

## **2001, April 16. The PIR Center's will hold regular Research Council meeting on "Proliferation of Missiles and Missile Technologies: Threats to Russian Security".**

On April 16, 2001 The PIR Center held regular Research Council meeting on "Proliferation of Missiles and Missile Technologies: Threats to Russian Security". Keynote speakers were Rebecca Johnson, Executive Director of the Acronym Institute, and Vitaly Lukyantsev, Senior Counselor of the Department of Security and Disarmament Affairs of the Russian Foreign Ministry.

**Rebecca Johnson**

**Executive Director of the Acronym Institute**

Missile defence plans favoured by some Republicans would go far beyond the land-based 'Clinton phase-one' interceptors, and even beyond Richard Perle's vision of sea and air-based interceptors. Some are harking back to Reagan's strategic defence initiative (SDI), seeking to provide a future US capability that includes lasers, other directed energy weapons (DEW) and potentially kinetic-energy weapons (KEW) based in space.

Much has been written about the missile capabilities of those countries designated by the United States as 'states of concern' – or as we must again call them 'rogue states', such as North Korea, Iran and Iraq. Similarly, much is known about the present capabilities of the five nuclear weapon states, Israel, India and Pakistan. Today, I want to look at a wider perspective arising from the perceived missile proliferation threats: the destabilising consequences of military responses based on ballistic missile defences. In particular, I choose to consider the danger that as part of its response to missile proliferation threats, the US may accelerate the militarisation of outer space and seek to deploy weapons in space, both for use space-to-space and for space-to-Earth interception.

When the US Space Command published its 'Vision for 2020' in 1997, reassuring voices in the Clinton Administration and armed forces said these ideas were just being floated as part of a future-looking exercise. Phrases like "US Space Command – dominating the space dimension of military operations to protect US interests and investment" and "Integrating Space Forces into warfighting capabilities across the full spectrum of conflict" were portrayed as the hyperbole of marketing, from a small, parentless agency seeking to attract funds and support. It was not being taken too seriously by those in charge. With the victory of George W. Bush and the appointment of Donald H. Rumsfeld as Secretary for Defence, the minority in the US Space Command who were developing plans for America to take military control of outer space may now be in the ascendant. Rumsfeld presided over a Commission whose report in January 2001 echoed Vision for 2020, though in less inflammatory language. Their plans have to be taken seriously before it is too late. There are very serious international security issues coming to the fore that need to be addressed preventively. The issues raised by NMD and the weaponisation of space could have a profound impact on global security and on hopes that the weapon states will make progress on nuclear disarmament. With the Geneva Conference on Disarmament (CD) currently deadlocked, with no realistic hope of convening any kind of substantive negotiations on its agenda item Prevention of an Arms Race in Outer Space (PAROS), this paper argues the case for separate multilateral negotiations on a treaty to prevent war in space, regulate the non-aggressive and commercial uses of outer space, and provide for a protected 'space sanctuary'.

In the 1980s there was a rash of articles proposing arms control to limit anti-satellite weapons (ASAT), but little happened. More recently, US plans for national missile defence have underlined military dependence on space for surveillance and communications, but some options would go further, putting targeting components and even directed energy or kinetic energy weapons on satellites. Space Command's 'Joint Vision 2010' called for 'full spectrum dominance', arguing that "the medium of space is the fourth medium of warfare – along with land, sea and air."

Extrapolating lessons from the rise of naval dominance to protect and enhance European commercial interests from the 16th century, USSC's Vision for 2020 (published as a set of visual images and slogans rather than a report) argues that an increased dependence upon space capabilities for 'commercial, civil, international, and military interests and investments' could lead to increased vulnerabilities: "As space systems become lucrative military targets, there will be a critical need to control the space medium to ensure US dominance on future battlefields...to ensure space superiority". US Space Command foresaw a role for itself in "dominating the space dimension of military operations to protect US national interests and investment...[and] integrating space forces into warfighting capabilities across the full spectrum of conflict." To accomplish these objectives, four operational concepts are envisaged: control of space; global engagement; full force integration; and global partnerships.

In articles intended to explain Space Command's vision, its commander-in-chief, General Joseph W. Ashy (CINCSPACE) talked of "engaging terrestrial targets from space. We will engage targets in space, from space." Space Command wanted the resources to carry out four key missions:

space support – launching and operating spacecraft;?

space force enhancement – providing services and information from space? such as navigation and weather, communications and missile warning launch;

space control or space superiority; and?

space force application – applying military force from space to a? terrestrial target.

