# 1NC Shell

**A. Uniqueness-no space militarization now**

**Lake, 11 (**Eli, Washington Times, “ U.S., EU eye anti-satellite weapons pact”, http://www.washingtontimes.com/news/2011/jan/27/us-eu-eye-anti-satellite-weapons-pact/)

The Obama administration is negotiating with the European Union on an agreement limiting the use of anti-satellite weapons, a move that some critics say could curb U.S. development of space weapons in general. Three congressional staffers told The Washington Times that Pentagon and intelligence analysts said in a briefing Monday that the administration is looking to sign on to the European Union’s Code of Conduct for Outer Space Activities. The briefing followed the completion of an interagency review that recommends the United States sign on to the document with only a few minor changes to its language, according to two administration officials familiar with the review. That recommendation is awaiting final approval from the National Security Council. “The United States is continuing to consult with the European Union on its initiative to develop a comprehensive set of multilateral TCBMs, also known as the Code of Conduct for Outer Space Activities,” Rose Gottemoeller, assistant secretary of state for arms control, verification and compliance, said Thursday at the U.N. Conference on Disarmament. TCBM stands for “transparency and confidence-building measures.”

**B. Link**

**Space exploration leads to militarization**

Raymond D. **Duvall**, and Jonathan **Havercroft** , University of Minnesota & University of Victoria, March 22-25,**2006** (“Taking Sovereignty Out of This World: Space Weaponization and the Production of Late-Modern Political Subjects,” International Studies Association. <http://www.allacademic.com//meta/p_mla_apa_research_citation/0/9/8/6/8/pages98680/p98680-1.php> ).

The weaponization of space—the act of placing weapons in outer space—has an intimate relationship to space exploration, in that the history of the former is embedded in the latter, while the impetus for space exploration, in turn, is embedded in histories of military development. Since the launch of Sputnik, states that have ability to access— and hence to explore—outer space have sought ways in which that access could improve their military capabilities. Consequently, militaries in general and the U.S. military in particular have had a strong interest in the military uses of space for the last half century. Early on, the military interest in space had two direct expressions: enhancing surveillance; and developing rocketry technologies that could be put to use for earthbased weapons, such as missiles. **Militaries also have a vested interest in the “dual-use” technologies that are often developed in space exploration missions**. While NASA goes to great lengths in its public relations to stress the benefits to science and the (**American) public of its space explorations, it is noteworthy that many of the technologies developed for those missions also have potential military use.**

**C. Impact**

**Weaponization causes war and it results in extinction**

**Mitchell, 01** – Associate Professor of Communication and Director of Debate at the University of Pittsburgh

(Dr. Gordon, ISIS Briefing on Ballistic Missile Defence, “Missile Defence: Trans-Atlantic Diplomacy at a Crossroads”, No. 6 July, <http://www.isisuk.demon.co.uk/0811/isis/uk/bmd/no6.html>)

A buildup of space weapons might begin with noble intentions of 'peace through strength' deterrence, but this rationale glosses over the tendency that '… the presence of space weapons…will result in the increased likelihood of their use'.33 This drift toward usage is strengthened by a strategic fact elucidated by Frank Barnaby: when it comes to arming the heavens, 'anti-ballistic missiles and anti-satellite warfare technologies go hand-in-hand'.34 The interlocking nature of offense and defense in military space technology stems from the inherent 'dual capability' of spaceborne weapon components. As Marc Vidricaire, Delegation of Canada to the UN Conference on Disarmament, explains: 'If you want to intercept something in space, you could use the same capability to target something on land'. 35 To the extent that ballistic missile interceptors based in space can knock out enemy missiles in mid-flight, such interceptors can also be used as orbiting 'Death Stars', capable of sending munitions hurtling through the Earth's atmosphere. The dizzying speed of space warfare would introduce intense 'use or lose' pressure into strategic calculations, with the spectre of split-second attacks creating incentives to rig orbiting Death Stars with automated 'hair trigger' devices. In theory, this automation would enhance survivability of vulnerable space weapon platforms. However, by taking the decision to commit violence out of human hands and endowing computers with authority to make war, military planners could sow insidious seeds of accidental conflict. Yale sociologist Charles Perrow has analyzed 'complexly interactive, tightly coupled' industrial systems such as space weapons, which have many sophisticated components that all depend on each other's flawless performance. According to Perrow, this interlocking complexity makes it impossible to foresee all the different ways such systems could fail. As Perrow explains, '[t]he odd term "normal accident" is meant to signal that, given the system characteristics, multiple and unexpected interactions of failures are inevitable'.36 Deployment of space weapons with pre-delegated authority to fire death rays or unleash killer projectiles would likely make war itself inevitable, given the susceptibility of such systems to 'normal accidents'. It is chilling to contemplate the possible effects of a space war. According to retired Lt. Col. Robert M. Bowman, 'even a tiny projectile reentering from space strikes the earth with such high velocity that it can do enormous damage — even more than would be done by a nuclear weapon of the same size!'. 37 In the same Star Wars technology touted as a quintessential tool of peace, defence analyst David Langford sees one of the most destabilizing offensive weapons ever conceived: 'One imagines dead cities of microwave-grilled people'.38 Given this unique potential for destruction, it is not hard to imagine that any nation subjected to space weapon attack would retaliate with maximum force, including use of nuclear, biological, and/or chemical weapons. An accidental war sparked by a computer glitch in space could plunge the world into the most destructive military conflict ever seen.

# Uniqueness

**Obama not pursuing space weaponization**

**New York Times, 10** (William Broad and Kenneth Chang, “ Obama Reverses Bush’s Space Policy”, http://www.nytimes.com/2010/06/29/science/space/29orbit.html)

The Obama administration on Monday unveiled a space policy that renounces the unilateral stance of the Bush administration and instead emphasizes international cooperation, including the possibility of an arms control treaty that would limit the development of space weapons. In recent years, both China and the United States have destroyed satellites in orbit, raising fears about the start of a costly arms race that might ultimately hurt the United States because it dominates the military use of space. China smashed a satellite in January 2007, and the United States did so in February 2008. The new space policy explicitly says that Washington will “consider proposals and concepts for arms control measures if they are equitable, effectively verifiable and enhance the national security of the United States and its allies.” The Bush administration, in the space policy it released in August 2006, said it “rejects any limitations on the fundamental right of the United States to operate in and acquire data from space,” a phrase that was interpreted as giving a green light to the development and use of antisatellite weapons. The policy also stated that Washington would “oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access or use of space,” a phrase that effectively ruled out arms control. In secret, the Bush administration engaged in research that critics said could produce a powerful ground-based laser, among other potential weapons meant to shatter enemy satellites in orbit. By contrast, the Obama policy underlines the need for international cooperation. “It is the shared interest of all nations to act responsibly in space to help prevent mishaps, misperceptions and mistrust,” the new policy says in its opening lines. “Space operations should be conducted in ways that emphasize openness and transparency.” Peter Marquez, director of space policy at the White House National Security Council, told reporters on Monday that the policy was reverting to a less confrontational approach that the United States had championed in the past. “The arms control language is bipartisan language that appeared in the Reagan policy and George H. W. Bush’s policy and the Clinton policy,” Mr. Marquez said in a White House briefing. “So we’re bringing it back to a bipartisan agreed-upon position.” Jeff Abramson, a senior analyst at the Arms Control Association, a private group in Washington, said the new policy “sets the stage for progress in space arms control — without getting into specifics.” For many years, diplomats from around the globe have gathered in Geneva to hammer out a treaty on the “prevention of an arms race in outer space,” which would ban space weapons. Arms control supporters say that China and Russia have backed the process, and that the United States during the Bush administration dragged its feet. In 2006, John Mohanco, a State Department official, told the diplomats in Geneva that as long as attacks on satellites remained a threat, “our government will continue to consider the possible role that space-related weapons may play in protecting our assets.” Now, the Obama administration has stopped the saber-rattling and started what might end in a new kind of peaceful accord — though with plenty of caveats and vague conditions.

**No weaponization now**

**RIA** 20**10** (MOSCOW, April 9 (RIA Novosti, “Russia has no plans to deploy weapons in space - top brass” accessed 7/11/10 Russia has no plans to deploy weapons in space - top brass aes)

The commander of Russia's space forces said on Friday Russia had no plans to deploy weapons of any kind in space. Some analysts have suggested that Russia could deploy space weapons as part of measures to counter controversial U.S. plans to build missile shields in Europe. "We have no such plans," Maj. Gen. Oleg Ostapenko told a news conference in Moscow a day after Russia and the United States signed a new START treaty, which significantly cuts the nuclear arsenals of both countries and for the first time recognizes the interrelationship between strategic offensive arms and strategic defensive arms. Ostapenko said that the signing of the new treaty would not affect the activities and plans of the Russian Space Forces. "The plans and tasks set by the commander-in-chief [the president] have not changed and are being developed at a determined pace," the general said. He added that changes would only be made if "breakthrough technologies emerge that affect the plans and budgets." As of 2009, there are no known operative orbital weapons systems, but several were developed by the United States and the Soviet Union during the Cold War. Development of orbital weaponry was largely halted after the 1967 Outer Space Treaty and the 1979 SALT II Treaty came into force. These agreements prohibit weapons of mass destruction (but not other weapons) being placed in space. In 2008, Russia and China proposed a draft international treaty to ban the deployment of weapons of any kind in space and to prohibit the use of force against space objects.

**No weaponization – PPWT**

**Jaramillo** 20**10** (April 9, 2010, Cesar Jaramillo is a Program Associate with Project Ploughshares. “In defence of the PPWT treaty: toward a space weapons ban” accessed 7/11/10 [http://www.thefreelibrary.com/In+defence+of+the+PPWT+treaty:+toward+a+space+weapons+ban-a0215481625](http://www.thefreelibrary.com/In%2Bdefence%2Bof%2Bthe%2BPPWT%2Btreaty%3A%2Btoward%2Ba%2Bspace%2Bweapons%2Bban-a0215481625) aes)

