

Space weapons essay



**ASSIGN
BUSTER**

Thesis statement: In this paper we would look into some of the important issues related to U. S regarding holding military weapons in space.

How it affects the outer world thus increasing the probability of an arms race

in spaceIntroductionFor almost 4 decades, there has been an unspoken agreement among the world's space powers to abstain from holding weapons in orbit. Despite Military utilization of space has been restricted to surveillance and communications satellites and scientific and commercial activities have widely been able to develop with least concernsRegrettably, the administration was little concerned about the public opinion, about the potential for far-reaching military, political and economic consequences of U. S. intent to break the taboo against weaponizing space. There is reason for concern that doing so could actually damage, rather than improve, the national security of the United States, as well as global stability. Thus it is very important that the administration, as well as Congress must undertake an in-depth and public policy review of the pros and cons of weaponizing space.

Such a review would deeply analyze the risk factor, both short-term and long-term, as well as measures to prevent, deter or counter any future risk by utilizing all the tools in the U. S. policy available: diplomatic, including arms control treaties; economic; and military, including defensive measures short of offensive weapons. There is nothing to be gained, and potentially much to be lost, by rushing such a momentous change in U. S. space policy.

(Weapons in Space: Silver Bullet or Russian Roulette?)Space power has completely changed the face of war. So much so, mainly for the United

States, fight of the century is not possibility won without space capabilities. That fact has given rise to the arguments as to the “ weaponization” of space - from satellites killing satellites, neutralizing space mines, even utilizing technology to make an enemy’s spaceship go deaf, dumb, or blind. United States has invested almost \$500 million a year in research on those potential space weapons in the past few years.

In the research phase are anti-satellite weapons, space-based antimissile systems, laser beam weapons and bombardment satellites using kinetic impact, directed energy and possibly nuclear explosions. Some of these weapons will be powered by orbiting nuclear reactors. (The Baltimore Sun, May 19, 2005)Weaponization of space: The weaponization of space represents a real threat to the security of everyone on Earth. The European nations have serious concern regarding American missile defense plan.

Russia has specifically singled out space issues as central to the bilateral relationship, and declaring that there ultimate goal is to keep the space out of the weapons, in “ 21st Century Stalingrad.” In a September 26, 2001 the Russian Foreign Minister Igor Ivanov expressed to the General Assembly of the United Nations that , there is need for the developing a strategy to prevent the space from holding weapons and proper measures should be taken in this regard. It is our common duty before succeeding generations to keep outer space peaceful through joint efforts. United Nations should design a treaty necessary for all the member states that would restrict the countries form weaponizing the space.

(Kerry Gildea, 2002.)The exploration and use of outer space ... shall be for peaceful purposes and shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development. ... The prevention of an arms race in outer space would avert a grave danger for international peace and security (Prevention of an arms race in outer space, United Nations General Assembly Resolution, A/RES/55/32, January 2001)Sociological ConcernIt's politically sensitive, but it's going to happen. Some people don't want to hear this, and it sure isn't in vogue, but—absolutely—we're going to fight in space. We're going to fight from space and we're going to fight into space.

That's why the US has development programs in directed energy and hit-to-kill mechanisms. We will engage terrestrial targets someday—ships, airplanes, land targets—from space. (Commander-in-Chief of US Space Command, Joseph W. Ashy, 2000)China, an emerging space power, they say that if the United States builds a missile shield, it will start a new sort of arm race between them and rest of the nation as it wont be ignorable to them, this will unavoidably mean the expansion of the arms race into space.” It is probable that other space powers do act on their concerns; it could involve consequences not just for the capabilities t of both military and non military asserts of United Stats. (Hays, Peter L.

, James M. Smith, 2000)The administration's position on weapons in space acknowledges that valuable, indeed, necessary satellite technology is at risk of attacks and signal jamming by America or any other rogue state. There is no problem that the America and other space-faring nations have invaluable assets in orbit today. Conversely, if probable to expand a Space Force and

weaponize space are progress to address their apparent vulnerability, it would stand for a dramatic exit from the international security framework presently in place, and could have serious and actually not completely foreseen inference for the strategic balance.

Should weaponization occur, a new set of issues and scenarios for calculating and countermeasures are sure to surface. Mines and the deployment of swarms of micro particles have already been advanced as hypothetical possibilities. The true irony is that instead of protecting our valuable assets in space, which also include a variety of vital commercial satellites, such developments, in effect, could make them more at risk. Technical challenges notwithstanding, it may be legally easier to implement the weaponization of space than many imagine. Currently there are very few treaties that are related to space.

(Johnson, Dana J, 1998.)Pros and consIf space, as the Pentagon's Space Command statements suggest, is the fourth frontier of warfare, many dual-use technologies could be designed anew or re-configured for non-civilian purposes, changing the existing security equilibrium both in space and on earth as well. What makes the situation potentially destabilizing is that there are no ways to regulate how such technology is being used. At the crux of this problem is the dual-use dilemma: the very technology that allows us to blaze a trail to the heavens and to subsequently utilize space can also have weapons applications- e. g.