Ashy explained that the US had development programmes in directed energy and hit-to-kill weapons because "we're going to fight a war in space. We're going to fit from space and we're going to fight into space..."

Karl Grossman has listed numerous other publications which all come to the same conclusion: new technologies will allow the fielding of space-based weapons "of reasonable mass and cost to effect very many kills" and the United States is gearing up for the "unilateral control of space, which overarches Planet Earth, all occupants, and its entire contents... [with] that vantage position could overpower every opponent".

In January 2001, the Commission to Assess United States National Security Space Management and Organisation, chaired by Donald Rumsfeld before becoming Secretary for Defence, recommended that US national space policy should be brought into the centre of defence planning, encompassing an early review and revision of policy priorities. The Commission, which included General Howell M. Estes III, a chief architect of Vision for 2020, was couched in less lurid terms than Vision for 2020 and emphasised that it was in the US national interest to promote the peaceful uses of space. However, it also concluded that space interests be regarded as a top national security priority and that the US must ensure continuing superiority in space capabilities in order "both to deter and to defend against hostile acts in and from space", including "uses of space hostile to US interests". The report also recommended that disparate space activities should be merged under a streamlined command structure, that the Secretary of Defence collaborate closely with the Director of the Central Intelligence Agency (CIA), and that sustained government investment in science and breakthrough technologies would be necessary to maintain US leadership in space. While recognising that "sensitivity" surrounds the notion of weapons in space, the Commission argued that the US Government should pursue the relevant capabilities "to ensure that the President will have the option to deploy weapons in space to deter threats to and, if necessary, defend against attacks on US interests".

Raising the spectre of a 'Space Pearl Harbour', the Commission argued that US military capabilities would need to be transformed in the areas of:

assured access to space and on-orbit operations?

space situational awareness?

earth surveillance from space?

global command, control and communications in space?

defence in space?

homeland defence?

power projection in, from and through space.?

If adhering to the 1967 Outer Space prohibition on weapons of mass destruction, there can be two types of space weapon: kinetic energy weapons (KEW) kill by hitting another object at high speed, although they may also carry chemical explosives; in directed energy weapons (DEW), destruction is accomplished by focussing energy beams at the speed of light.

Testing and exercises including 'live fire' events were recommended to keep the armed forces proficient. In addition to arguing for strengthened intelligence capabilities, investment to advance US technological leadership, the creation of a cadre of space professionals, and a restructuring of the decision-making to bring national security space policy into the mainstream and under the 'deliberate leadership' of the US President, the Commission argued that the US should participate actively in shaping the space legal and regulatory environment. However, the US "must be cautious of agreements intended for one purpose that, when added to a larger web of treaties or regulations, may have the unintended consequences of restricting future activities".

Rumsfeld's Commission noted that in July 2000, the Xinhua news agency reported that China was developing methods and strategies for defeating the US military in a high-tech and space-based future war. For Rumsfeld, this was a sign of vulnerability justifying US plans to enhance their military and weapon capabilities in space. Lt. Col. Bruce M. DeBlois of the United States Airforce came to an opposition conclusion. DeBlois criticises the assumption that "space will be weaponised; we only need to decide if the US will take the lead". While accepting that the advantages of being the first nation to weaponise space were "undeniable", DeBlois argues that it may not be the best strategy. Arguing that weaponising space would be profoundly destabilising, invigorate a high tech arms race and potentially a new round of MAD [mutual assured destruction], and that the US would have more to lose, DeBlois advocates pursuit of a policy of 'space sanctuary'. DeBlois utilises some of the same arguments as US Space Command regarding US dependence on space for intelligence, communication, surveillance, navigation, commercial interests and commercial and military data acquisition. Where the Rumsfeld Commission argued that the attendant vulnerabilities must be met with aggressive development of military space capabilities, DeBlois describes three viable approaches for defending space assets: "i) diplomatic/political defences (agreements aimed at building collective security); ii) passive defences (hide and seek), and iii) active defences (weapons). DeBlois recommends combining options i) and ii) and "active, aggressive avoidance of the third". As a military analyst, DeBlois identifies a number of military reasons for not weaponising space. He argues that space weaponisation strategies are expensive, provocative and escalatory; they are militarily and politically self-defeating and lack the element of survivability; they maintain a bogus centre of gravity (COG) of vulnerability, for which other strategies might provide better defence and protection; initial advantage would soon be neutralised as other major powers seek to develop space weapons of their own, while lesser powers could offset them with asymmetric responses.

