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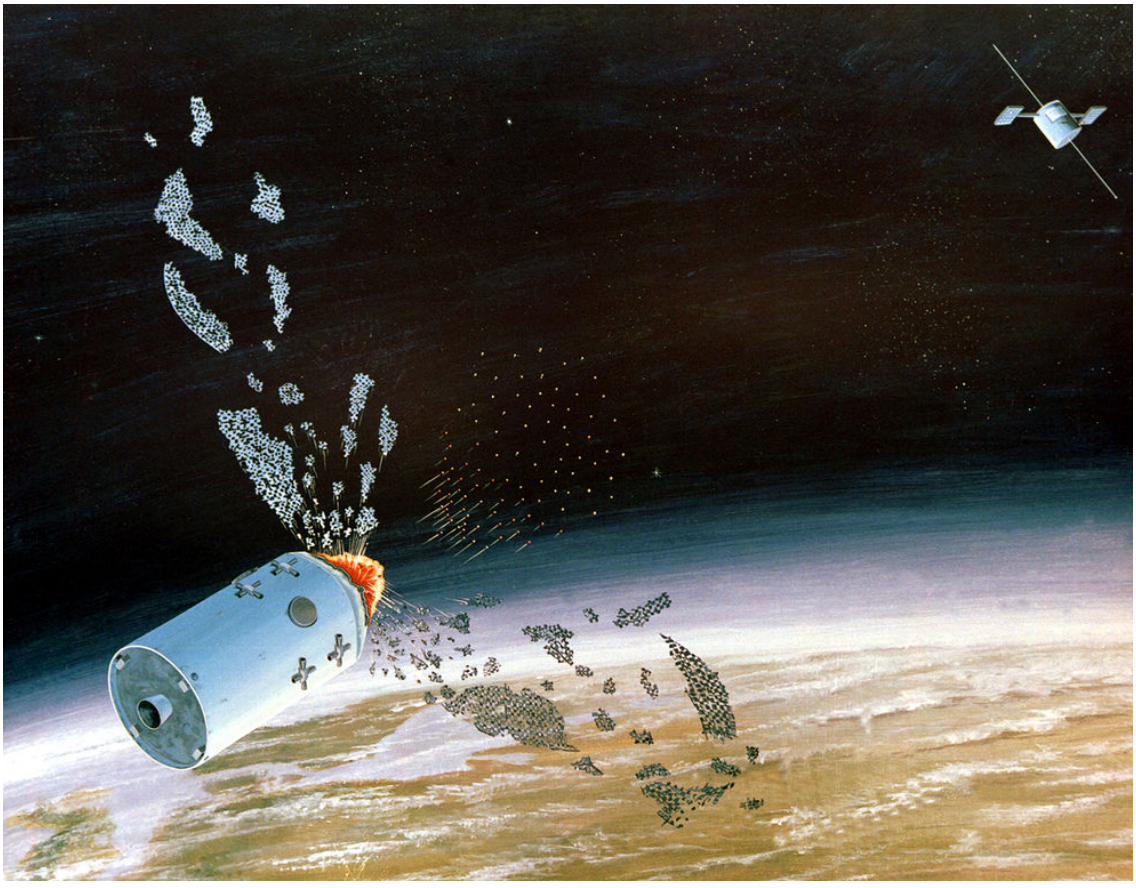
How to prevent placement of weapons in Outer Space: challenges and solutions (Russian priorities)

Andrey Malov



The article deals with the exploration, development and use of outer space. Special attention is paid to the military potential of outer

space and the threat of its weaponization. The corresponding legal regulation instruments are especially noted. Special emphasis is placed on measures aimed at maintaining strategic stability and preventing the arms race in outer space.