The draft Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT) (CD 2008), jointly introduced to the Conference on Disarmament (CD) by Russia and China in 2008, constituted a welcome step toward the non-weaponization of space. It was--and continues to be--the most promising proposal to fill the normative void in the current space security treaty regime. However, almost two years after its introduction, the international community has failed to embrace this unique opportunity to lay down the foundation for a robust, unambiguous, and universal space security treaty that unequivocally prohibits the weaponization of space. Background The existing legal regime that tackles the potential weaponization of outer space is outdated, inadequate, and insufficient. Moreover, the rapidity with which space-related technologies are being developed seems to be widening the gap between military applications that may affect space assets and the precarious normative architecture that should regulate them. The fact that space will inevitably become more complex and congested each year underscores the need for a comprehensive space security treaty that builds on what little international law exists in this realm and not only reflects current threats to space security, but also tackles the emerging legal questions that inevitably arise as space becomes a more convoluted domain. Ads by GoogleSchool Grants For Felons Find Hundeds of Online Colleges! AA, BA & Graduate Degree Programs. WashingtonPost.com Free Govt Cell Phone Free Phone & Minutes that Carry Over each Month, Others Don't! www.SafeLinkWireless.com The PPWT--while not perfect and subject to revisions--represents what is undoubtedly the most substantive effort thus far to embed the or-expressed desire to maintain a weapons free outer space in international treaty law. It is true that the 1967 Outer Space Treaty specifically bans signatory states from placing nuclear weapons and other weapons of mass destruction in orbit and calls for the peaceful exploration of outer space. However, it does not explicitly refer to the placement or use of other types of weapons in outer space or the use of earth-based weapons against space targets--activities which clearly need regulation, if not outright prohibition. [ILLUSTRATION OMITTED] It is often said that the perils inherent to the indiscriminate weaponization of space are perhaps only comparable to those posed by nuclear weapons, although much of this assessment rests on speculation, since outer space has not yet seen a scenario of direct military confrontation. Indeed, it is assumed that there have been no weapons placed in space to date as there have been neither claims nor denunciations of such behaviour by any state, and considerable efforts are being made in diverse governmental and nongovernmental circles to ensure that this delicate threshold is preserved. To be sure, a distinction must be made between militarization and weaponization: while the former has arguably already happened, given the widespread use of satellites for military applications such as reconnaissance and intelligence, it is the latter that is the primary focus of proponents of a space security treaty. Not surprisingly, a resolution on the Prevention of an Arms Race in Outer Space (PAROS) has been introduced at both the CD and the First Committee of the UN General Assembly and has garnered near-unanimous support year after year--with the notable exception of the United States and Israel. (1) In this context, the PPWT draft treaty introduced at the CD in February 2008 has been touted as a practical way to "nip the problem of PAROS in the bud" (UNIDIR 2008, p. 147). If there is a ban on space weapons, the rationale goes, there will be no arms race to prevent.

# AT: Weaponization innevitable

**Arguing that Space has Already been Weaponized ignores Political Perception that New Efforts would Cross a Threshold**

Everett C **Dolman**,.- Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies , **and** Karl P. **Mueller-** Senior political scientist at RAND**, 06** ("Toward a U.S. Grand Strategy in Space." Washington Roundtable on Science & Public Policy. Washington, D.C.: George C. Marshall Institute, March 10, 2006. )

MUELLER: The second misconception is that the transition from space not being weaponized to being weaponized may be a gray, indistinct thing. It is not true that it is not going to be a big political deal when it happens, even if we don’t know exactly what form it will take. People with engineering backgrounds in the space weapons community have a tendency, I think, to say, "Space is already so weaponized and so militarized because we use GPS for the guidance of many of our weapons, or because in the 1980s there were anti-satellite systems, or because ICBMs cross space on their way to targets, that we have al-ready crossed the weaponization frontier. Stop talking to me about it." I would liken them to the people who on December 31, 1999 were running around saying, "We shouldn't have these big parties tonight! The millennium doesn’t start for another year; it starts in 2001, not 2000." That may be technically correct, but it is totally irrelevant be-cause this is about what the public believes. The party is tonight and you can go or not, it’s up to you.

# Link – Helium-3

**Helium 3 causes countries to weaponize space to control access to resources**

**Gagnon, 06** (Bruce, Coordinator Global Network Against Weapons And Nuclear Power in Space, “ NASA Plans Moon Base

To Control Path To Space”, December 17th, <http://www.rense.com/general74/path.htm>)

Some scientists predict that one metric ton of helium-3 could be worth over $3 billion. Researchers at the Princeton University Plasma Physics Laboratory have estimated that some one million tons of helium-3 could be obtained from the top layer of the Moon. If all this turns out to be true and scientifically possible, imagine the gold rush to the Moon and the conflict that could follow in years to come. Who would police the Moon, especially when countries like the U.S. refuse to sign the Moon Treaty that restricts "ownership claims"? The U.S. Space Command's plan, Vision for 2020, says, "Historically, military forces have evolved to protect national interests and investments - both military and economic. During the rise of sea commerce, nations built navies to protect and enhance their commercial interests....Likewise, space forces will emerge to protect military and commercial national interests and investment in the space medium due to their increasing importance." I have always been convinced that, by creating offensive space weapons systems, one of the major jobs of the Space Command would be to control who can get on and off planet Earth, thus controlling the "shipping lanes" to the Moon and beyond. There has long been a military connection to NASA's Moon missions. In early 1994, NASA launched the Deep Space Program Science Experiment, the first of a series of Clementine technology demonstrations jointly sponsored with the Ballistic Missile Defense Organization (BMDO). The Pentagon announced that data acquired by the spacecraft indicated that there is ice in the bottom of a crater on the Moon, located on the Moon's south pole - the same venue NASA now envisions as the site for the 2024 permanent base. According to a Pentagon website, "The principal objective of the lunar observatory mission though was to space qualify lightweight sensors and component technologies for the next generation of Department of Defense spacecraft [Star Wars]. The mission used the Moon, a near-Earth asteroid, and the spacecraft's Interstage Adapter (ISA) as targets to demonstrate sensor performance. As a secondary mission, Clementine returns valuable data of interest to the international civilian scientific sector." In the end, the NASA plan to establish permanent bases on the Moon will help the military "control and dominate" access on and off our planet Earth and determine who will extract valuable resources from the Moon in the years ahead.

**Helium 3 causes space militarization**

Marko **Beljac**- Foreign Policy In Focus contributor, teaches at the University of Melbourne-**08** (“Arms Race in Space”, Foreign Policy in Focus, March 31, http://www.fpif.org/articles/arms\_race\_in\_space)

As noted, China has tested an anti satellite weapon and Russia has stated that it would not allow other states to control space and threaten its own space assets. In Asia a nascent space race seems to be developing between China, Japan and India. In the far future the large deposits of Helium-3 on the moon's surface could lead to a militarized race to colonize the moon to secure Helium-3 for nuclear fusion energy technologies based on anuetronic fusion reactions in the context of depleting hydro-carbons.

**Mining for helium 3 causes conflict between other nations which force space weapons to be launched**

**Lasker, 06** (John, Wired Staff, “Space Hawks Chase Death Rays”, Wired, March 1st, http://www.wired.com/science/discoveries/news/2006/03/70303)

The Bush administration has called for a permanent base on the moon by 2020, Gagnon noted. Once there, the United States will be able to monopolize the moon's resources, he said, such as helium-3, an element rare on Earth but abundant on the moon that may drive nuclear fusion. In January, Russia announced a similar plan, aiming to establish a permanent base on the moon by 2015 and mining operations to extract helium-3 by 2020. China, which in 2003 became the third country in the world to send a human into space, has announced plans for an unmanned lunar landing by 2010, and a manned moon mission by 2020. To protect U.S. interests, Gagnon said space-based weapons will be deployed near or on the moon. "The military has stated the moon is the ultimate high ground," Gagnon said. "There's going to be a scramble for the moon by the Chinese, the Russians and the Americans. This is real. There's going to be a conflict over it."

# Link – SPS

**SSP will be used as a death ray**

**Rako, 08 –** technical editor of Electronics Design, Strategy, and News (Paul, “Solar power in space, a really stupid idea,” 7/25, <http://www.edn.com/blog/1700000170/post/1830030583.html>

This is a flat-out lie. It’s a lie in so many places it hurts my teeth. Sweeping all the alternative energy sources under the rug, without looking at the complex analog tradeoffs involved is an affront to reason and decency. That is a bad enough lie. But to then follow that absurdity with the assertion that space solar power is somehow economically possible and environmentally friendly is complete madness. Now I am going to give some sources you can read that prove beyond a shadow of a doubt that this proposal is clinically insane, but first I wanted to share an epiphany I had. Paul’s epiphany came about 5 hours into a wasted Thursday night where I should have been in downtown San Jose having fun at the free concert. Instead I spent all night reading all the sources I could find regarding SPS. I am embarrassed because it took five hours to realize something that was plainly stated in the comments to the article that I read five hours before. Someone pointed out that the technology of this proposal did not matter. This space-panel microwave gizmo was also a weapon and it would be politically impossible to deploy it.

Wow, hours of my personal time down the drain before the epiphany. The epiphany was that this thing was exactly that, a weapon. That is why NASA researched it in the 1980s, that is what all the feasibility studies were about and that is why it is being floated out there right now. The military industrial complex wants to test how stupid we are. If the American people are dumb enough to believe that solar panels in space is even the slightest bit possible then they can use that cover as they do what they really want to do, make a death machine. The images of the Terminator movies and [SkyNet](http://en.wikipedia.org/wiki/Skynet_%28fictional%29) are too chilling to even contemplate.

Now there may be some [Pollyanna types](http://www.urbandictionary.com/define.php?term=Pollyannaish) that think our wonderful government is way too nice to ever try and develop a death machine. Sorry, for those of you that think the United States Government is more like a fluffy little fabric softener sheet tumbling around the dryer, making everything silky smooth and smelling fresh, well, news flash: Governments are about coercion. Force, killing, jails, waterboards, and the rest are the essential nature and job of the government. Sure they hand out a bunch of middle class entitlements to stay in power and keep the sheep bleating happy sounds, but the core nature and purpose of governments is forcing people to do things. Most of the less naive among us are OK with that. After all, I am sitting on a lovely little parcel of land that was stolen from the Mexicans, who stole it from the Spanish priests, who stole it from the Portuguese priests, who stole it from the Indians, who stole it from each other for 10,000 years. Works for me, I just planted some cactus in the front yard. Of course I will be complaining about the effective 45% tax rate we engineers have to suffer till the day I die, I hate the government forcing me to do that. But I will just kind of skirt around the benefits all the killing and mayhem provided me. After all, I deserve a happy little Domicile of the Future here in sunny Sunnyvale. I have a title to prove it is all mine. I am glad my government stole the land for me, just like I am glad Burger King shoots a rod into a cow’s head so I can have a tasty burger with none of the emotional baggage. Who wants to drive a nail into [Elsie’s](http://en.wikipedia.org/wiki/Elsie_the_Cow) skull?

OK, still doubtful that NASA, our beloved space program would try to fund a death machine under the cover of alternative energy? Well, you didn’t have the benefit of working at several military contractors, like I did. When you work at those places you invariable meet people who think in military terms. One of them told me twenty years ago that the entire space program was a military operation. I was incredulous. He patiently explained. See, warfare has always been about controlling the high ground. If you could control the plains while the enemy was in the ditch, you won. If you controlled the hill while the enemy was on the plain, you won. If you control the mountain while the enemy is on the hill, you won. If you controlled the airplanes while the enemy was on the mountain, you won. OK, news flash, live at five, film at eleven: If you control space while the enemy is in an airplane, you win. The military types at those military contractors told me what was already pretty apparent—that there is no sensible scientific reason to put people in space. All the science is much much much cheaper if you don’t need to launch life support. Sure astronauts do maintenance on the Hubble telescope, but for what we spent developing the shuttle, especially when you count the dead astronauts, we could have sent up a dozen Hubble telescope and just let the broken ones fall out of orbit. The space station is a prototype [AWAC](http://en.wikipedia.org/wiki/AWAC) and this solar-power death-machine is a prototype [AC-130](http://en.wikipedia.org/wiki/Lockheed_AC-130). And remember, for the $100 billion we spent on the space station, every American household could get 952 dollars for gasoline.