, a satellite's launcher could be easily converted into an intercontinental rocket, space platforms for scientific or commercial uses could be converted

into orbital weapons carriers, and so on. Fifty years ago the international community did find the right approach to tackle the problem relating to the dual-use nature of what was then new technology, and of no less danger to humanity. Following the historic “Atoms for Peace” initiative of President Dwight Eisenhower, speaking before the General Assembly of the UN in 1953, the UN designed a special set of rules, safety measures and procedures of verification to considerably limit the chance of the dual utility of nuclear energy. Even if imperfect, the International Atomic Energy Agency, established then as an international regulatory body, is still currently serving the goals of “Atoms for Peace,” a plan that allows non-nuclear states access to the benefits of alternative sources of energy.

(Radionov, Stanislav., 1993)According a research the GPS network can easily be disrupted in part because of its low power signals and as its characteristics are public because of its commercial and local uses. (25 Jason Bates, 2001)Similarly the Russian-made, handheld jamming devices are already been launched which are capable to block GPS receivers. Moreover, like other satellite networks, the 24 GPS satellites have stable yet vulnerable orbits. Yet, vulnerabilities do not essentially result in threats. So as to threaten American space installations, military or commercial, a probable adversary should have both industrial capabilities and objective to use them in a hostile way.

There is not little solid evidence of any other state possessing such hi-tech technology or the intent to actually threaten American military or commercial installations in space— nor is there much evidence of inclination to hold space weapons by any nation or state. In reality, the technical

barriers to advancement and integration of space-based weapons cannot be overvalued, even for the American military. There are grave, primary obstacles to the expansion of both kinetic kill weapons and lasers against targets in both the space and earthly targets. Concerns associated with lasers include power generation provisions adding to size, the requirement of huge amount of chemical fuel and refueling necessities, and the physics of broadcasting and stabilizing beams transversely long distances or through the atmosphere. Space-based kinetic energy weapons have their own issues, including achieving proper orbital trajectories and velocities, the need to carry massive amounts of propellant, and concern about damage to own-forces from debris resulting from killing an enemy satellite.

Space-based weapons also have the problem of vulnerability, for example, predictable orbits and the difficulty of regeneration. A detailed discussion of technology challenges is beyond the scope of this paper, but a comprehensive primer on the myriad problems with developing space-based weapons is a September 1999 paper by Maj. William L. Spacy II, "Does the United States Need Space-Based Weapons?" written for the College of Aerospace Doctrine, Research and Education at Air University, Maxwell Air Force Base, Ala. It is not clear that any state has any plan, or even incentive, to participate in space war.

On the other hand, majority of states, including China and Russia, have been stressing a global ban on weapons in space. A lot of experts, including numerous Air Force officers, convincingly argue a U. S. initiative to put offensive weapons in space could have the bad effect of developing a new threat because other countries would feel bound to follow suit (Lt. Col.

Bruce M. DeBlois,)However, it is not possible to completely measure any threat to American national security devoid of the benefit of classified information. It also must be accepted that threat valuation is not the single obligatory input to the creation of national security plan. Even considering an urgent threat to American space operations, an analysis of how best to neutralize those threats — together with the pros and cons of the American' responding by becoming the first state to put weapons in space — would still be vital. In specific, it is very important to look at risks originating from such a decision.

These include: the probability for initiating an arms race in space that leads to both military and political damage to the America at large; and the probability that the initiation of space warfare could negatively affect the American commercial space and telecommunications business, which now rules the world marketplace. ConclusionAs this paper has attempted to outline, there are a numerous issues regarding the question of whether the America must hold weapons in space. It is very clear to the world media that there are measures that are needed to be taken in order to ensure the security to the space asserts of America. However , the most important concern is does it requires to hold space weapons to protect the asserts in future, and if there is , provide the genuine reason to the society before taking any initiative in this regard. Beyond the technological challenges and the crucial issue of whether the American government is ready or capable to take on the long-term uneconomic investment needed to hold military operations in and from the space, there are potential national security and economic risks involved with such a path. There is a fundamental question as

to whether an American plan to weaponize space could be a ' silver bullet' for future security, or a game of Russian roulette.

It is therefore crucial that before any change to today's policy of restraint takes place, the American government must take on an in-depth analysis of the pros and cons as well as the alternatives. The short-term military advantages to the U. S. military of being first to utilize space weapons, however dramatic, must be considered against the long-term military, political and economic costs.

It is the responsibility of the administration to establish grounds for any policy change that could possibly provide a net, and sustainable, improvement in U. S. national security writ large. Such a formal policy review should be undertaken immediately, given the Bush administration's fast-forward space missile defense strategy.

It is imperative that the missile defense program not be allowed to solely drive a decision to weaponize space, specifically in absence of serious matter of the potential strategic, military and economic consequences. Under ideal circumstances, the National Security Council should develop an interagency team to look at opportunities and alternatives together with passive security for space assets and arms control solutions, and allow the independent experts and institutions to have an input. Definitely, such a step could be taken under the support of the new Space Policy Committee. Congress, too, should begin studying the issue - including holding near-term hearings to draw out the implications of a space-based element to a missile defense architecture, as well as to address the wider issue.

A broad-based public debate is necessary to ensure that policy-makers completely understand the implementation of breaching the ' final frontier.';