Read

Key findings:

- As can be seen, **there are no prohibitive international legal norms with regard to a number of possible areas of space activities related to space strike weapons and anti-satellite systems, as well as electronic and optoelectronic suppression systems.**
- Certainly, not all of these activities can and should be monitored from a legal perspective, but in conceptual terms, it should be recognized that **nowadays outer space is not legally protected from being a possible area for the placement of attack weapon systems, so as not to become, under certain conditions, an arena for armed struggle and a potential theatre of war.**
- The placement of weapons in outer space and the prevention of an arms race in outer space has traditionally required stringent measures and the highest possible standards to ensure that states comply with their obligations under the agreements reached. **Such standards are ensured only through a legally binding instrument.**
- Thus, it would be appropriate to state that the main efforts in the field of security of space activities with regard to its weapons aspect are currently being made by the Russian Federation through the promotion of the PPWT, the NFP initiative and TCBMs with a view to preserving outer space as a free zone for peaceful uses and research. **In general, these avenues of practical efforts could be considered as possible scenarios for paving the way to keeping the outer space free from attack weapons.**

Read

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About the Author

Dr. Andrey Malov is an associate Professor of the Diplomatic Academy of the Russian MFA. Member of PIR Center Advisory Board. PhD in History. Graduated from Maurice Thorez Moscow State Pedagogical Institute of Foreign Languages. Worked at the Committee of the Soviet Youth Organizations. In 1991-1994 – a researcher and lecturer at the Institute for Economic Strategies, Russian Academy of Sciences. In 1992 – a visiting scholar in Western International University (Phoenix, Arizona). Serves at the Ministry of Foreign Affairs since 1994. Participated in the OSCE activities in Nagorny Karabakh (1994-1996) and Bosnia and Herzegowina (1996-1998). Works on arms control, nonproliferation and disarmament issues at the Russian Ministry of Foreign Affairs since 1998. Participated in the negotiations on multilateral disarmament.

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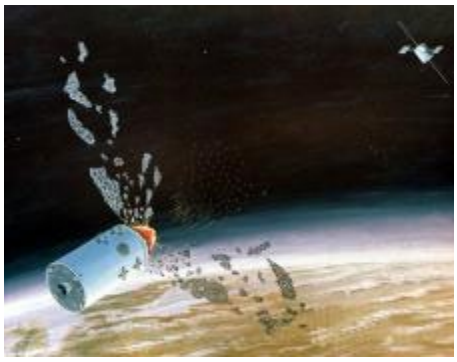
How to Prevent Placement of Weapons in Outer Space: Challenges and Solutions (Russian Priorities)

Andrey Yu. Malov



Recently, the threats of weaponization of outer space have been increasingly backed by both the doctrinal documents of several countries, first of all the United States, and the material content, which in turn is being formed through organizational measures, as well as improving military technical capabilities.

We are getting closer to point of no return beyond which the measures on prevention of weapons deployment in outer space (PPWT) may lose its relevance.

Under these conditions, it is important to analyze both the existing potential of specific steps aimed at preventing an arms race in outer space (PAROS), and the long list of specific actions that impede the advancement of the PAROS initiative, primarily from the United States.

This is particularly relevant given the latest US Administration propaganda steps aimed at ensuring a dominant position in space (for example, the declared monopoly and unconditional right to explore the Moon and Mars).

These and other issues related to this topic are the subject of the proposed study by Andrey Malov, Ph.D., a member of the PIR Center Expert Council, associate professor of the Department of International and National Security, Diplomatic Academy of the Russian Ministry of Foreign Affairs.

Developments of the very beginning of the space age

The space age has set a new strategic objective for mankind: to systematically explore, develop and use outer space for the benefit of the community. National space programs and international cooperation programs adopted in many countries around the world have shown impressive potential for the use of outer space for scientific, economic and military purposes.

In light of the above, the role of space systems in ensuring the defense capabilities of states is a relevant issue.

This area of space activity began to develop almost from the early years of space exploration. The U.S.S.R and the U.S. conducted extensive research into areas of possible military applications of space technology. The possibility of placing weapons in space against ground, sea and air targets was studied in depth. The key criterion for determining the feasibility of developing such assets was the ratio between the possible costs for their development and expected effectiveness of the accomplished task in comparison with other types of (non-space-based) weapon systems with similar purposes.

