

# Militarization of Space

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## ABSTRACT

Defensive in the first few decades, the use of space for military purposes is now aggressive. The concept of militarized outer space has been replaced by the concept of "weaponized" outer space. International law in space only strictly prohibits the putting of weapons of mass destruction into orbit. The threat of conventional weapons development, which is primarily aimed at destroying operating military satellites, may not be prevented by France's earnest diplomatic activities. In this context, "European Space Deterrence" is a statement of strong European foreign policy, the development of independent means for trajectory monitoring of ballistics and space launches, and the ability to respond quickly in the event of an actual attack. May be based on including retaliation. And a small dedicated launcher. This seems to secure the space used for the social and economic development of France and Europe and will become increasingly important in the coming decades. Such assets will put Europe on an equal footing in dialogue with the United States in the context of NATO with interoperable space assets.

**Key Words:** Space militarization, space deterrence, military purposes

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## INTRODUCTION

The X-37B was the name of a small unmanned US spacecraft that returned to Earth at the end of last year after 220 days of space flight. It was not sent by NASA, a US private space agency, but was on a test flight by the US Air Force. There is a contradictory explanation about the mission of the orbit tester. The US government claims that it is designed to deliver payloads very quickly. However, conflict researcher Getz Neuneck of Hamburg's Institute for Peace Studies and Security Policy agrees with other experts that it can also serve as a military function. "Equipped with satellites, they can independently destroy, manipulate, or interfere with other satellites, which means they can be used as space weapons."

US space expert Jeff Mumber is particularly critical of the US government's lack of openness. "Why is the Air Force tolerating the capabilities and purposes of the orbital tester? It's just wrong to keep it so secret," he said.

In 1957, there was only one satellite in space. Currently, there are over 1,100 active systems. In addition to this, 19,000 satellites are no longer in operation, but continue to orbit the Earth. The universe plays an increasingly important role in human daily life. Mobile phones, the Internet, GPS, climate observations and weather forecasts are just a few examples.

Satellites are also becoming more important to the military. For example, you can find the position and movement of enemies in the war in Afghanistan. Images can be transferred to military command posts or sent directly to field soldiers in real time. Today, almost all communication with the military is via satellite. It also helps guide precision weapons to the target (Donepudi, 2019). For example, a surveillance space to detect launched enemy missiles would not be possible without satellites.

There are satellite launch sites in 11 countries. Today, satellites from 60 countries are constantly orbiting the earth. The United States is the overwhelmingly dominant private and military space power. Superpowers rely heavily on space systems because they want to operate militarily on a global scale. Half of the approximately 170 pure military satellites that orbit the Earth constantly belong to the United States. However, Russia, China, Germany, France and other countries also use satellites for military purposes.

Under international law, military use of space is regulated by only one provision of the Outer Space Treaty from 1967. Hans Joachim Heintze of the University of Bochum, an expert in international law, said: "As a result, military use of outer space is limited to some extent".

## **MILITARIZATION OF OUTER SPACE AND THE INTERNATIONAL LEGAL SOLUTIONS**

The most important document regulating the use of outer space is the so-called Outer Space Treaty (formally, the Convention on the Principles governing National Activities in the Exploration and Use of Outer Space, including the Moon and other celestial bodies) (UNOSA, 1967). It has been ratified in 109 countries (as of January 1, 2019) (UNOSA, 2019, p.10). The treaty regulates a wide range of space exploration issues. That is, it prohibits the "diverting" of all kinds of space by the nation-state, which refers to the moon and other celestial bodies (Article II), and obliges the Parties. A Convention that opens all stations, equipment, equipment, and spacecraft on the Moon and other celestial bodies to representatives of other Parties to the Convention (Article XII). With the exception of the direct ban on nuclear and weapons of mass destruction in space, the treaty does not regulate other issues related to the potential militarization of space. This document is the backbone of international space law. The treaty is so short and general that it was later supplemented by four formal agreements. 1) Rescue of astronomical objects, return of astronomical objects, agreement on return of objects launched into outer space, April 22, 1968 (UNOSA, 1968), 2) International liability for damage caused by space objects Convention on March 29, 1972 (UNOSA, 1972), 3) Convention on the Registration of Objects Launched into Outer Space, January 14, 1975 (UNOSA, 1975), 4) State on the Moon and other celestial bodies Agreement governing the activities of the United States, December 18, 1979 (UNOSA, 1979). All five documents make up the legal framework for using outer space, but the end of the listed documents has not been ratified by any of the current states that may have planned to launch humans into space. It should be noted that. The majority of Russia, China, Japan, and the member states of the European Space Agency (UNOSA, 2019).