Trust me on this one; this solar power in space stuff is a military research project to make a death machine. Then things start to makes sense technologically and sociologically. Some of the most severe limitations of the system go away when it is a weapon. There is no need for constant maintenance since it is used intermittently. There is no need for a geostationary orbit, you want to be able to kill people anywhere, including and maybe especially inside the US borders. Keeping us in control is just as important as killing foreigners. Heck you don’t even need a geosynchronous orbit. You can put the death machine in low earth orbit. That saves a huge amount of cost and dispenses with fantasy proposals like the NASA guy that said we should build them on the moon and then bring them down. I started to ask myself if these idiots have even been in a semiconductor fab, much less one on the moon, but see, then I realized, Doctorates are not stupid. The government needed some fantasy cover story to keep the research going in the face of the fact that the power would cost not 10, not 100 not 1000 but about 10,000 times more than terrestrial based power of any form.Ok, sorry to all you hard-core technical types for that diatribe, but I did not want you spending 5 hours researching this like I did without understanding this is death machine proposal, not an alternative energy proposal. Here are the sources. The [URSI (Union Radio-Scientifique Internationale)](http://www.ursi.org/) has [a nice web page](http://www.ursi.org/WP/WP-SPS%20final.htm) as well as [an identical pdf](http://ursi.ca/SPS-2006sept.pdf) that debunks most of the SPS proposals. They seem to make an error when they say you need 10,000m2 to receive 14GW solar flux. With 1.37 kW/m2 solar flux I see it as a million square meters, a solar panel 1 km on a side. The 14 GW is reduced to 1 GW by the 7% system efficiency they describe. The paper is very neutral, unlike some of my ham buddies that would just say; “You want to beam a gigawatt of RF energy into the atmosphere, and then build a whole bunch of them? Are you out of your f\*(&^ing mind?” This paper has references, both pro and con and it is the con ones that have the good reading. One good resource is [S. Fetter, “Space Solar Power: An Idea Whose Time Will Never Come?,” (pdf)](http://www.publicpolicy.umd.edu/Fetter/2004-P%26S-SSP.pdf). Where you might want to start is just read all the [comments in the NY Times article](http://community.nytimes.com/article/comments/2008/07/23/opinion/23smith.html?permid=73#comment73). Read all 6 pages.

**SSP directly facilitates the offensive weaponization of space**

**Ramos 2k** – US Air Force Major, Thesis submitted for the AIR COMMAND AND STAFF COLL MAXWELL Air Force Base (Kim, “Solar Power Constellations: Implications for the United States Air Force,” April, <http://handle.dtic.mil/100.2/ADA394928>)

Force Application United States Space Command developed four operational concepts to guide their vision. One of those operational concepts is global engagement. The *USSPACECOM Long Range Plan* defines global engagement as an “integrated focused surveillance and missile defense with a potential ability to apply force from space.”27 This application of force from space involves holding at risk earth targets with force from space.28 *New World Vistas* identifies several force application technologies. One of the technological issues associated with developing these space force application technologies is that they all require large amounts of power generation. A solar power satellite can supply the required power. Two technologies in particular would benefit from integration with a solar power satellite, directed energy weapons, such as lasers, and jamming devices. The space-based lasers currently under study accomplish ground moving target indication, and air moving target indication, which would be part of missile defense.29 The main difficulty with the laser is designing a power plant, which can produce the required energy in space without the enormous solar arrays required. By using a solar power satellite to beam power to the laser, this eliminates the problem. Another project, which would benefit from integration with a solar power satellite, is a device, which would beam RF power to a particular geographic location to blind or disable any unprotected ground communications, radar, optical, and infrared sensors.30 As with the laser and other directed energy applications, the limiting factor right now is generating enough power in space to energize the RF beam.

**Deployment of defensive weapons will spur counter weaponization and ASATS**

**Pena and Hudgins, 02** (Policy Analysis, March 18, Charles V. Peña is senior defense policy analyst and Edward L. Hudgins is former director of regulatory studies at the Cato Institute. http://www.cato.org/pubs/pas/pa427.pdf , Should the United States “Weaponize” Space? Military and Commercial Implications).

Advocates of a more aggressive U.S. military policy for space argue that the United States is more reliant on the use of space than is any other nation, that space systems are vulnerable to attack, and that U.S. space systems are thus an attractive candidate for a “space Pearl Harbor.” But as important and potentially vulnerable as current U.S. space-based assets may be, deploying actual weapons (whether defensive or offensive) will likely be perceived by the rest of the world as more threatening than the status quo. Any move by the United States to introduce weapons into space will surely lead to the development and deployment of anti-satellite weapons by potentially hostile nations. As the dominant user of space for military and civilian functions, the United States would have the most to lose from such an arms race. Although there are legitimate (and unique) military requirements for space assets, virtually all are “dual use.” Military requirements should not necessarily dictate those other uses. In fact, commercial efforts in space often lead those of the government and the Department of Defense and usually have lower costs, due to market influences and competition. National security must be one component of total U.S. space policy, but it must certainly not be the primary component. In the post–Cold War environment—with no immediate threat from a rival great power and none on the horizon— the United States must not establish overstated and costly military requirements for space-based resources. The military must make greater use of commercial space assets. Also, the United States should strive to foster an environment that allows commercial space activity to grow and flourish rather than use it to create a new area for costly military competition.

# Impact – Space Debris

**Space weaponization leads to space debris**

Bill **Wickersham**-an adjunct professor of peace studies at MU-**10** (“ GUEST COMMENTARY: Outer space arms race posed for conflict”, The Missourian, http://www.columbiamissourian.com/stories/2011/03/14/guest-commentary-arms-race-space-must-be-stopped/)

One of the most troubling aspects of an arms race in space is the potential for the proliferation of massive amounts of space debris. In January 2007, China used a ground-based anti-satellite weapon to destroy one of its own deteriorating weather satellites. In the process, it unleashed massive amounts of space debris whose small pieces travel in orbit at about 14,000 mph. Such debris, including that of the U.S., released more than 50 years of space activity, already poses a considerable hazard to various spacecraft — U.S. and other. According to RCW, this orbital crowding could become worse if a large number of space weapons are placed in Low Earth Orbit (LEO). Continued launching and testing of space based weapons will also add markedly to the dangerous space debris and leave less room for peaceful civilian systems. Those problems can occur during periods of relative peace, as well as during times of war. In the latter case, many civilian satellites will be destroyed, and their vast distribution of debris will cause chaotic disruption of the Internet, resulting in a breakdown of most electronic communications involving financial, health, security, environmental and other societal operations necessary to our "wired" way of life on this planet.

**Space debris crushes the global economy**

**Moore**, 2-22-**09** (Mike, Independent Institute Research Fellow “Space Junk It's Been A Nuisance; It Soon May Become A Nightmare,” Pittsburgh Post Gazette, accessed 5-3-11, p. factiva)

At the moment, the amount of debris in "low-Earth orbit" -- the region of space that extends a few hundred miles above the atmosphere -- is merely a nuisance. The United States tracks objects in space and shares the data with the world. Satellite handlers based in many countries use the data to slightly alter the course of their birds if a collision seems possible. End of story? Not quite. "Orbital space" is a natural resource, as surely as land, air and water. It must be protected because it is home to nearly a thousand satellites put up by many countries -- communications, geo- observation, geopositioning, weather and other types. "Globalization" would not be possible without commercial satellites. Further, the United States' military-related birds permit the country to conduct "precision" war. For the first time in history, satellites provide the data and the guidance necessary to enable bombs and missiles to actually hit the targets they are fired at. That's a moral plus. If a war must be fought, it should be prosecuted in such a way that military targets are hit and civilians spared to the greatest extent possible. No other country can fight a conventional war as cleanly and humanely as the United States. Satellites make the difference. Because of the importance of satellites to the American way of war, the United States insists that it must achieve the capability to militarily dominate space in a time of conflict. It is the only country that claims that right. Space, says international law, is the common heritage of humankind and must be devoted to "peaceful purposes." America's truculent space-dominance language annoys many of its friends and allies. Meanwhile, some major powers -- particularly China and Russia -- think it smells of imperialism. A country that could control space in a time of conflict might also exercise that control in a time of peace. Since 1981, virtually every country save the United States and Israel has gone on record in the U.N. General Assembly as favoring a treaty that would prevent an arms race in space. Every year, the United States -- under presidents Ronald Reagan, George H.W. Bush, Bill Clinton and George W. Bush -- has used its veto power at the Conference on Disarmament in Geneva to prevent serious talks. No one, including the United States, is likely to have actual weapons in space in the foreseeable future. Space control does not require such weapons. Ground-based, sea-based and even air-based antisatellite weapons (ASATs) can do the trick. The United States has long been working on a variety of highly sophisticated ASAT programs -- indeed, the infrastructure for missile defense is the sort of infrastructure needed for ASAT systems. When a country builds ever greater military capabilities, potential rivals react. China, in particular, is wary of the coercive possibilities of U.S. military power. The Middle Kingdom says it wants a space treaty, but in January 2007, it tested its own somewhat primitive ASAT -- a kinetic-kill device that roughly replicated a test the United States carried out in 1985. Is a space-related arms race under way? Yes. But there is still time to ratchet it down, and the Obama administration has signaled that it might do so. That will be difficult, though. The belief in America as the exceptional nation is a major driver of U.S. foreign policy, and influential people and hard-line think tanks are comfortable with the idea that full-spectrum dominance in all things military is America's right. A nightmare scenario: The United States continues to work on its "defensive" ASAT systems. China and Russia do the same to counter U.S. capabilities. India and Japan put together their own systems. Ditto for Pakistan, if it survives as a coherent country. Israel follows suit, as does Iran. In a time of high tension, someone preemptively smashes spy satellites in low-Earth orbits, creating tens of thousands of metal chunks and shards. Debris-tracking systems are overwhelmed and low- Earth orbits become so cluttered with metal that new satellites cannot be safely launched. Satellites already in orbit die of old age or are killed by debris strikes. The global economy, which is greatly dependent on a variety of assets in space, collapses. The countries of the world head back to a 1950s-style way of life, but there are billions more people on the planet than in the '50s. That's a recipe for malnutrition, starvation and wars for resources.

**Depression causes global war – proliferation ensures it threatens survival**

**Kerpen** policy director for American’s for Prosperity **08** (Phil October 28, 2008 [http://www.philkerpen.com/?q=node/201 From Panic to Depression? The dangers of blaming free trade, low taxes, and flexible labor markets)

It’s important that we avoid all these policy errors — not just for the sake of our prosperity, but for our survival. The Great Depression, after all, didn’t end until the advent of World War II, the most destructive war in the history of the planet. In a world of nuclear and biological weapons and non-state terrorist organizations that breed on poverty and despair, another global economic breakdown of such extended duration would risk armed conflicts on an even greater scale.