In 1967, in the heyday of the US-Soviet space race, but before humans had actually walked on the moon or set up orbiting space stations such as MIR, the international community negotiated the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, commonly known as the Outer Space Treaty. The treaty prohibits the placing or stationing in earth orbit or celestial bodies of any objects carrying nuclear or other weapons of mass destruction. It was accepted that "passive military use" such as reconnaissance satellites, surveillance, early warning or communications would be allowed. Although military personnel could conduct scientific research, the testing of weapons in space or the holding of military manoeuvres or establishment of military bases was banned. Ballistic missiles carrying nuclear weapons through space were permitted, as were weapons not capable of mass destruction. A further confidence building Treaty was negotiated in 1975, the Convention on Registration of Objects Launched into Outer Space (the Registration convention). This complemented the 1972 Convention on International Liability for Damage Caused by Space Objects but neither convention has received much attention or prompt observance. More than a decade later, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the Moon Agreement) was signed in December 1979 and entered into force in 1984. There have been further initiatives. Sri Lanka, in particular, for many years took the lead on outer space arms control.

The United Nations has a Committee on the Peaceful Uses of Outer Space (COPUOS) attached to the Fourth Committee. The Conference on Disarmament in Geneva has for over two decades had the agenda item 'Prevention of An Arms Race in Outer Space' (PAROS), although for much of that time, the issue failed to get into a programme of work. Among the working papers issued in 1993, France put forward one calling for confidence building measures in outer space to enhance the existing treaty regime, strengthen the security of space activities, prevent the aggressive use of space, and promote space cooperation for civil and scientific purposes. The last time an ad hoc committee was convened on PAROS was 1994. The committee considered whether existing space treaties were sufficient and speculated about what kind of legal instrument or measures should be employed or negotiated. The non-aligned states and China took the view that PAROS was still important and urgent, while most Western and Eastern-European countries advocated confidence-building measures instead of treaty negotiations, on the grounds that the end of the Cold War had brought about considerable changes and there was no longer an arms race in outer space.

With the advent of US plans for ballistic missile defences, that sanguine view has now changed somewhat. In successive years the UN General Assembly resolution on PAROS has garnered increased interest and votes. In December 2000, UNGA res. 55/32 was introduced by Sri Lanka and co-sponsored by a number of non-aligned countries plus Russia and China. It emphasised the need for consolidation and reinforcement of the regime on outer space and called on countries with major space capabilities to refrain from acts contrary to maintaining a peaceful outer

space. The resolution received 163 votes in favour and none against. The United States, Israel and Micronesia abstained.

The CD has not addressed PAROS issues for over six years. It is now a mechanism for blocking negotiations on a treaty banning the production of fissile materials for nuclear weapons (fissban). China's demand that the fissban and outer space issues should be treated equally – i.e. negotiations on both – is the principle cause of the current deadlock in the CD. Or to look at the problem from a different perspective, the major obstacle is US refusal to let the CD address concerns about outer space in any substantive or meaningful way. The United States wants negotiations on a fissban but would only agree to a subsidiary body to talk about talks about PAROS (and with the current Administration, even that may now be in doubt).

China has its national security concerns, but is also very vocal in expressing concern that the US will pursue a series of increasingly sophisticated and comprehensive missile defence programmes into space – not only for surveillance and intelligence, but for targeting and even interceptors and weapons. But China is not the only country concerned that missile defence could be a slippery slope towards further militarising space, on down to the placement of weapons in space.

At a recent UN meeting, I proposed a parallel approach for making progress in substantive negotiations on both the fissban and on outer space issues. Recognising the political realities, which mean that PAROS is unlikely to get properly addressed, let alone negotiated, in Geneva in the near future, it is time for a group of states concerned about keeping space peaceful to take the lead and establish a conference somewhere outside Geneva to look into these issues, with a view to preparing and then negotiating a Space Sanctuary Treaty.

The Treaty of Antarctica, negotiated in 1959 to ensure that the wide Antarctic wilderness should be shared and used only for peaceful purposes, provides a good, though not exact precedent. Since some military activities are already carried on in space, it will be important to agree clear definitions and parameters on what types of activity are to be permitted, regulated or prohibited. The negotiations would have to cover at least three main components:

i) extending and strengthening the 1967 Outer Space Treaty's prohibitions on weapons of mass destruction in space to cover all kinds of weapons, thereby bringing weapons envisaged by the US Space Command, such as laser and other directed energy weapons, kinetic energy weapons, and other potential innovations into the ban;

ii) banning the production, testing and deployment of anti-satellite (ASAT) weapons, whether earth-based or space-based; and

iii) establishing a code of conduct for the peaceful/non-aggressive uses of space.