So far, the treaty has served its purpose relatively well. In other words, there were no serious cases that violated that regulation. From this point of view, the most controversial is

the assumption that outer space will be used only for peaceful purposes (Article IV). For example, in the context of orbiting reconnaissance satellites for which the exact number is unknown for obvious reasons (although, as mentioned above, about 95% of satellites may be used for military purposes), or 2007. China shot down one of its own meteorological satellites with a mid-range ground-to-air missile. Thanks to private companies such as SpaceX and Blue Origin, in addition to the recently observed increasing frequency of space launches, there are increasing questions about the validity of current legislation, especially in the context of further development and expansion. The two most important international legal issues that may require preparation and consensus are the militarization and commercialization of outer space. The declarations of the leaders of the most important countries in the space market, namely the United States, Russia, China and India, show planned activities to break the letter directly or indirectly, if not in the spirit of space and SALT. Masu II Treaty. In 2018, US President Donald J. Trump declared the establishment of the Space Force (Insinna, 2019). In 2019, India decided to establish a military space agency – the Space Defense Agency (Lele, 2019), the current Russian Space Forces was founded in 2015 (GSO, 2019), and in the same year China was strategic. Established support for the military, including the Space Systems Division (Keck, 2014).

According to the discussion provided by the US Commercial Space Launch Competitiveness Act of 2015 (GPO, 2015), the treaty treats the nation-state as a political party rather than a private sector. As a result, the interpretation of such law leads to, for example, the consent of private and commercial exploitation (so-called space mining) of objects in the major asteroid belts. Of course, it's Russia.

## **THE WEAPONISATION OF SPACE**

The United States has officially promised to dominate the world by 2020. President Trump's new Space Command-4, the production of laser-armed fighters as a possible precursor to space weapons, and the possibility of a nuclear warhead going into orbit, the clock is ticking.

In 1997, the now rebuilt US Space Force announced its commitment to "Full Spectrum Dominance." The 2020 vision explains that "full-spectrum dominance" means military control of land, sea, air, and space (the so-called fourth dimension of war) "to protect US interests and investment." doing. "Protection" means guaranteeing freedom of operation. "US profits and investments" means the profits of a company.

Glossy pamphlets explain in the past that the Army has evolved to protect US settlers who stole land from Native Americans in the birth of the country's genocide. Similar to the 2020 vision, the National War College report acknowledges that by the 19th century, the Navy had evolved to protect the newly developed "grand strategy" of the United States. Perhaps in addition to protecting citizens and the Constitution, "the top priority is to protect American territory and our financial well-being, and it is still going on." By the 20th century, the Air Force was established to protect the "benefits of life", in the words of the Air Force Research Strategy Guide: Safe energy supply; [and] freedom of action. In the 21st century, these pillars of power are being strengthened by the Cyber Command and the upcoming Space Force.

The use of three-dimensional power by the Army, Navy, and Air Force means that the United States is already approaching the achievement of "Full Spectrum Dominance." The Brown University War Costs Project documents the current US military involvement in 80

countries, or 40 percent of the world's countries. This includes 65 so-called anti-terrorism training operations and 40 military bases (though some may think that the number of bases is much higher). With this measurement, "Full Spectrum Dominance" is almost half completed. However, this map excludes US and NATO bases, training programs, and operations in Estonia, Latvia, Poland, and Ukraine.