# Impact – China War

**Space weaponization causes the US to strike China**

**Lewis, 04** (Jeffery, Post Doctorate Fellow in the Advanced Methods of Cooperative Security Program, July, “What if Space Were Weaponized? Possible Consequences for Conflict Scenarios” Center for Defense Information, <http://www.cdi.org/PDFs/scenarios.pdf>)

During these exercises, the commander of Blue Forces became concerned that Red might use ground-based lasers against U.S. satellites. Fearing the loss of such important assets, he ordered a limited preemptive strike – using a fleet of CAVs that he had deployed in space – against suspected ground-based laser sites deep inside Red’s country. At the same time, he refrained from striking other targets “rationalizing that the preemptive strike was only protecting high-value space assets, not initiating hostilities.”26 The Blue Team was stunned when Red viewed the strike on targets deep inside its territory as an act of war and retaliated – causing a general war. One flabbergasted participant, sounding not completely convinced of what had just happened, reportedly explained: “We thought these preemptive strikes might very well have stopped the crisis situation. But there were some who had a different point of view – that the strikes may have been provocative.”27 It is important to note that the Chinese don’t even have to actually acquire ASATs for this nightmare scenario to happen. The Pentagon’s assessments of Chinese ASATs are based largely on circumstantial evidence – a Hong Kong newspaper report here; a commercial purchase by a Chinese company there. In fact, the Pentagon admits that “specific Chinese programs for a laser ASAT system have not been identified” and that press reports of a so-called “parasitic” microsatellite “cannot be confirmed.”28 Such gaps in U.S. knowledge are dangerous, given the natural tendency of defense planners to assume the worst. Although Blue claimed that it had acted on “unambiguous warning” of a threat to space assets, the mere fact that the Chinese might already have such system – or could improvise a crude ASAT in a pinch – would create a strong incentive to use U.S. space systems before they were lost. It is not too far fetched to imagine the president, faced with a crisis over Taiwan, deciding – as he did with Iraq – that “we cannot wait for the final proof – the smoking gun – that could come in the form of a mushroom cloud.”29

**Extinction**

**Straits Times, 2K** (“Regional Fallout: No one gains in war over Taiwan,” June 25, Available Online via Lexis-Nexis)

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -- horror of horrors -- raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -- truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilisation. There would be no victors in such a war. While the prospect of a nuclear Armaggedon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

# Impact – Soft Power

**Space weaponization destroys soft power which tanks overall hegemony**

Trevor **Brown**-BA, Indiana University; MSc, S. Rajaratnam School of International Studies, Nanyang Technological University [Singapore]-**09** (“ Soft Power and Space Weaponization”, Air and Space Power Journal, Spring 2009, http://www.airpower.au.af.mil/airchronicles/apj/apj09/spr09/brown.html#brown)

The problem for the United States is that other nations believe it seeks to monopolize space in order to further its hegemonic dominance.7 In recent years, a growing number of nations have vocally objected to this perceived agenda. Poor US diplomacy on the issue of space weaponization contributes to increased geopolitical backlashes of the sort leading to the recent decline in US soft power—the ability to attract others by the legitimacy of policies and the values that underlie them—which, in turn, has restrained overall US national power despite any gains in hard power (i.e., the ability to coerce).8 The United States should not take its soft power lightly since decreases in that attribute over the past decade have led to increases in global influence for strategic competitors, particularly Russia and China. The ramifications have included a gradual political, economic, and social realignment, otherwise known as “multipolarism” and translated as waning US power and influence. “Soft power, therefore, is not just a matter of ephemeral popularity; it is a means of obtaining outcomes the United States wants. . . . When the United States becomes so unpopular that being pro-American is a kiss of death in other countries’ domestic politics, foreign political leaders are unlikely to make helpful concessions. . . . And when U.S. policies lose their legitimacy in the eyes of others, distrust grows, reducing U.S. leverage in international affairs.”9 Due to US losses of soft power, the international community now views with suspicion any legitimate concerns that the United States may have about protecting critical assets in space, making it far more difficult politically for the Air Force to make plans to offer such protection.

**That causes nuclear war.**

**Khalilzad**, Rand Corporation **95** (Zalmay Khalilzad, Spring 1995. RAND Corporation. “Losing the Moment?” The Washington Quarterly 18.2, Lexis.)

Under the third option, the United States would seek to retain global leadership and to preclude the rise of a global rival or a return to multipolarity for the indefinite future. On balance, this is the best long-term guiding principle and vision. Such a vision is desirable not as an end in itself, but because a world in which the United States exercises leadership would have tremendous advantages. First, the global environment would be more open and more receptive to American values -- democracy, free markets, and the rule of law. Second, such a world would have a better chance of dealing cooperatively with the world's major problems, such as nuclear proliferation, threats of regional hegemony by renegade states, and low-level conflicts. Finally, U.S. leadership would help preclude the rise of another hostile global rival, enabling the United States and the world to avoid another global cold or hot war and all the attendant dangers, including a global nuclear exchange. U.S. leadership would therefore be more conducive to global stability than a bipolar or a multipolar balance of power system.

# Impact – Russia

**Space weapons cause hair trigger posturing – the impact is a nuclear war with Russia**

**Lewis, 04** – Post doctorate Fellow in the Advanced Methods of Cooperative Security Program (Jeffery, July “What if Space Were Weaponized? Possible Consequences for Conflict Scenarios” Center for Defense Information, <http://www.cdi.org/PDFs/scenarios.pdf>)

This is the second of two scenarios that consider how U.S. space weapons might create incentives for America’s opponents to behave in dangerous ways. The previous scenario looked at the systemic risk of accidents that could arise from keeping nuclear weapons on high alert to guard against a space weapons attack. This section focuses on the risk that a single accident in space, such as a piece of space debris striking a Russian early-warning satellite, might be the catalyst for an accidental nuclear war. As we have noted in an earlier section, the United States canceled its own ASAT program in the 1980s over concerns that the deployment of these weapons might be deeply destabilizing. For all the talk about a “new relationship” between the United States and Russia, both sides retain thousands of nuclear forces on alert and configured to fight a nuclear war. When briefed about the size and status of U.S. nuclear forces, President George W. Bush reportedly asked “What do we need all these weapons for?”43 The answer, as it was during the Cold War, is that the forces remain on alert to conduct a number of possible contingencies, including a nuclear strike against Russia. This fact, of course, is not lost on the Russian leadership, which has been increasing its reliance on nuclear weapons to compensate for the country’s declining military might. In the mid-1990s, Russia dropped its pledge to refrain from the “first use” of nuclear weapons and conducted a series of exercises in which Russian nuclear forces prepared to use nuclear weapons to repel a NATO invasion. In October 2003, Russian Defense Minister Sergei Ivanov reiterated that Moscow might use nuclear weapons “preemptively” in any number of contingencies, including a NATO attack.44 So, it remains business as usual with U.S. and Russian nuclear forces. And business as usual includes the occasional false alarm of a nuclear attack. There have been several of these incidents over the years. In September 1983, as a relatively new Soviet early-warning satellite moved into position to monitor U.S. missile fields in North Dakota, the sun lined up in just such a way as to fool the Russian satellite into reporting that half a dozen U.S. missiles had been launched at the Soviet Union. Perhaps mindful that a brand new satellite might malfunction, the officer in charge of the command center that monitored data from the early-warning satellites refused to pass the alert to his superiors. He reportedly explained his caution by saying: “When people start a war, they don’t start it with only five missiles. You can do little damage with just five missiles.”45 In January 1995, Norwegian scientists launched a sounding rocket on a trajectory similar to one that a U.S. Trident missile might take if it were launched to blind Russian radars with a high altitude nuclear detonation. The incident was apparently serious enough that, the next day, Russian President Boris Yeltsin stated that he had activated his “nuclear football” – a device that allows the Russian president to communicate with his military advisors and review his options for launching his arsenal. In this case, the Russian early-warning satellites could clearly see that no attack was under way and the crisis passed without incident.46 In both cases, Russian observers were confident that what appeared to be a “small” attack was not a fragmentary picture of a much larger one. In the case of the Norwegian sounding rocket, space-based sensors played a crucial role in assuring the Russian leadership that it was not under attack. The Russian command system, however, is no longer able to provide such reliable, early warning. The dissolution of the Soviet Union cost Moscow several radar stations in newly independent states, creating “attack corridors” through which Moscow could not see an attack launched by U.S. nuclear submarines.47 Further, Russia’s constellation of early-warning satellites has been allowed to decline – only one or two of the six satellites remain operational, leaving Russia with early warning for only six hours a day. Russia is attempting to reconstitute its constellation of early-warning satellites, with several launches planned in the next few years. But Russia will still have limited warning and will depend heavily on its space-based systems to provide warning of an American attack.48 As the previous section explained, the Pentagon is contemplating military missions in space that will improve U.S. ability to cripple Russian nuclear forces in a crisis before they can execute an attack on the United States. Anti-satellite weapons, in this scenario, would blind Russian reconnaissance and warning satellites and knock out communications satellites. Such strikes might be the prelude to a full-scale attack, or a limited effort, as attempted in a war game at Schriever Air Force Base, to conduct “early deterrence strikes” to signal U.S. resolve and control escalation.49 By 2010, the United States may, in fact, have an arsenal of ASATs (perhaps even on orbit 24/7) ready to conduct these kinds of missions – to coerce opponents and, if necessary, support preemptive attacks. Moscow would certainly have to worry that these ASATs could be used in conjunction with other space-enabled systems – for example, long-range strike systems that could attack targets in less than 90 minutes – to disable Russia’s nuclear deterrent before the Russian leadership understood what was going on. What would happen if a piece of space debris were to disable a Russian early-warning satellite under these conditions? Could the Russian military distinguish between an accident in space and the first phase of a U.S. attack? Most Russian early-warning satellites are in elliptical Molniya orbits (a few are in GEO) and thus difficult to attack from the ground or air. At a minimum, Moscow would probably have some tactical warning of such a suspicious launch, but given the sorry state of Russia’s warning, optical imaging and signals intelligence satellites there is reason to ask the question. Further, the advent of U.S. on-orbit ASATs, as now envisioned50 could make both the more difficult orbital plane and any warning systems moot. The unpleasant truth is that the Russians likely would have to make a judgment call. No state has the ability to definitively determine the cause of the satellite’s failure. Even the United States does not maintain (nor is it likely to have in place by 2010) a sophisticated space surveillance system that would allow it to distinguish between a satellite malfunction, a debris strike or a deliberate attack – and Russian space surveillance capabilities are much more limited by comparison. Even the risk assessments for collision with debris are speculative, particularly for the unique orbits in which Russian early-warning satellites operate. During peacetime, it is easy to imagine that the Russians would conclude that the loss of a satellite was either a malfunction or a debris strike. But how confident could U.S. planners be that the Russians would be so calm if the accident in space occurred in tandem with a second false alarm, or occurred during the middle of a crisis? What might happen if the debris strike occurred shortly after a false alarm showing a missile launch? False alarms are appallingly common – according to information obtained under the Freedom of Information Act, the U.S.-Canadian North American Aerospace Defense Command (NORAD) experienced 1,172 “moderately serious” false alarms between 1977 and 1983 – an average of almost three false alarms per week. Comparable information is not available about the Russian system, but there is no reason to believe that it is any more reliable.51 Assessing the likelihood of these sorts of coincidences is difficult because Russia has never provided data about the frequency or duration of false alarms; nor indicated how seriously early-warning data is taken by Russian leaders. Moreover, there is no reliable estimate of the debris risk for Russian satellites in highly elliptical orbits.52 The important point, however, is that such a coincidence would only appear suspicious if the United States were in the business of disabling satellites – in other words, there is much less risk if Washington does not develop ASATs. The loss of an early-warning satellite could look rather ominous if it occurred during a period of major tension in the relationship. While NATO no longer sees Russia as much of a threat, the same cannot be said of the converse. Despite the warm talk, Russian leaders remain wary of NATO expansion, particularly the effect expansion may have on the Baltic port of Kaliningrad. Although part of Russia, Kaliningrad is separated from the rest of Russia by Lithuania and Poland. Russia has already complained about its decreasing lack of access to the port, particularly the uncooperative attitude of the Lithuanian govern-ment.53 News reports suggest that an edgy Russia may have moved tactical nuclear weapons into the enclave.54 If the Lithuanian government were to close access to Kaliningrad in a fit of pique, this would trigger a major crisis between NATO and Russia. Under these circumstances, the loss of an early-warning satellite would be extremely suspicious. It is any military’s nature during a crisis to interpret events in their worst-case light. For example, consider the coincidences that occurred in early September 1956, during the extraordinarily tense period in international relations marked by the Suez Crisis and Hungarian uprising.55 On one evening the White House received messages indicating: 1. the Turkish Air Force had gone on alert in response to unidentified aircraft penetrating its airspace; 2. one hundred Soviet MiG-15s were flying over Syria; 3. a British Canberra bomber had been shot down over Syria, most likely by a MiG; and 4. The Russian fleet was moving through the Dardanelles. Gen. Andrew Goodpaster was reported to have worried that the confluence of events “might trigger off … the NATO operations plan” that called for a nuclear strike on the Soviet Union. Yet, all of these reports were false. The “jets” over Turkey were a flock of swans; the Soviet MiGs over Syria were a smaller, routine escort returning the president from a state visit to Moscow; the bomber crashed due to mechanical difficulties; and the Soviet fleet was beginning long-scheduled exercises. In an important sense, these were not “coincidences” but rather different manifestations of a common failure – human error resulting from extreme tension of an international crisis. As one author noted, “The detection and misinterpretation of these events, against the context of world tensions from Hungary and Suez, was the first major example of how the size and complexity of worldwide electronic warning systems could, at certain critical times, create momentum of its own.” Perhaps most worrisome, the United States might be blithely unaware of the degree to which the Russians were concerned about its actions and inadvertently escalate a crisis. During the early 1980s, the Soviet Union suffered a major “war scare” during which time its leadership concluded that bilateral relations were rapidly declining. This war scare was driven in part by the rhetoric of the Reagan administration, fortified by the selective reading of intelligence. During this period, NATO conducted a major command post exercise, Able Archer, that caused some elements of the Soviet military to raise their alert status. American officials were stunned to learn, after the fact, that the Kremlin had been acutely nervous about an American first strike during this period.56

