.

For example, having more member states, especially those with a strong space program, sign and ratify the Moon Treaty that would give those territories to the international community would alleviate pressure from any future claims that might come from any country.

Another point to think about is the issue of space-based weapons, such as the Tungsten rods suspended by satellites in space. While no country is currently working on this type of weapon, it has been shown to be possible in the past, with estimates of power leading it to be considered at points to be a Weapon of Mass Destruction. A possible suggestion is to give concrete boundaries to the existence of these types of weapons, and what would qualify them to be one, as no treaty or agreement specifically targets them.

And finally, the last point to consider is the short lived Anti-Ballistic Missile Treaty between the United States and the Soviet Union, and later the Soviet Republics, which the United States later backed out of. This was set out to limit the amount of Anti-Ballistic missiles one country could have. While the method of controlling the threat might not be the right one, this being having more missiles to destroy the incoming missiles, it would be a good thing to look at ways to limit the amount of ballistic missiles in the possession of some major world powers. This would ensure that outer space would be used less for the implementation of weapons.

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