As the United States expands its space operations (the fourth dimension of war), competition for "full-spectrum dominance" will accelerate. Space has long been militarized in the sense that the United States uses satellites to guide missiles and aircraft. But the new doctrine is trying to weaponize the universe, for example, by blurring the boundaries between high-altitude military aircraft and the universe itself. The power of space today is harnessed by the United States to secure an advantage over the satellite infrastructure that enables the modern world of the Internet, e-commerce, GPS, telecommunications, surveillance, and war.

Since the 1950s, the United Nations has introduced various treaties banning the militarization and weaponization of space. The most famous is the Outer Space Treaty (1967). These treaties aim to protect the universe as the commons of all humankind. The creation of the US Space Force is a blatant, if not a letter, of those treaties. In the more recent decades, successive US governments have unilaterally rejected treaties to strengthen and expand existing space agreements for peace. In 2002, the United States withdrew from the Anti-ballistic Missile Treaty (1972), allowing the expansion of its long-range missile system. In 2008, China and Russia submitted to the Conference on Disarmament a draft treaty on the placement of weapons in outer space and the prevention of threats or the use of force against space objects. This would have responded to the US claim that the "enemy" would use space as a battlefield with US satellites, maintaining the principle of space as a commons.

But peace is not the goal. The United States rejected the offer because the goal is "full spectrum dominance." China and Russia introduced the treaty again proposed in 2014 – and again the United States rejected it. Earlier this year, the United States withdrew from the Intermediate-Range Nuclear Forces Treaty (INF). Last month, President Trump sent a non-confidential note about the new Space Directive 4 to the Vice President, the Chairman of the Joint Chiefs of Staff, NASA, and the Secretary of Defense and Secretary of Defense.

This document is a chilling and important reading. It recommends legislation for US military training "to ensure free access and freedom to space and to provide essential capabilities to the Joint and Allied forces." Importantly, this doctrine includes "the entire scope of peacetime and conflict." This memo recommends not only integrating the Space Force with intelligence agencies, but also establishing a Space Force Chief of Staff who will join the Joint Chiefs of Staff. The memo also states that US space operations comply with "international law." However, given that the United States rejected the Anti-Space Weapons Treaty, it is largely unconstrained by international law.

In late 2017, Space.com reported on a \$ 26.3 million Pentagon contract with Lockheed Martin to manufacture lasers for fighters under the Next Generation Compact Environmental Laser Advancement Program. According to the report, the laser will be ready by 2021. This article links to Doug Graham, Vice President of Lockheed Martin Space Systems' Missile Systems and Advanced Programs. In the original link, Graham reveals that the Air Force laser is "an example of how Lockheed Martin is using a variety of innovative technologies to transform laser devices into integrated weapons systems."

As if all of this wasn't bad enough, the UK Ministry of Defense (MoD) said in its forecasts by 2050: "The economy is becoming more and more dependent on space-based systems ... By 2050, space-based weapons systems will also be deployed, which may include nuclear weapons." But this is very reckless. Another MoD forecast that discusses technologies such as artificial intelligence that underlie weapons systems states: "Disastrous consequences, planned and unplanned possibilities ... various end-to-end scenarios related to these and other areas of development. Indicates the potential for catastrophic consequences, including the end of the world, or at least the end of mankind. "

"Full-spectrum dominance" is not only dangerous to the world, but also to US citizens who suffer the consequences of problems with their leaders' complex space weapons.

## SPACE FOR PEACEFUL PURPOSES

Internationally, it has been agreed for many years that the universe should be used for peaceful purposes and for the benefit of all humankind. Examples of uses and benefits include weather monitoring, search and rescue assistance, assistance in detecting potential natural disasters, detection and response to space debris problems, coordination of efforts to minimize harmful effects on the planet, and science. , Health and other studies are included.

The United Nations Outer Space Treaty provides a basic framework for international space law, stating that space should be reserved for peaceful use. It came into effect in October 1967. As summarized on the United Nations Office for Outer Space Affairs website, the Convention includes the following principles.