These proposals are not particularly new. Many proposals have been made on all three components. In 1983, the Soviet Union proposed a draft treaty banning the possession, use and testing of ASAT capabilities. Draft treaties have been proposed and forgotten. The US and Russia undertook voluntary restraints on ASAT. The CD proposed space 'rules of the road', a draft code of conduct that encompassed a formal renunciation of actions that might interfere with the operation of space objects, whether civilian or military. What is new is the growing sense of urgency and the wider level of international commercial and military interests in preventing space from becoming a battleground.

Countries and industries with significant commercial interests in telecommunications and navigation, which include powerful lobbies in the United States itself, have a vested interest in keeping space peaceful. The last thing they want is an ASAT free-for-all. But that could be the result if the United States uses its satellites to place targeting components or directed energy weapons in space. Taking the independent Ottawa-style route has two major virtues: it removes PAROS from its blocking position in the CD; and it ensures that prevention of the weaponisation of space gets addressed sooner rather than later.

Inevitably, the United States (and possibly others) will object and try first to prevent the talks from taking place and then to stay outside any agreements or treaties that might be agreed. As the process of negotiations gets underway, however, I think it will be possible to build some powerful coalitions, not only among a large group of countries, but between civil society and large commercial enterprises, and even the military, for whom communications are the Achilles heel of ever more sophisticated, 'smart' conventional weaponry – although my intention is not to make the heavens safe for smart bombs!

The difficulties should not be under-estimated. But neither should the complexities faced be a reason to give up without trying. Space is already substantially militarised, with space intelligence, surveillance and reconnaissance supporting

war fighting from the early 1960s up to the NATO air strikes in Yugoslavia. At the same time, such capabilities can support and reinforce arms control agreements through monitoring and verification. In some way, the concept of the 'peaceful uses of outer space' have already been superseded, although it is widely understood to mean 'non-aggressive'. There will be other problems of definition that will need to be negotiated: e.g. where is the boundary between air space and outer space? what constitutes a weapon, an object or a component/subcomponent of a weapon? what constitutes testing? and so on.

The United States Office of Technology Assessment noted that "there is a strong relationship between ASAT and BMD technologies and the technical, political and diplomatic action taken in one sphere will almost certainly affect the other" It is unsurprising, therefore, that the growing international interest in finding collective ways to prevent space being turned into a battleground are fuelled by US plans to deploy ballistic missile defences and by a lack of clarity from the Bush Administration over how far they mean to go. Recent reports associated with Bush's Secretary for Defence, Donald Rumsfeld, come close to advocating that the United States needs to place weapons in space, to protect not only its military and commercial assets in outer space, but also to dominate and control activities on Earth from space. This paper argues that attempts to dominate space militarily will backfire, and could risk a new arms race and increase the vulnerability of important commercial, communication, verification and intelligence assets in space. The initiative must be taken now, by as large a group of states as possible, to convene preparatory meetings and then full negotiations on a treaty to prevent a war in outer space and preserve space sanctuary for non-aggressive purposes.

**Vitaly Lukyantsev**

### **Senior Counselor of the Department of Security and Disarmament Affairs of the Russian Foreign Ministry**

There is a certain stalemate as far as missile defense is concerned. What is the US explanation? Washington believes that this lack of progress is accounted for by the change in administration and preparations of the Bush team for something much more grandiose. The press reports indicate that the approach is actually different from that of the Clinton team and the White House will need some time to adjust to these changes. Another thing that draws attention of US political analysts concerns arms race in outer space. They point out that if the new NMD concept provides for space-based components, opposition to US NMD plans may become stronger and involve some US conservatives, who now back the NMD deployment but oppose weaponization of outer space. I would like to focus on these issues.

We held two international expert meetings on the problems of Global System of Control in Moscow. When we started to develop this concept, we assumed that there are certain concerns about missile proliferation in the world. But missile challenges named by the United States to support their position on the NMD deployment are not quite relevant. We see no reasons for such threats, no reasons for the states of concern (neither political, nor economic, nor military) to threaten the USA with missile attack. Moreover, if any nation dares to launch a ballistic missile against the United States, it must realize the consequences: US response would be devastating and we should bear this in mind.

If we look at the chronology of missile proliferation debate and regard February 1996 as a starting point (US announced its program to prepare for NMD deployment), we will see that issues of missile proliferation and missile threats have become quite urgent. Besides, the very process of missile proliferation has intensified.