Much attention was paid in the research to the possibilities of developing space systems against ballistic missiles, i.e. ballistic missile defense systems. After many years of scattered research conducted in the U.S., such scientific efforts were compiled in the widely publicized Strategic Defense Initiative (SDI), launched in 1983. Kinetic energy (based on straight-line impact of striking element on a missile's warhead), laser, beam (based on directed charged particles beams),

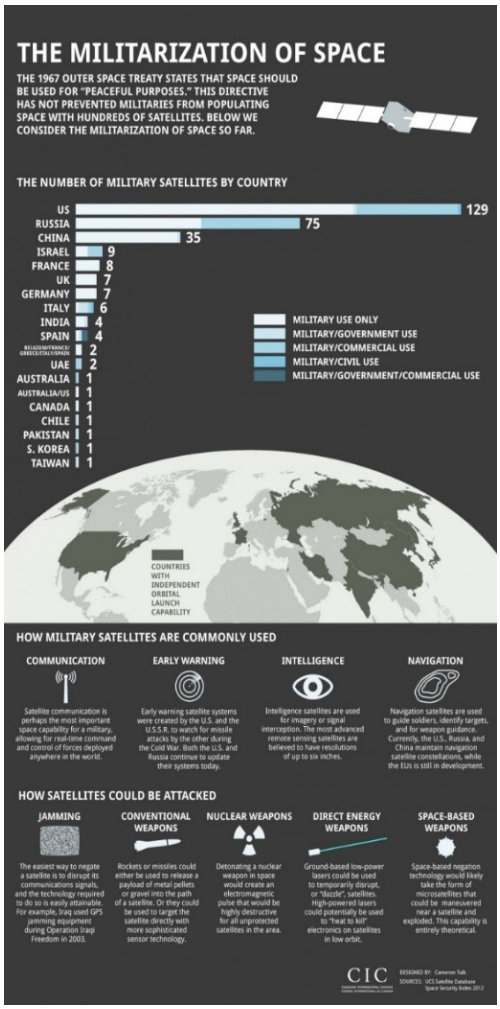
electromagnetic, and nuclear weapons were considered as possible weapons for space-borne ABM systems. Extensive research was also carried out on anti-satellite systems (ASATs).

Practical developments in anti-satellite systems were carried out in the U.S. and the U.S.S.R. The U.S. first developed an anti-satellite with ground-based interceptor missile, followed by an aircraft-based ASAT in the 1980s, which was successfully tested on a real target in space, but not deployed and put into service. In the 1970s, the U.S.S.R deployed a ground-based space missile defense system called "IS" (Satellite Destroyer), which was operational until April 1993. However, no test launches of interceptor satellites have been carried out since 1983.

Thus, we have quite a comprehensive picture of what was done in the field of exploration, development and use of outer space during the first decades of the space age. As a whole, this period can be described as the time of exploring the scientific, economic and military potential of outer space, reflecting on the areas of practical application of space technology, understanding the role of space systems in ensuring national defense capability, as well as maintaining strategic stability and international security.

Legal framework for the exploration and use of outer space

At the same time, there was an evolution in the legal regime for the exploration and use of outer space, including for military purposes.



All these substantial and significant works have contributed to the creation of legal prerequisites for a number of draft fundamental international legal agreements governing space activities: 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water; 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space; 1972 Convention on International Liability for Damage Caused by Space Objects; 1972 Treaty on the Limitation of Anti-Ballistic Missiles Systems; 1976 Convention on Registration of Objects Launched into Outer Space; 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques; 1984 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies. The Charter of the United Nations containing important provisions fully applicable to space activities should also be taken into account.

It should also be noted that the real starting point for legal regulation of space activities was UNGA resolution 1348 (XIII) of December 13, 1958, which reflected a year after the launch of the first artificial Earth satellite by the U.S.S.R. "the common interest of mankind in outer space", and UNGA resolution (XIV) of December 12, 1959.

Thus, there are now strong legal restrictions on the military use of space and a number of international obligations protecting spacecraft from hostile actions.