The exploration and use of outer space shall be in the interests and interests of all nations and shall be under the jurisdiction of all humankind. Outer space shall be freely explored and used by all nations. Outer space is not subject to national diversion by claim of sovereignty, use or occupation, or any other means. The State must not place nuclear weapons or other weapons of mass destruction in orbit or in celestial bodies, or otherwise in outer space. The moon and other celestial bodies shall be used for peaceful purposes only. Astronauts are considered human envoys (Donepudi et al., 2020). The State shall be responsible for national space activities, whether carried out by governmental or non-governmental activities.

The State shall be liable for the damage caused by the space object. The State shall avoid harmful pollution of space and celestial bodies. Towards the end of 2000, the UN General Assembly voted for a resolution called the Prevention of the Space Arms Race. It was adopted with 3 abstentions and a record of 163 votes in favor with no negative votes. The three abstainers were the Federated States of Micronesia, Israel and the United States.

In June 2004, the United Nations reiterated concerns about the militarization of space and its use for peaceful purposes in sessions at the UN General Assembly. UN Commission [On the Peaceful Use of Outer Space] The Commission expressed its view that it did not fulfill the task given by the General Assembly to recommend methods and means of maintaining outer space for peaceful purposes. It was. The delegation expressed the view that military activities in outer space had a serious impact on international cooperation in space exploration and peaceful use, and the Commission should address the issue. Some delegations believe that the greater risk of introducing weapons into outer space and adopting the concept of using force in outer space will undermine the foundations and logic of the development of non-proliferation mechanisms and systems as a whole. Was expressed. International security.



## US SEEKS MILITARIZATION OF SPACE

Various military forces around the world have used the space for years, mainly for surveillance satellites and the like.

However, the Bush administration of the United States hopes that the United States will expand its military power, have weapons in space, and therefore dominate this fourth military sector (the other three are sea, land, and air). I have made it clear for a long time. This new ultimate highland offers even greater military power.

It provides an additional important defense mechanism, but many are worried about the other benefits it brings, the ability to attack the United States' national interests without benefiting the international community.

In addition, with the pursuit of missile defense (contrary to the anti-ballistic missile treaty, which is an important part of the global arms control mechanism), the United States risks initiating wasted spending on an arms race in space.

Since the terrorist attacks on September 11, 2001, military-based policies and spending on the war on terror have increased. There are also policies to consider space-based weapons. The Center for Defense Information (CDI), based in Washington, D.C., provides detailed reports suggesting that this should not be decided in a hurry.

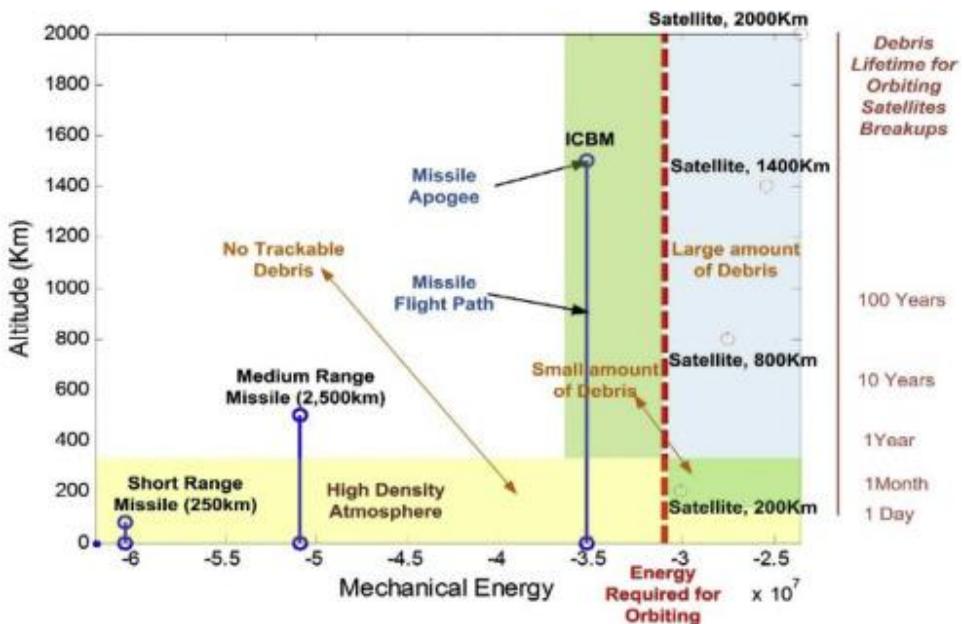
Unlike Star Trek, the final frontier isn't on the battlefield yet. But if the current trend continues, it will change. It's not the distant future of science fiction, it will change in the coming decades (Donepudi, 2017). The Bush administration's new plans and policies are clearly aimed at making the United States the first country to deploy space-based weapons. Behind this goal are several drivers, including highly realistic concerns about the vulnerability of space assets, which are becoming increasingly important to how the U.S. military operates, and the government's decision to pursue missile defense.