**That’s the ONLY scenario for extinction**

**Bostrum, 02** (Nick, Ph.D., Journal of Evolution and Technology, Vol. 9, March 2002)

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that might have been persistent enough to qualify as global and terminal. There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4] Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately. There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, is not an existential risk, since it would not destroy or thwart humankind’s potential permanently. Such a war might however be a local terminal risk for the cities most likely to be targeted. Unfortunately, we shall see that nuclear Armageddon and comet or asteroid strikes are mere preludes to the existential risks that we will encounter in the 21st century.

# Impact – Accidental Nuclear War/Escalation

**Space weapons create use it or lose it mentality that escalates any conflict to nuclear war**

Theresa **Hitchens**-Vice President, Center for Defense Information-**03** (“ U.S. Weaponization of Space: Implications for International Security”, Center for Defense Information, http://www.cdi.org/program/document.cfm?DocumentID=1745&from\_page=../index.cfm)

The negative consequences of a space arms race are hard to exaggerate, given the inherent offense-dominant nature of space warfare. Space weapons, like any thing else on orbit, are inherently vulnerable and, therefore, best exploited as first-strike weapons. Thus, as Michael Krepon and Chris Clary argue in their monograph, “Space Assurance or Space Dominance,” the hair-trigger postures of the nuclear competition between the United States and Russia during the Cold War would be elevated to the “ultimate high ground” of space. Furthermore, any conflict involving ASAT use is likely to highly escalatory, in particular among nuclear weapons states, as the objective of an attacker would be to eliminate the other side’s capabilities to respond either in kind or on the ground by taking out satellites providing surveillance, communications and targeting. Indeed, U.S. Air Force officials participating in space wargames have discovered that war in space rapidly deteriorates into all-out nuclear war, precisely because it quickly becomes impossible to know if the other side has gone nuclear. *Aviation Week and Space Technology* quoted one gamer as saying simply: “[If] I don’t know what’s going on, I have no choice but to hit everything, using everything I have.” This should not be surprising to anyone – the United States and the Soviet Union found this out very early in the Cold War, and thus took measures to ensure transparency, such as placing emphasis on early warning radars, developing the “hotline” and pledging to non-interference with national technical means of verification under arms control treaties.

**Space weapons lead to “hair trigger” response, hightening chances of accidential war**
Charles S. **Robb**, Winter **99**, “Star Wars II,” Washington Quarterly, Vol. 22, No. 13
The third **consequence of U.S. space weaponization would be the heightened probability of strategic conflict.** Anyone familiar with the destabilizing impact of MIRVs will understand that**weapons in space will bring a new meaning to the expression "hair trigger.**" Lasers can engage targets in seconds. Munitions fired from satellites in low-earth orbit can reach the earth's surface in minutes. As in the MIRV scenario, the side to strike first would be able to destroy much of its opponent's space weaponry before the opponent had a chance to respond. **The temptation to strike first during a crisis would be overwhelming; much of the decisionmaking would have to be automated.** **Imagine that during a crisis one of our key military satellites stops functioning and we cannot determine why**. We--or **a computer controlling our weapons for us-must then decide whether or not to treat this as an act of war and respond accordingly**. The fog of war would reach an entirely new density, with our situational awareness of the course of battle in space limited and our decision cycles too slow to properly command engagements. Events would occur so quickly that we could not even be sure which nation had initiated a strike. We would be repeating history, but this time with far graver consequences.

**Space weapons lowers the decision making time of launching weapons -causes itchy fingers on the nuclear triggers**

**Marko Beljac- Foreign Policy In Focus contributor, teaches at the University of Melbourne-08** (“Arms Race in Space”, Foreign Policy in Focus, March 31 http://www.fpif.org/articles/arms\_race\_in\_space)

Washington argues that it has too much commercially riding on space to allow others to have the potential capability of disrupting U.S. space assets. In 1998 the failure of one satellite, the Galaxy IV, made some 80% of pagers in the U.S. malfunction. Though the latest Russian and Chinese space arms control proposal is flawed, because of the clumsy definition of what constitutes a “space weapon,” this doesn’t mean that space arms control is not possible in principle. A global space arms control regime would protect U.S., Russian, Chinese, and even Australian space assets. An arms race in space will eventually lead other states to catch up with the United States and thereby placing Washington's commercial satellites at risk. Space weaponization may well have cataclysmic consequences given the link between space weapons and nuclear weapons strategy. This is because Russia, and the United States, to a certain extent rely on satellites for early warning of nuclear attack. As other space nations with nuclear weapons develop their space capacity it is expected that they will follow suit. The deployment of space weapons means that the first shot in a nuclear war would be fired against these early warning satellites. Currently strategic planners in Moscow have about 10 minutes between warning of an attack and the decision to launch nuclear weapons in response before they impact. Weapons in space would lower this in certain scenarios down to seconds. This would also apply for weapons placed in space that would be considered to be defensive such as say a space based BMD interceptor or a “counter-ASAT” weapon. On occasion, ground warning radars falsely show that a nuclear attack has been launched. In the 1990s a false alarm went all the way up to President Boris Yeltsin and was terminated after approximately eight minutes. We are still here, noted analysts believe, because warning satellites would have given Moscow real time information showing the alarm to be false. Should such a false alarm coincide with an accident involving an early warning satellite when space weapons are known to exist, an accidental nuclear exchange could result. The risk would increase if the false alarm occurred during a crisis. Space weapons could lead to itchy fingers on nuclear triggers. They would therefore significantly increase the importance nuclear weapon states place upon nuclear deterrence.

# AT: Hegemony Impact Turn

**Space militarization trades off with terrestrial military capability.**

Michael **Krepon**, arms control expert and President Emeritus, The Stimson Center, with Chrisopher Clary, SPACE ASSURANCE OR SPACE DOMINANCE: THE CASE AGAINST WEAPONIZING SPACE, 20**03**, Henry L. Stimson Center, p. 107.

The argument presented here is that terrestrial U.S. military dominance would be impaired, rather than enhanced, by American initiatives to weaponize space. While the United States clearly has the ability to outspend competitors, and to produce more advanced types of space weaponry, weaker adversaries will have affordable, asymmetric means to counter U.S. initiatives in space, as well as on earth. The net result of an uneven competition to weaponize space would be that prudent U.S. defense planners could not count on protecting space assets, and that weaker adversaries could not count on the negation of U.S. advantages. Neither could be certain of the outcome of space warfare, but both adversaries would have to fear the worst. Because of the vulnerability of space assets to ASATs, both would need to assume a dangerous “hair-trigger” posture in space—unless the United States employed preemptive military means to prevent the launch or deployment of presumably hostile space assets belonging to other states.

# AT: Indo/Pak Impact Turn

**U.S. Weaponization of Outer Space would Disrupt disarmament of nuclear weapons in india and pakistan**

 Zhang, **Hui-** research Associate in the Project onManaging the Atom in the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government**-05** . ("Action/Reaction: U.S. Space Weaponization and China." Arms Control Today,December 2005).

Moreover, space weaponization would seriously disrupt the arms control and disarmament process. The initiation of U.S. space-based missile defenses would likely cause Russia as well as the United States (in response to Russia) to make smaller reductions in their nuclear arsenals. China would likely be forced to build more warheads to maintain its nuclear deterrent, which could in turn encourage India and then Pakistan to follow suit. Also, Russia has threatened to respond to any country's deployment of space weapons. Failure to proceed with the nuclear disarmament process would also further undermine the already fragile nuclear nonproliferation regime. As Ambassador Hu Xiaodi warned in 2001, "With lethal weapons flying overhead in orbit and disrupting global strategic stability, why should people eliminate [weapons of mass destruction] or missiles on the ground? This cannot but do harm to global peace, security and stability, hence be detrimental to the fundamental interests of all states."