At the same time it should be noted that these legal restrictions do not prevent the development, deployment and use of military space assets, and space-faring nations did not seek to do so. Such assets, by the nature of their tasks, were considered not to be destabilizing weapons and therefore "non-hazardous" for maintaining strategic balance of forces. As can be seen, there are no prohibitive international legal norms with regard to a number of possible areas of space activities related to space strike weapons and anti-satellite systems, as well as electronic and optoelectronic suppression systems.

After the U.S. withdrawal from the ABM Treaty in 2002, the commitment not to develop, test or place space-based ABM systems and their components ceased to exist. This not only paved the way for the development of space weapons for missile defense, but also made it possible to design space-based anti-satellite weapons owing to the availability of relevant and similar technologies.

Certainly, not all of these activities can and should be monitored from a legal perspective, but in conceptual terms, it should be recognized that nowadays outer space is not legally protected from being a possible area for the placement of attack weapon systems, so as not to become, under certain conditions, an arena for armed struggle and a potential theatre of war.

It should be pointed out that legal gaps in the field of military space activities have prompted many countries to develop relevant international agreements. The Soviet Union, and later Russia, has been active with respect to this issue. Without seeking to give a full overview of the political and diplomatic steps taken by the U.S.S.R. to prevent the placement of weapons in outer space, we shall emphasize only three key initiatives: the draft treaty on the prevention of the placement of weapons in outer space, introduced to the UN in 1981; a draft treaty banning the use of force in outer space and from outer space against the Earth proposed in 1983 and supplemented by a ban on the use of force from the Earth against space objects in 1984; the commitment made by the Soviet Union in 1983 not to be the first to place any kind of anti-satellite weapons in outer space as long as other states refrain from placing any type of anti-satellite weapon in outer space (this moratorium also covered test launches).

It is worth noting that the United States did not support any of these U.S.S.R. initiatives. It should be stressed that the initiatives by the Soviet Union on the prohibition of the use of force in outer space, from outer space and against space objects provided a fundamental basis for a

comprehensive solution to the problem of preventing the turning of outer space into an area of weapons placement, an arena of armed struggle and a potential theatre of war.

Current threats of space weaponization

Is there any reason today to talk about the existence of precondition for the placement of weapons in outer space? The answer is yes rather than no. There are international legal gaps that allow for the placement of weapons in outer space, as well as relevant military and strategic prerequisites and, as may be assumed, scientific and technological capacities.

To understand the challenges we face and to find means to address them, it is necessary to clearly distinguish the threat posed to humanity by the arms race in outer space, accompanied by the weaponization of outer space, from the risks and dangers associated with the objective development of space activities, the involvement of new actors in them and the impact of natural phenomena on them. They differ in their origins, i.e. the factors contributing to their emergence.

In the case of a threat of an arms race in outer space, such a factor is the intention or aspiration of a single state (or group of states) to gain a military advantage over its potential adversaries, take a dominant position in outer space, as well as to be able to impose its national policies on other states as the only pattern of behavior in outer space. In other words, the source of the problem is the political will and state policy.

In contrast, the dangers and risks of space activities derive from the natural course of their development, the increasing density of space traffic and space operations, space debris and effects of natural phenomena such as space weather.

Therefore, the approaches to solving these issues differ as well. In the context of an arms race in outer space, mainly involving the placement of weapons in outer space, we still seem to have the opportunity to take preventive measures aimed at eliminating the threat of weapons being placed in outer space and to start an arms race there.

In the latter case, we face the already existing problems (space debris, traffic density, space weather effects). A preventive approach cannot be used to tackle them as these issues have existed for decades.

Moreover, the placement of weapons in outer space and the prevention of an arms race in outer space has traditionally required stringent measures and the highest possible standards to ensure that states comply with their obligations under the agreements reached. Such standards are ensured only through a legally binding instrument.

Transparency and confidence-building measures and PAROS resolution as a path to security in outer space

As for the elimination of risks and dangers posed by activities in outer space that are not related to the proliferation of weapons in outer space, this could involve elements of "soft law", including the elaboration of codes of conduct, principles and standards of responsible behavior – transparency and confidence-building measures in outer space activities (TCBMs).