Unfortunately, the administration has little, at least publicly, considered the potential for widespread military, political, and economic impact of the US move to break the taboo on

weaponized spaces. There is reason for concern that doing so could actually undermine US national security and global stability, rather than strengthen it. Therefore, the government and parliament are encouraged to conduct a public policy review in detail on the pros and cons of the weaponized space. Such reviews seriously consider both short-term and long-term threats, as well as measures to prevent, deter, or counter future threats using all the tools in the US Policy Toolbox. Diplomacy including arms control treaties. Economical; military, including defenses other than offensive weapons. Nothing can be gained by rushing such a major change in US space policy, and there is much that can be lost.

Theresa Hitchens, *Space Weapon: Silver Bullet or Russian Roulette?*, Policy Implications of US Pursuit of Space-Based Weapons, Center for Defense Information, April 18, 2002

However, space-based weapons have been on the agenda long before September 11, and the war on terror may add reasons, but the fight against terrorism is not the only justification. But long before September 11, concerns about US motivation to pursue such a policy have been questioned. The fear is that by trying to establish a dominant position in space, the United States will become stronger and others may be forced to participate in an arms race in space.



Source: Dr. Wang Ting (Provided by Brian Weeden, Secure World Foundation)

The CDI report above also points out that the Bush administration's views were directly reflected in the Quadrennial Defense Review (QDR), published on October 1, 2001. The main purpose is ... not just to ensure the United States' ability to use space for military purposes. The QDR states that it is necessary not only for the purpose, but also for denying the enemy's abilities. In this context, the universe is no longer seen as a resource available to all humankind, but as another place to fight geopolitical and economic battles (Rahman et al., 2020).

The New York Times (May 18, 2005) reported that there was further promotion by the US Air Force for weapons in space. With the exception of weapons of mass destruction, there

are no treaties or laws prohibiting Washington from placing weapons in space, but the Times argue that deploying space weapons will face financial, technical, political, and diplomatic hurdles. However, this news article passed a resolution to prevent an arms race with three abstentions (the United States is one of the three), adopted by the Outer Space Treaty mentioned above, or by a recorded 163 votes in favor of disagreement. Seems to be ignoring. The Air Force doctrine defines the superiority of space as freedom of attack and freedom of attack in space.

In April 2005, General James E. Cartwright, who heads the United States Strategic Command, told the Senate Military Committee's Nuclear Force Subcommittee that the goal of developing space weapons was for the country to develop very quickly and in a very short time. He said it was to be able to attack. Lines of planning and delivery, everywhere on the surface of the globe.

The dominance of the universe is not our innate right, but it is our destiny ... The superiority of the universe is our daily mission. Space supremacy is our vision for the future.. General Lance Lord, head of the US Air Force Space Command, quoted on May 18, 2005 from the New York Times' air force seeking approval for Bush's space weapons program.

On August 31, 2006, President Bush approved a new national space policy to replace the national space policy of September 14, 1996.

The policy was based on eight principles. One was to support the peaceful use of space by all nations. However, in line with this principle, policy advocacy and peace objectives will enable intelligence-related activities with the US Department of Defense in pursuit of national interests. Two other important principles referred to the use of force when necessary to protect the interests of the United States.