# AT: Asteroids Impact Turn

**No risk asteroids—small probability, new models say nukes and ballistic missiles deflect. No risk space debris from deflection—too far out**

Denise **Chow 10** SPACE.com Staff Writer posted: 25 June 2010 Nuclear Bombs Could Save Earth from Asteroids http://www.space.com/scienceastronomy/diverting-asteroids-nuclear-explosives-100625.html?

If a massive asteroid is hurtling toward Earth and threatening to sterilize the entire planet, blasting it to pieces with nuclear bombs might seem fit for a Hollywood movie. But, it could, in fact, be a viable solution to the potentially apocalyptic event, according to scientists who have studied asteroids and possible solutions to prevent Earth impacts. There are some strings attached: The interloping space rock would have to pose a definite asteroid threat to Earth in a relatively short timeframe to justify such a drastic option, the scientists said. And blowing up an asteroid runs the risk of creating more debris to worry about later, they added. If an asteroid was expected to collide with Earth within the next 50 years, using nuclear explosives to divert or disperse the hostile space rock could be the best alternative, explained David Dearborn, a research physicist at the Lawrence Livermore National Laboratory in Livermore, Calif. "The nuclear bomb is the strongest bomb we know," said Dearborn, who presented his study last month at the 216th meeting of the American Astronomical Society in Miami, Fl. "It's about 3 million times more efficient than chemical bombs. The question is how to use that energy." The Lawrence Livermore National Laboratory, a research facility founded by the University of California, has programs that design and test nuclear weapons. [Top 10 Weapons in History] Nuclear bangs in space Dearborn believes that powerful nuclear explosives could be used to change the orbit of an asteroid heading for Earth, causing it to miss our planet and avoid a potentially devastating impact. But, that nuclear option is most effective in circumstances where there are only a few years notice, said David Morrison, director of the NASA Lunar Science Institute and senior scientist for Astrobiology at NASA's Ames Research Center at Moffett Field, Calif., who has done extensive research on asteroid and comet impact hazards. "If we have an asteroid that is really large, and we don't have more than a few years notice, nuclear is probably all we can do," Morrison told SPACE.com. "If it's a mile or smaller and we have 10 to 20 years warning, we probably won't go nuclear." In such cases, scientists could opt to impact the asteroid with a ballistic rocket, sending the cosmic interloper off course. At the moment, there is probably very little difference in terms of accuracy for both the nuclear method and ballistic method, said Morrison. But if using ballistic rockets to divert asteroids can be tested, it is possible that this technique could be more precise. "If we test the ballistic impact, as people have proposed doing, then we can make it much more accurate than a nuke," he said. But will it really work? In fact, the ability to test these methods is one of the main sources of contention. "One of the problems with the nuclear alternative is that I don't think anyone will ever let us test it," Morrison explained. "I think it would arouse considerable opposition from the public, because people are very nuclear averse. That's the thing about David Dearborn and I – we don't disagree about the facts at all. I'm just a little less anxious to embed the public relations problem." Some of the issues that have affected previous ideas on how to divert asteroids have been due to the extremely low levels of gravity present on asteroids. "If you were to watch an asteroid go by in space, it would look like a tumbling dog bone," Dearborn said. "On a one kilometer (0.62 mile) asteroid, a 200-pound person would weigh about 1/10th of an ounce. So, proposals that people have made for how to divert them have encountered problems with how you give a push to an asteroid." NASA is now aiming to send astronauts to visit an asteroid by 2025 to get a first-hand look at them. The mission is part of the space agency's new space exploration plan proposed by President Barack Obama. Additionally, a European spacecraft, Rosetta, will be gliding past asteroid Lutetia on July 10 to get some close-up views of the space rock. Scientists are hoping that the observations from the flyby will contribute to the relatively small body of knowledge about asteroids. Blowing up asteroids According to Dearborn, blowing up an asteroid – or fragmenting it – using powerful nuclear explosives could be the most effective way of diverting it. For one, nuclear fusion is vastly more efficient per unit of mass, compared to chemical fuel. So, from a practicality standpoint, it would be easier to transport this type of energy into deep space for an asteroid-diverting mission. "You can carry an awful lot of energy for a very small amount of mass," Dearborn said. "As long as payload – the ability to lift things and get them to deep space – is significant, this is a way of transporting enough energy to do the job." The sheer power of nuclear explosives also makes it a good candidate for such a task. Dearborn discussed a previous proposal to use a powerful laser beam to repeatedly zap an asteroid in order to alter its course. While this could be a feasible option, Dearborn said, the timescale needed to carry out such an operation using current technology is too large. For example, using a beam from the National Ignition Facility to deliver enough energy would require 5 million pulses which would have to be delivered over the course of approximately 6,000 years. To effectively fragment and divert an asteroid, its orbit must be pushed by at least a centimeter per second. To do this, about five to 10 kilotons of energy input is needed, regardless of the method. "The nice thing about any kind of intervention is that you only have to make it miss the Earth," Dearborn said. "A very small change in its orbital period will do that." But wait, there's more Still, the problem does not end with simply blowing up an asteroid. Fragmenting an asteroid creates a debris field, and it is important to account for these remains in such a way that only a fraction of the debris is able to pass through the Earth's atmosphere. Dearborn created simulations to examine the amount of energy and time needed to most effectively divert an asteroid and disperse its debris field in such a way as to minimize collisions with Earth. He found that intersecting a 270-meter body asteroid with a 300 kiloton energy source at the surface could safely be done 15 days out from impact. "If you can intersect it 15 days out, which is beyond the orbit of the moon, that would be fine," Dearborn said. "It was enough that 97 percent of that material missed Earth." Furthermore, if the explosion occurs far enough into space, debris should be less of a concern, said Morrison. "If you're going to do this 100 million miles away from Earth, it shouldn't be too much of a problem," Morrison said. "There'll be a little bit of debris, but by the time it gets close to us, it would be pretty dispersed." Asteroid sentinels on alert Dearborn is continuing to experiment with models and simulations that attempt to determine the amount of time needed to act for different size asteroids. And while Dearborn states that a truly disastrous impact with Earth is possible, the chances of such an occurrence remain slim. "There will be another large impact resulting in global catastrophe any mega-year now," he said. "But, a million years is a really long time." The Spaceguard Survey Report from NASA's Ames Space Science Division, which was an effort to study near-Earth objects, has done extremely well in locating large objects that could cause mass extinction. "We've found more than 90 percent of those," Morrison said. "In a few more years, we'll be able to say that there's nothing out there to cause a global catastrophe. But, there'll be a million that will be big enough to wipe out an entire city. It'll take a long time, if ever, to find them and figure out their orbits." Technological advancements in ground-based and space telescopes should assist scientists in their study of near-Earth objects and other potential hazards, but the threat will likely be omnipresent, since smaller objects will always be more difficult to track down. "The bottom line is, we could be hit by one of those small ones at any time, with no warning at all," Morrison said. "Right now, I can say almost nothing about the probability of one of those small objects hitting us, because we simply haven't found all of them." Still, in the event that an asteroid crashes toward Earth, particularly with only a few years warning, nuclear explosives may be our best option, both scientists agree. "With current technology and enough time, we should be able to divert large bodies," Dearborn said. "Right now, it is the only technology that we have that has the energy to move large bodies.

\*\*\*aff answers

# Non-unique

**Non-unique: space militarized now**

**Oberg, 8** (James, “Sense, Nonsense, and Pretense about the Destruction of USA 193,” The Space Review, 3-4-08,

http://www.spacedebate.org/argument/1139)

Myth #8: Russia and China will be "forced" to respond by developing corresponding weapons. This "blank check for the bad guys" claim seems to be a view espoused by spokesmen for DC lobby groups, for foreign governments, and for other associations who seem to favor one spin in common: any foreign action allegedly sparked by anybody's worries about US actions is excusable, while any US action sparked by activities of another nation is dangerously paranoid. But China has already "pre-responded" with its own test a year ago—a weapon with far greater capability (and leaving far worse space pollution) than the US missile. As for Russia, it's had its space-capable anti-missile defense shield deployed around Moscow for decades, and recently reopened a mothballed missile test range at Sary Shagan in Kazakhstan to test-fire upgraded missiles. They are probably launched so far only against imaginary missile or space targets, or potentially against real ones with no final impacts. Even if one of them is soon used in a demonstration against a satellite, it will represent nothing new in their arsenal, only the exercise of a latent capability that had always been there.

**Weaponization happening now-new technologies prove**

**Cooper, 10** (Charles, CBS editor, “ Unmanned Space Plane Opening Door to Space Weaponization?”,http://www.cbsnews.com/8301-501465\_162-20003159-501465.html)

After a decade of development work, the Air Force is finally ready to launch its secret space plane, the unmanned X-37B Orbital Test Vehicle from Cape Canaveral.The craft is expected to spend up to nine months in orbit and will re-enter Earth on autopilot. It will land like an airplane at the Vandenberg Air Force Base, Calif. That much is publicly available. Much of the rest has become fodder for speculation. The only thing the government is saying officially is that the 29-foot-long delta-wing craft will conduct classified experiments while in orbit. Speaking earlier in the week, Gary Payton, the Air Force's deputy under secretary for the space program, said the Air Force's main interest is to test the craft's automated flight control system and learn about the cost of turning it around for launch again. Piecing together the available clues, Popular Mechanics suggests that the X-37B might resemble "a miniature version of the space shuttle. The publication notes that the launch "will mark the fulfillment of a dream the Department of Defense has been pursuing for nearly 50 years: the orbital flight of a military vehicle that combines an airplane's agility with a spacecraft's capacity to travel in orbit at 5 miles per second." NASA began the X-37B project in 1999, but the program was later moved under the Defense Department's auspices. It eventually found a home in the Air Force. The ensuing shroud of secrecy fed speculation that the U.S. military was interested in weaponizing space. So, what is the likely end game? The Christian Science Monitor raises the obvious question of whether this is a precursor to war in orbit. The fact that the US may have an aircraft that can remain airborne for such extended periods "provides you with all kinds of capability, both military and civilian," Chris Hellman, a policy analyst with the National Priorities Project told the Monitor.

**More ev.**

**Global Research, 10** (Centre for research on Globalization, “ The Weaponization of Space: US to Launch Secret 'Space Warplane'”, April 20th, http://www.globalresearch.ca/index.php?context=va&aid=18752)

The United States Air Force has announced that it will launch a secret space plane that has sparked speculation about the militarization of space.