TCBMs are at the same time an integral part of the work on options for legally binding agreements on the establishment of a barrier against the weaponization of outer space.

In 2005-2010, UNGA resolutions on TCBMs were adopted annually at the initiative of Russia and China. During this time, 68 states (including all EU countries) acted as co-sponsors, while 21 states and the European Union submitted their proposals on TCBMs to the UN.

In accordance with UNGA resolution 65/68 of 2010, a group of governmental experts (GGE), composed of representatives from 15 States, worked under the Russian presidency in 2012-2013. The GGE summarized and elaborated on the existing proposals on TCBMs advanced by states and provided recommendations on their introduction into international practice. The final report (Document A/68/189*) by the GGE was adopted by consensus at the 68th session of the UNGA.

As a follow-up to the final report by the GGE, a UNGA resolution on TCBMs was adopted by consensus in 2014-2017, with an unprecedented initial trilateral co-authorship by China, Russia and the U.S. For the 72nd session of the General Assembly, pursuant to resolution 70/53 on TCBMs, a report by the United Nations Secretary-General containing States' views on the coordination of TCBMs within the UN system was prepared (Document A/72/65). However, at the 73rd session of the UNGA, the resolution (A/RES/73/72) traditionally adopted by consensus was put to a vote: 180 votes in favor, one abstention (Palau) and two against (Israel and the U.S.).

This goes to prove that U.S. approaches have evolved significantly – from joint elaboration of TCBMs and co-sponsorship of the Resolution to their actual denial, which is an alarming indicator of military and space preparations and desire to dominate outer space. Another important fact deserves attention in this context. The annual resolution Prevention of an Arms Race in Outer Space (PAROS), introduced alternately by Egypt and Sri Lanka, is adopted by a convincing majority at the UN General Assembly; no one votes against it, but before the 72nd session of the UN General Assembly, the US and Israel had consistently abstained.

But at the 73d session PAROS was approved with 178 votes in favor, while the U.S. and Israel for the first time voted against it.

In general, when referring to the existing international legal regime applicable to outer space and the prevention of an arms race in it, it is appropriate to take into account the body of principles, rights, international obligations and definitions already established by the international community over the past decades. Of course, it must be borne in mind that the prevention of an arms race in space (PAROS) is a very complex phenomenon at the boundary between various branches of international law.

> **"Regarding space matters, in our contacts with our US colleagues we are ready to go beyond the long-standing Russia-China initiative to prevent the deployment of weapons in outer space. In fact, the Americans do not want to be alone when they give the green light to this initiative. However, following up on these discussions we are ready to talk about ways to cooperate in the peaceful use of outer space", -** *Minister of Foreign Affairs of the Russian Federation Sergey Lavrov during his interview with Russian and foreign media via video-conference on urgent international issues, Moscow, April 14, 2020*

It is clear that international law should be at the core of all state activities in outer space. However, one has to realize that outer space has its specific features. Its special nature should be strictly taken into account. It may, therefore, be necessary to adapt some norms of international law to outer space. These issues, however, should be discussed at specialized international fora, including at the First and Fourth Committees of the UNGA, the UN Committee on the Peaceful Uses of Outer Space in Vienna, and the Conference on Disarmament in Geneva.

This is a very long and time-consuming process. However, this is the only way to elaborate effective international legal instruments. In this regard, I would like to remind that the formulation of principles and rules of the international Law of the Sea was quite a long process. At present, the adaptation of international law to the information environment is not going smoothly.

Unclear perspectives of the legally binding instruments promoted by Russia

As we know, the 1967 Outer Space Treaty prohibits the placement of any kind of weapons of mass destruction (WMD) in outer space. Other types of weapons are not covered by the Treaty.

As for PAROS issues, they are part of arms control, disarmament and non-proliferation. Therefore, the search for a solution must first and foremost be carried out with the tools that have been elaborated by the international community over the past 50 years and within the structures designed to address such issues. Notwithstanding the usefulness of the TCBMs, the main and effective element of such a toolkit is a legally binding agreement that would prevent the placement of strike weapon systems in outer space.