The substantial number of countries strives to acquire any missile equipment to ensure their economic development, benefit from acquired technologies and use them to enhance economic growth. Other states try to strengthen their military-political presence in the region. The third group attempts to enhance their security. And when there is demand, there will be a supply.

The concept attempts to suggest a solution to prevention and curbing of missile proliferation. To be fair, our concept lacks the element of control and we have been criticized for that. And this criticism is fair, but we did not provide for verification mechanisms for a number of well-known reasons. The thing is that the Global System of Control contains several mechanisms and regimes, which function, as a single complex.

Its key components are:

- multilateral regime of notification of missile launches. We consider it to be a transparency measure that provides assurances to each state, as far as the intentions of its neighbor are concerned. This regime would prevent unauthorized launches, would help to assess correctly certain actions. In the long run, the major goal is to prevent armed conflict resulting from a missile launch or false interpretation of a missile launch.

- material incentives for those nations that refrain from or abandon the development of national ballistic missile programs for military purposes. At the same time, we speak also about security assurances for such states.
- establishment of the international center with database on missile launches (this information could easily be collected and freely disseminated).
- regular international consultations providing for further development of the Global System of Control, dispute resolution and clarification of vague issues pertaining to ballistic missiles.

Nowadays, after the second meeting on the Global System of Control one can make some optimistic interim conclusions and argue that the system gets more and more supporters. There are certain ways of practical implementation of the solutions described in the concept.

Let us get back to issue of notification of ballistic missile launches. In 2000, Russia and the United States signed two memoranda on the Joint Data Exchange Center (JDEC) and on notifications of ballistic and space missile launches. If the technique of data exchange and joint operation of data is developed, a similar multilateral regime can be set up. Besides, the memorandum on notifications envisages that Russia and the United States will strive to facilitate transformation of this regime into multilateral one, or at least, to make a basis for such transformation. Moreover, the center to be established in Moscow can technically serve for 200 users. Hence, there are some indications of how the multilateral system can work.

The same relates to material incentives. I mean the statement by the North Korean leader concerning the DPRK's refusal to develop further its long-range ballistic missile program in exchange for the possibility of launching two-three satellites per year at the expense of other nations.

Incentives and engagement of nations refraining from developing their ballistic missile programs, as well as their involvement in broad international space cooperation (providing them with information on space activities, results of space research, etc.), will enable us to reach a new agreement that may make a part of the Global System of Control.

The very idea of the Global System of Control gives impetus to missile technology control. States Parties to the MTCR have immediately intensified their activities and have quickly developed a code of conduct to prevent proliferation of ballistic missiles, which contains many elements of our concept. In fact, the Global System of Control is not a national idea put forward by Russia, as it may seem. It is a set of initiatives set forth by a number of states before 1999. It includes proposals by France and Australia, the UK and the United States. The Global System of Control embodies concepts and suggestions invented by international community and this accounts for wide international endorsement of this project. The countries, whose ideas are reflected in the concept of the Global System of Control, cannot simply abandon them. They should either accept this plan as it is, or add some new considerations to it.

The system is based on the following principles: voluntary participation, equality, and non-discrimination.

If we really strive to establish the Global System of Control, all nations concerned should take part in this process. The decision should take the form of international treaty or a series of international agreements.

We assumed from the very beginning that this problem should be solved under the UN aegis. The UN General Assembly passed twice in a row the resolution on missiles at its annual sessions. The recent document urges the UN Secretary General to submit to the Assembly a report on missiles by 2002. Hence, we have selected the right path and will continue to follow it.

Some states argue that when the code of conduct was negotiated, some competition emerged. Perhaps, it is true, but this rivalry is insignificant. Japan held a meeting on the MTCR code of conduct and Russia had not been invited. Eventually Moscow received the invitation, cleared up its position, raised some issues at the forum and then asked the organizers: "Why did you refrain from inviting Russia?" The answer was: it was planned to be an event for Asia, while Russia is a non-Asian state. Moreover, the organizers had to explain to Asian nations what they meant by speaking about the code of conduct. In general, their main objective is to involve in this project as many states as possible and to set aside the concept of the Global System of Control. We are not against discussions on this issue at different forums, on the contrary, we do our best to facilitate such multilateral debate. President Putin raise this problem at different levels and gets positive response.

Let me get back to the aforementioned UN General Assembly resolution. The Assembly recognized the problem and passed the resolution. Thus, the problem of missile proliferation should be discussed and solved within the framework

of the most universal and representative international forum, i.e. the UN and the UN Security Council, which is responsible for maintaining peace and security.