The Pentagon has set April 21 as the date for the launch of the robotic space plane known as the X-37B Orbital Test Vehicle (OTV), which is a reusable unmanned plane capable of long outer space missions at low orbits. Since the nature of the project is shrouded in mystery, defense analysts allege that the US military is building the first generation of US 'space Predator drones' that will build up the United States' space armada, the Christian Science Monitor wrote in a recent article. Military experts argue that the US Department of Defense would not have saved NASA's costly X-37B project, which had been scrapped, if it did not have a military application. They say the US wants to maintain a leading role in space via the development of the new 'space weapon' at a time when other countries like China are expanding their space programs. However, US military officials maintain that the X-37B will only be used for transporting payloads and facilitating space experiments. The OTV is capable of supporting a range of tests, the Air Force spokesperson for the project said earlier at the 26th National Space Symposium. "The first mission will emphasize proving technologies necessary for long duration reusable space vehicles with autonomous reentry and landing capabilities," Angie Blair added. She went on to say that the "specific details of the OTV capabilities, limitations and vulnerabilities" remain classified. The X-37B can stay at an orbit between 200 and 800 kilometers for around 270 days before landing automatically at Vandenberg Air Force Base in California, reports say. The location of the mission control center for the Boeing-made space vehicle is also a classified secret, but Blair says that Air Force Space Command's 3rd Space Experimentation Squadron (AFSPC) will run the operation. Military space specialist Professor Roger Handberg, who is the chair of the Department of Political Science at the University of Central Florida in Orlando, told Space.com that the X-37B project may signify continued U.S. Air Force interest in a rapid response vehicle along the lines of the long-proposed space maneuver vehicle. He added that the project could be viewed "as the logical extension of the push into unmanned aerial vehicles (UAVs) where vehicles used for observation have moved into weapon carriers and various other missions, many classified." "From the perspective of international observers, especially in space-aspiring states such as China, the X-37B program just reinforces their view that the U.S. is pushing to gain first mover advantage in rapid response, including possible weaponization of space using this vehicle or a derivative," Handberg noted. Political analysts say that the X-37B project could be interpreted as a violation of the Outer Space Treaty of 1967 if the space plane is used for military purposes.

# Weaponization inevitable

**Weaponization innevitable**

**AFP, 09** (Agence France Press, “ China commander says space weapons inevitable”, Defence Talk, Nov 3rd, http://www.defencetalk.com/china-commander-says-space-weapons-inevitable-22844/)

 Beijing: A top China air force commander has called the militarization of space an "historical inevitability", state media said Monday, marking an apparent shift in Beijing's opposition to weaponising outer space. In a wide-ranging interview in the People's Liberation Army (PLA) Daily, air force commander Xu Qiliang said it was imperative for the PLA air force to develop offensive and defensive operations in outer space. "As far as the revolution in military affairs is concerned, the competition between military forces is moving towards outer space... this is a historical inevitability and a development that cannot be turned back," Xu told the paper. "The PLA air force must establish in a timely manner the concepts of space security, space interests and space development. "We must build an outer space force that conforms with the needs of our nation's development (and) the demands of the development of the space age."

# No Link-SSP

**The DOD won’t weaponize SSP – better options already exist**

**NSSO, 8** (National Space Security Office, Space-Based Solar Power Study Group, Ad Astra, “Strategic Importance”

Spring 2008, pg. 28, http://www.nss.org/adastra/AdAstra-SBSP-2008.pdf)

When first confronted with the idea of gigawatts of coherent energy being beamed from a space-based solar power (SBSP) satellite, people immediately ask, “wouldn’t that make a powerful weapon?” Depending on their bias that could either be a good thing: developing a disruptive capability to enhance U.S. power, or a bad thing: prolif-erating weapons to space. But the NSSO is not interested in space- based solar power as a weapon. 1. The DoD is not looking to SBSP for new armaments capabilities. Its motivation for study-ing SBSP is to identify sources of energy at a reasonable cost any-where in the world, to shorten the logistics lines and huge amount of infrastructure needed to support military combat operations, and to prevent conflicts over energy as current sources become increasingly costly. 2. SBSP does not offer any capability as a weapon that does not already exist in much less-expensive options. For example, the nation already has working ICBMs with nuclear warheads should it choose to use them to destroy large enemy targets. 3. SBSP is not suitable for attacking ground targets. The peak intensity of the microwave beam that reaches the ground is less than a quarter of noon-sunlight; a worker could safely walk in the center of the beam. The physics of microwave transmission and deliberate safe-design of the transmitting antenna act to prevent beam focusing above a pre-determined maximum inten-sity level. Additionally, by coupling the transmitting beam to a unique ground-based pilot signal, the beam can be designed to instantly diffuse should pilot signal lock ever be lost or disrupted. 4. SBSP would not be a preci-sion weapon. Today’s militar-ies are looking for more precise and lower collateral-damage weapons. At several kilometers across, the beam from geostationary Earth orbit is just too wide to shoot indi- vidual targets—even if the intensity were sufficient to cause harm. 5. SBSP is an anti-war capability. America can use the existing technical expertise in its military to catalyze an energy transformation that lessens the likelihood of conflict between great powers over energy scarcity, lessens the need to intervene in failed states which cannot afford required energy, helps the world climb from poverty to prevent the spawn of terrorism, and averts the potential costs and disaster responses from climate change.

**No risk of space militarization**

**Smith, 08** – Air Force Colonel, PhD student in the strategic studies program under Professor Colin Gray at the University

of Reading in the UK, former Chief of Future Concepts for the National Security Space Office at the Pentagon, and the

Director of the Space Solar Power Study (M.V., Message board post in response to a post by “Hsdebater”, 7/12,

http://spacesolarpower.wordpress.com/2008/04/09/ad-astra-special-report-space-based-solar-power/#comment-2680)

We also advocate for the business sector to develop and operate SBSP systems, not government(s). We much prefer the satellites to be ‘owned’ by international stock holders and investors. Plus we’d like to see each satellite broadcast power into several nations. This way an attack on an SBSP satellite will be an attack on all owners and customers and their nations. This will serve as a deterrent against attacks, backed up by military force to suppress the threat to SBSP satellites. Another thing for you to think about: With SBSP satellites on orbit nations such as Iran and North Korea will not need nuclear power plants for their energy. Certainly safe, clean electrical power can be broadcast to them at a market price below all the R&D that goes into building their first-ever nuclear reactors. Here’s a comment which is always controversial; space is already weaponized. There already exists in space and on the Earth the types of systems that we use every day for routine civil, commerical, and military space operations that can also be used as weapons to negate satellites. Everything for ramming one satellite into another or merely jamming satellite signals is already in place…it merely depends on how you use the systems we currently have. We’ve already witnessed a number of episodes of hostile satellite jamming and bandwidth piracy around the globe. Fortunately, most space faring states are highly motivated to use space peacefully. But if war between space faring nations breaks out here on Earth I believe it is highly likely that those nations will negate each other’s satellites–the alternative to negating uninhabited satellites may be the killing of more people on Earth. This places advocates of “space sanctuary” in a strange moral dilemma. Unfortunately, achieving orbit does not place activities in space beyond the realm of human affairs. It is really a matter of politics as usual, no matter where your assets lie; air, land, sea, or space. Preventing battles in space depends on preventing wars on Earth. So, with this in mind, the way to protect space-based solar power satellites is to ensure that the outcome from attacking one of them is an unacceptable expansion of the war (militarily and/or legally) against the attacker. In other words, the consequence outweighs the benefit. Plus, if SBSP is part of a proper mix of safe, clean energy sources in use, the target value of such satellites drops.

# AT: Russia Impact

**Russia will not counter the United states**

**Podvig and Zhang, 08** (Pavel, Research Associate at the Center for International Security

and Cooperation at Stanford University, and Hui, research Associate in the Project onManaging the Atom

in the Belfer Center for Science and International Affairs at Harvard University’s

John F. Kennedy School of Government, “Russian and Chinese Responses to U.S. Military Plans in Space”, American Academy of Arts and Sciences, http://www.amacad.org/publications/militarySpace.pdf)

Even if the United States decided to introduce weapons in space, Russia would be unlikely to follow. Its experience with anti-satellite programs is discouraging— the capabilities of the Soviet system were very limited and if used would have had virtually no impact on the ability of the United States to operate its own space-based systems.With the increase in U.S. capabilities in space, a system of the kind that the Soviet Union had in the 1970s would be even less useful today. Among other factors that would make development of space-related weapons systems less likely are the very high cost of such systems and the lack of a proper organizational structure to support a development project in this area.

# AT: Miscalculation Impact

**Multiple historical examples prove miscalculation or single strikes won’t escalate**

Steven **Lambakis**, senior defense analyst at the National Institute for Public Policy, **2001**. Policy Review 105, “Space Weapons: Refuting the Critics,” http://www.hoover.org/publications/policy-review/article/6612

Those who believe we run extraordinary risks stemming from clouded perceptions and misunderstandings in an age of computerized space warfare might want to take a look at some real-world situations of high volatility in which potentially provocative actions took place. Take, for example, the tragedies involving the USS Stark and USS Vincennes. In May 1987, an Iraqi F-1 Mirage jet fighter attacked the Stark on patrol to protect neutral shipping in the Persian Gulf, killing 37 sailors. Iraq, a "near-ally" of the United States at the time, had never before attacked a U.S. ship. Analysts concluded that misperception and faulty assumptions led to Iraq’s errant attack. The memory of the USS Stark no doubt preoccupied the crew of the USS Vincennes, which little over a year later, in July 1988, was also on patrol in hostile Persian Gulf waters. The Vincennes crew was involved in a "half war" against Iran, and at the time was fending off surface attacks from small Iranian gunboats. Operating sophisticated technical systems under high stress and rules of engagement that allowed for anticipatory self-defense, the advanced Aegis cruiser fired anti-aircraft missiles at what it believed to be an Iranian military aircraft set on an attack course. The aircraft turned out to be a commercial Iran Air flight, and 290 people perished owing to mistakes in identification and communications. To these examples we may add a long list of tactical blunders growing out of ambiguous circumstances and faulty intelligence, including the U.S. bombing in 1999 of the Chinese Embassy in Belgrade during Kosovo operations. Yet though these tragic actions occurred in near-war or tinderbox situations, they did not escalate or exacerbate local instability. The world also survived U.S.-Soviet "near encounters" during the 1948 Berlin crisis, the 1961 Cuban missile crisis, and the 1967 and 1973 Arab-Israeli wars. Guarded diplomacy won the day in all cases. Why would disputes affecting space be any different?

# Space Weaponization Good-Hegemony

**Space militarization key to hegemony**

**Waller** 20**01** (J. Michael Miller is a reporter for Insight on the News, published March 9 2001, “Militarizing Space” accessed 7/8/10 <http://findarticles.com/p/articles/mi_m1571/is_11_17/ai_72274730/> aes)

The nation with military control of space will have the capability to control international communications and access to land, sea and air. If the U.S. should lose its present control of space, it will mark the end of its status as a global superpower. Sen. Robert Smith, R-N.H., was grimly serious. "**Whoever controls space will control the destiny of the Earth**," he declared. "And when you look at the options out there, I would ask you, who do you want it to be? Iran? Russia? Iraq? China?" Smith was raising those tough questions at a recent seminar on space power at the prestigious Center for Security Policy in Washington. Not given to flamboyant rhetoric, the plainspoken New Hampshireman continued, "To those who say we can't militarize space, I must say, `Do you want somebody else to do it?'" China and Russia want to. So do likely or incipient nuclear powers Pakistan, India, Iraq and North Korea. And it isn't just those with military ambitions, say leading defense authorities. Now, thanks to commercialization of many space technologies, any individual or group with the cash can buy the hardware and software to cause havoc for U.S. security interests in space. Space holds the key to U.S. communications -- not only for the military, but for every single citizen whose news and entertainment, telephone calls, Internet surfing, banking and financial services depend on satellites. Vulnerable to attack is the entire communications system on which the U.S. economy now depends. Equally vulnerable is the U.S. mainland itself. Any defense against incoming ballistic missiles -- be they short-range or strategic rockets with nuclear warheads -- must rely heavily on space-based sensors and, in some cases, space-based weapons to shoot down the missiles or warheads before they land.