It was with this understanding that Russia introduced the PPWT draft together with China at the Conference on Disarmament as far back as 2008. In June 2014, Russia and China presented an updated PPWT draft to the CD, which incorporated suggestions made by concerned states since its submission.

A number of countries express support for the conclusion of a multilateral legally binding treaty banning the placement of weapons in outer space, but the lack of coordination in the work program of the CD does not allow for a full format discussion of this issue based on the PPWT draft.

At the same time, realizing that advancing towards the legal ban was not an easy process, Russia made a unilateral political commitment not to be the first to place weapons in outer space (NFP) at the First Committee of the 59th session of the UNGA as early as October 2004, as a first step towards the PPWT. In 2005, all other CSTO Member States made such a commitment.

To date, commitments not to be the first to place weapons in outer space have been made in joint inter-state statements by 18 States.

At the 73rd session of the UNGA, the document (A/RES/73/31) on the NFP got 128 votes with 50 countries acting as co-sponsors. It is quite telling that 12 states (Australia, United Kingdom, Hungary, Georgia, Israel, Latvia, Lithuania, Poland, United States, France, Ukraine and Estonia) opposed it.

The political commitment to the NFP initiative, as the highest form of inter-State transparency and mutual trust, is currently one of the few truly working measures aimed at preventing the

weaponization of outer space. It should be noted, however, that it is not subject to the requirements that are generally imposed on binding international legal instruments.

Thus, it would be appropriate to state that the main efforts in the field of security of space activities with regard to its weapons aspect are currently being made by the Russian Federation through the promotion of the PPWT, the NFP initiative and TCBMs with a view to preserving outer space as a free zone for peaceful uses and research. In general, these avenues of practical efforts could be considered as possible scenarios for paving the way to keeping the outer space free from attack weapons.

However, despite their importance in the face of the increasing number of practical measures to weaponize outer space, the NFP initiative and TCBMs appear not to be sufficient.

A serious blow against the existing legal field and the legal base of space activities has been manifested quite recently by the US President executive order of 7 April, 2020 that brushes aside historic space treaties that view space objects as global commons. In fact, by this political step 1979 Moon Treaty turns out to be totally ignored by opening practical way to mine The Moon and possibly Mars. The right of the USA to engage in the exploration, scientific discovery and use of The Moon, Mars or other celestial bodies is practically granted by this executive order which could be considered as an additional incentive for hostile actions in outer space.

In this context the order said that the US doesn't see space as a common area for resources and doesn't need permission of international agreements or any other permission to get started.

Summing it up. The preparation of the grounds for a full-scale arms race in outer space is becoming a reality. Time is running out and the window of opportunity for PAROS is narrowing. This worst-case scenario can only be avoided by developing and adopting a legally binding instrument with strong safeguards against the placement of weapons in outer space, to which all space-faring nations would become parties.

That is why today any proactive initiatives are of the utmost relevance. Therefore, an international legally binding agreement on PAROS would also be valuable, the elements of which a dedicated UN Group of Governmental Experts (GGE) established by UNGA resolution (document A/RES/72/250) has sought to elaborate.

The initiative to establish a GGE on PAROS comes from Russia and China, whose aim was to give additional impetus to the discussion on PAROS issues with subsequent negotiations at the Conference on Disarmament in Geneva (CD).

Unfortunately, the GGE has failed to reach a consensus decision, and the elements of an eventual agreement on PAROS have not been agreed upon.

Thus, we can make the following conclusions.

Real threats of the weaponization of outer space are on the rise. The window of opportunity for proactive action is narrowing. Under these circumstances, it is of great importance to convey to all participants in the multilateral dialogue on the security of outer space activities the key idea that a serious discussion on ensuring free access to space, its safe use, the safety of space property and, in general, the sustainability and stability of space activities in the current context is simply impossible without addressing in a practical way the issues of preventing the placement of weapons in outer space.