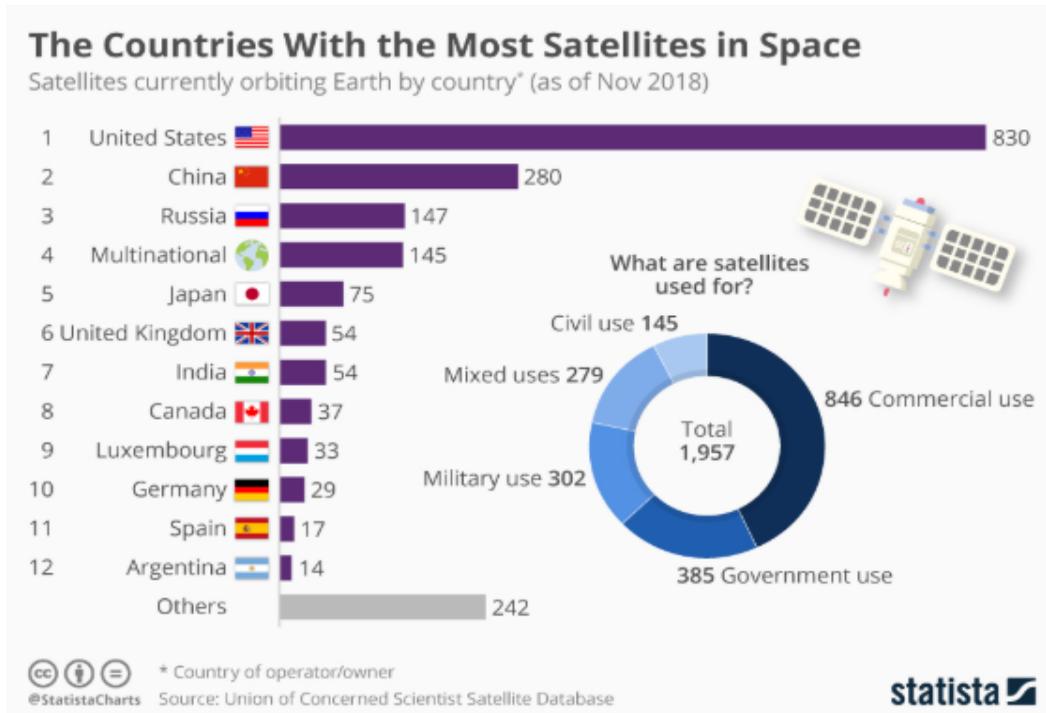
The United States believes that space functions, including ground and space segments and support links, are essential to national interests. In line with this policy, the United States will: Maintain rights, abilities, and freedom of action in space. Discourage or discourage others from interfering with or developing the abilities intended to do so (Donepudi, 2014a). Take the necessary actions to protect the space feature. Respond to interference. If necessary, deny adversaries the use of space capabilities that are hostile to the national interests of the United States.

The United States opposes the development of new legal systems or other restrictions that seek to ban or limit access to or the use of space in the United States. The proposed arms race agreement or restriction must not undermine the United States' right to research, develop, test, operate or otherwise engage in space for the national interest of the United States.

Uncategorized National Space Policy, Office of Science and Technology Policy, Executive Office of the President of the United States, October 6, 2006

## **EVIDENCE OF INCREASING MILITARIZATION OF SPACE**

The Verge reports that the U.S. Space Force has released details on testing anti-satellite weapons that Russia is suspected of using existing spacecraft already in orbit. The Russian satellite in question is the same one that was talked about in early 2020, which appeared to be tailing a US spy satellite in existing orbit. The same spacecraft appears to have deployed some type of projectile, according to space commands that monitor objects currently orbiting the Earth (Donepudi, 2014b).



US Space Force General John Raymond said this is "further evidence of Russia's continued efforts to develop and test space-based systems," which could endanger space assets in the United States and its allies. He told Verge that he was pursuing a strategy.

The militarization of space is not new, and stakeholders in all aspects have sought to develop offensive and defensive space weapons technology. One of the greatest potential risks is that in theory it is possible to deploy such weapons and destroy other satellites. It can disable key ground communications, intelligence, or observation space-based infrastructure used to support command and control operations on the ground. Defense or surveillance of battlefields and major military assets.

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