**That causes nuclear war.**

**Khalilzad**, Rand Corporation **95** (Zalmay Khalilzad, Spring 1995. RAND Corporation. “Losing the Moment?” The Washington Quarterly 18.2, Lexis.)

Under the third option, the United States would seek to retain global leadership and to preclude the rise of a global rival or a return to multipolarity for the indefinite future. On balance, this is the best long-term guiding principle and vision. Such a vision is desirable not as an end in itself, but because a world in which the United States exercises leadership would have tremendous advantages. First, the global environment would be more open and more receptive to American values -- democracy, free markets, and the rule of law. Second, such a world would have a better chance of dealing cooperatively with the world's major problems, such as nuclear proliferation, threats of regional hegemony by renegade states, and low-level conflicts. Finally, U.S. leadership would help preclude the rise of another hostile global rival, enabling the United States and the world to avoid another global cold or hot war and all the attendant dangers, including a global nuclear exchange. U.S. leadership would therefore be more conducive to global stability than a bipolar or a multipolar balance of power system.

# Space Weaponization Good-Indo/Pak War

**Effective militarization deters Indo-Pak war and aggression against the U.S.**

**Miller** 20**02** (John J. Miller is a national political reporter for the National Review and a Bradley fellow at the Heritage Foundation, “Our 'Next Manifest Destiny': America should move to control space -- now, and decisively” accessed 7/8/10 <http://www.freerepublic.com/focus/news/714383/posts> aes)

With the right mix of intellectual firepower and political muscle, the United States could achieve what Dolman calls "hegemonic control" of space. The goal would be to make the heavens safe for capitalism and science while also protecting the national security of the United States. "Only those spacecraft that provide advance notice of their mission and flight plan would be permitted in space," writes Dolman. Anything else would be shot down. That may sound like 21st-century imperialism, which, in essence, it would be. But is that so bad? Imagine that the United States currently maintained a battery of space-based lasers. India and Pakistan could inch toward nuclear war over Kashmir, only to be told that any attempt by either side to launch a missile would result in a boost-phase blast from outer space. Without taking sides, the United States would immediately defuse a tense situation and keep the skies above Bombay and Karachi free of mushroom clouds. Moreover, Israel would receive protection from Iran and Iraq, Taiwan from China, and Japan and South Korea from the mad dictator north of the DMZ. The United States would be covered as well, able not merely to deter aggression, but also to defend against it.

**India-Pakistan war means extinction**

Ghulam Nabi Fai, Executive Director, Kashmiri American Council, WASHINGTON TIMES, September 8, 2001, p. 1

The foreign policy of the United States in South Asia should move from the lackadaisical and distant (with India crowned with a unilateral veto power) to aggressive involvement at the vortex. The most dangerous place on the planet is Kashmir, a disputed territory convulsed and illegally occupied for more than 53 years and sandwiched between nuclear-capable India and Pakistan. It has ignited two wars between the estranged South Asian rivals in 1948 and 1965, and a third could trigger nuclear volleys and a **nuclear winter** **threatening the entire globe**. The United States would enjoy no sanctuary.

# Space Weaponization Good-Asteroids

**Space weapons necessary to defend against asteroids**
John C. **Kunich**, **97**, “[Planetary Defense: The Legality of Global Survival\_](http://afls14.jag.af.mil/dscgi/ds.py/Get/File-71020/part4.DOC)." [\_\_Air Force Law Review\_\_](http://www.spacedebate.org/source/Air%20Force%20Law%20Review). Vol. 41
Mitigation, or response, could take several forms, depending in part on the nature and magnitude of a given threat, once it has been detected and evaluated. One possible response would be evacuation of the impact zone, to minimize loss of life. A closely related response is preparation to minimize the resultant damage due to fires, tidal waves, earthquakes, acid rain, and other after-effects, and to provide medical care to the victims. These forms of response, though important, would be grossly inadequate when dealing with a truly massive threat such as those discussed previously. In the event of a massive strike from space, the resultant apocalyptic disasters would render such efforts as fruitless as rearranging the deck chairs while the Titanic sinks. **The only meaningful response to a massive strike is some form of direct intervention. Direct intervention may entail deflection or destruction of the approaching space object to prevent or mitigate any impact with Earth**. **The means for achieving this fall partially within the realm of existing military capabilities**, and partially within the ambit of technologies superficially similar to some proposed/experimental aspects***of the Strategic Defense Initiative***(SDI). Depending on the physical size and other attributes of the threatening object, a variety of countermeasures might be effective in diverting or destroying it. Earth-based nuclear devices such as Intercontinental Ballistic Missiles (ICBMs) or their submarine-launched counterparts might suffice. Non-nuclear options conceivably would work, including kinetic energy or laser systems such as were explored under SDI.***Some of these may require space-basing to be effective***, while others may work in an Earth-based mode.

**An asteroid or high speed comet that strikes the earth will result in disasters unprecedented in recorded history. Blazing fireballs will rain down on the earth and no nation will be spared the dramatic repercussions. Dark Age now without colonization**

**Chapman** 20**03** (Clark R. Chapman, Institute Scientist Southwest Research Institute, Dept. of Space Studies, B.S. in Astronomy, Harvard University, 1967 M.S. in Meteorology, Massachusetts Institute of Technology, 1968 Ph.D. in Planetary Science, Massachusetts Institute of Technology, 9 January 2003, Commissioned by the Global Science Forum, OECD, for "Workshop on Near Earth Objects: Risks, Policies, and Actions," January 2003, Frascati, Italy, “How a Near-Earth Object Impact Might Affect Society” accessed 6/25/09 http://www.oecd.org/dataoecd/18/40/2493218.pdf aes)

Nature of the Devastation. Much has already been written about this case. Despite the rarity of such large impacts, they statistically dominate the impact hazard, in the sense that the small probability of such an event happening each year multiplied by the enormous number of expected fatalities yields an annual rate of fatalities similar to that of hurricanes, earthquakes, or airliner crashes. While the other cases treated here (as well as species extinction by an even larger impact) are terrible disasters, an individual's chances of dying are considerably less in all those cases than for the 2-3 km impact (Morrison *et al.*, 1994). Here I largely follow Toon *et al.* (1997). A 3 km diameter asteroid, or somewhat smaller but higher speed comet, would explode with the almost inconceivable yield of a million megatons of TNT. It would be as though more than 1,000 of the Case A or B impacts hit the same place simultaneously. The crater alone would engulf an area comparable to one of the world's largest cities. An impact into the ocean would penetrate into the seafloor, ejecting enormous quantities of oceanic crustal rocks in addition to tens of thousands of cubic kilometers of ocean water; the resulting tsunami would be of a scale unprecedented in recorded history. The localized devastation due to the immediate effects of an impact on land would be similar to those described in Case B, except that all effects would extend outward at least ten times as far, thus qualifying as a "regional" rather than "local" disaster (as I describe below, other aspects transform this event into a "global" disaster). In addition, new effects would add to the magnified, compound effects already discussed. Material thrown out of the Earth's atmosphere would rain back toward the ground, filling the sky with blazing fireballs and incinerating an area perhaps as large as India or twice the size of Western Europe. The Earth's ozone layer would be severely depleted or destroyed for a period of several years, subjecting everyone to the dangers of direct ultraviolet sunlight. And so on. Such apocalyptic devastation nevertheless pales compared with the worldwide death and economic calamity that would be produced by sudden (taking hold within a couple of weeks), worldwide, climate change due to stratospheric contamination. Enormous quantities of dust, water vapor, sulfate aerosols, and nitric oxide would not only dramatically change stratospheric chemistry but would block out most sunlight worldwide for months. It is expected that an "impact winter" would ensue, encompassing the whole globe and probably ruining one growing season worldwide before sufficient recovery of the climate could occur. **Without advance preparation, mass starvation might result in the deaths of a large fraction of the world's population. No nation would be spared the dramatic climate change, but some -- with abundant food stores -- would be better equipped than others to weather the temporary cessation of agriculture.** One can only speculate about secondary repercussions, such as disease, disruption of global economic interdependencies, perturbation of military equilibria, social disorganiza­tion, and so on. Depending on the robustness vs. fragility of modern civilization, the world might well be jolted into a new Dark Age by such a horrific global calamity. Chapman & Morrison (1994) defined a civilization threatening impact as one that would kill more than one-quarter of the world's population. There are great scientific uncertainties about whether it might take only a 1 km asteroid or instead would require a >5 km asteroid to wreak the environmental disruption described in this Case and whether that would, in fact, kill more than 1.5 billion people and, beyond that, **whether such devastation would destroy modern civilization as we know it**. But there can be little doubt that the calamity would be the most catastrophic in recorded human history. Probability of Happening. An >2 km asteroid has a probability of striking Earth about once every 2 million years. However, most asteroids of such sizes have already been discovered, largely by the telescopic Spaceguard Survey during the past decade, and none of those will hit during the 21st century. Much of the remaining threat of civilization-threatening impacts is thus posed by long-period or "new" comets, whose numbers are poorly known and many of which are not discovered until a year or so before they enter the inner solar system. My best estimate is that the chance of a million MT impact happening in the 21st century is between 1 in 50,000 and 1 in 100,000. Beyond that, the meta error bars discussed in a later section are particularly relevant for this unwitnessed case. Warning Time. There is an excellent chance that an asteroid of this size would be discovered long before it would strike the Earth, giving decades of warning. Comets, however, are found only months to a few years at most before entering the inner Solar System where one could conceivably strike Earth. There is a very small chance that such an impact would happen with little or no warning. **Post-Warning Mitigation Possibilities. If an incoming object of this size were discovered decades before impact, it could perhaps be diverted using advanced space-based technologies. Unlike Case A, moving an object this large would be technically very challenging. But the motivation would be high so the challenge could probably be met, at Apollo Program costs or more, especially if design work had already begun to deflect smaller asteroids.** If diversion of the asteroid could not be accomplished, or if the warning time were only months or years rather than decades (as would almost certainly be true for a comet), then mitigation would turn to (a) evacuation of the entire sector of the Earth where the impact’s effects would be greatest, (b) optimal advance production and storage of food, and (c) "hardening" of those susceptible elements of civilization's infrastructure (communications, transportation, medical services, etc.) that would be most vital to have in place during and after the disaster. I will not amplify on these complex issues, which would surely engage all the nations of the planet and would be extraordinari­ly challenging; if the warning time were only months, it is unlikely that such efforts could be effectively mobilized in time.