\*\*\*Case Frontlines

\*\*Rogue States Frontline

**1. Low risk of rogue state attack**

Charles **Glaser and** Steve **Fetter,** Professor in the Irving B. Harris Graduate School of Public Policy Studies at the University of Chicago and Professor in the School of Public Affairs at the University of Maryland, **01**

International Security, “National Missile Defense and the Future of U.S. Nuclear Weapons Policy”, Summer, 2001, Vol. 26, No. 1, P. 40-92 [Marcus]

The probability of a rogue-state attack in the absence of NMD is very low. We explained above that the number of rogue states that might acquire ICBMs over the next ten to fifteen years is small, and diplomacy may enable the United States to prevent some of these threats from materializing. Here we argue that the United States most likely will be able to deter any rogue ICBM threats that do emerge.

**2. Stopping missiles in boost phase is nearly impossible.**

Graham **Spinardi**, Senior Research Fellow Research Centre for Social Sciences, Science Studies Unit **09**

University of Edinburgh, “Technological Controversy and US Ballistic Missile Defence: Star Warriors versus the Huntsville Mafia”, 1/1/09, <http://www.stis.ed.ac.uk/__data/assets/pdf_file/0009/30600/SpinardiBMDTechControversyWP.pdf> [Marcus]

Boost phase interception does in theory offer great benefits in eliminating the effects of MIRVing. However, locating defensive weapons close enough to Soviet ICBM fields was problematic. The earth’s curvature meant that the early stage of a missile launch – the boost phase – would be out of the ‘line-of-sight’ of any surface based weapon. Guaranteed boost phase interception of Soviet ICBMs thus seemed to require space-basing, but even if the technology was available to achieve interception from space, there remained practical concerns. The logistics of putting sufficient defensive systems into orbit was (and still is) daunting. There is only one orbit, known as the geostationary orbit, where satellites move at the same speed as the earth rotates, and so stay above the same location. However, the geostationary orbit is 35800 kilometers above the equator and thus too far from boost phase targets for any realistic weapon to be effective.55 Satellites in orbits closer to the earth move across the face of the earth, and so maintaining a capability above a particular area, such as Soviet ICBM fields, would require a large number of satellites. In the early 1980s it was possible to be optimistic that the Space Shuttle might provide cheap transportation into orbit, but such optimism proved unfounded.56 Thus, apart from the availability or not of suitable weapons technologies, the cost of putting a constellation of battle stations into orbit led many to doubt the feasibility of the space-based approach. A further concern was that battle stations based in space would themselves be vulnerable to attack.

**3. Rogue states would transport weapons in new ways if NMD was deployed.**

Charles **Glaser and** Steve **Fetter,** Professor in the Irving B. Harris Graduate School of Public Policy Studies at the University of Chicago and Professor in the School of Public Affairs at the University of Maryland, **01**

International Security, “National Missile Defense and the Future of U.S. Nuclear Weapons Policy”, Summer, 2001, Vol. 26, No. 1, P. 40-92 [Marcus]

Opponents argue that NMD lacks value because rogue states do not need ICBMs to attack the United States with WMD. If faced with an effective U.S. NMD, rogues could turn to short-range ballistic or cruise missiles launched from surface ships operating in international waters off the U.S. coast, or they could smuggle weapons into the United States by land, sea, or air. We believe that effective NMD would retain some value nevertheless, because ICBMs possess military-operational characteristics and political uses not easily provided by other means of delivery. Alternative means of delivery generally are far less expensive and technically challenging to develop and deploy than is an ICBM. It is much easier to develop or purchase a short-range ballistic or cruise missile and to modify it for launch off a ship than to develop or purchase an ICBM of equal payload, and the technical challenges associated with smuggling are trivial in comparison.

**4. SBMD is expensive and not effective- Earth based solves better**

**Deblois et al** Bruce M. is director of systems integration for BAE Systems, in Reston, Va. Richard L. Garwin (F) is IBM Fellow Emeritus at the Thomas J. Watson Research Center, (,R. Scott Kemp is a member of the research staff of the Program on Science and Global Security at Princeton University, in New Jersey. Jeremy C. Marwell is a Furman Scholar at the New York University School of Law.**’05** (IEEE Spectrum, “Star-Crossed: From Orbiting Lasers to Metal Rods that Strike form the Heavens, the Potnetial to Wage War from Space Raises Startling Possibilities- and Serious Problems, http://ieeexplore.ieee.org/xpls/abs\_all.jsp?arnumber=1402717March 2005)

A reasonable response time, then, means having an overlapping constellation of many satellites. A satellite capable of destroying a target up to 3000 km away could cover a circular area of 28 million square kilometers, or about one-18th of Earth’s total area. In theory, 18 identical laser-weapon satellites would be needed to cover every location on Earth. Unfortunately, the circular coverage areas of the individual satellites would provide overkill at some points and no effectiveness at others. For example, in a 2002 Air Force-sponsored RAND report, “Space Weapons, Earth Wars,” Bob Preston and his coauthors describe how a constellation of twenty-four 5-MW hydrogenfluorine lasers with 10-meter-diameter mirrors would usually be able to destroy two to four ballistic missiles launched simultaneously from a small area, but if one missile was launched every 5 minutes or so, the constellation would be able to destroy just one. For lower-power lasers, the number of satellites escalates. For 1-MW beam power, 120 satellites could kill a launch of four missiles most of the time, but occasionally would be able to destroy only three. The main point is that many weapons (of any type) need to be orbiting to ensure that at least one weapon is within range to strike any possible target at any given time. An additional challenge for space-based lasers is their vulnerability to countermeasures. As we have noted, even the highest-power lasers do not penetrate clouds or smoke, and some wavelengths cannot penetrate Earth’s atmosphere, including those used by the HF laser currently proposed for space-based missile defense. For ground targets, smoke pots could disrupt an attack already in progress. Vulnerability is increased by the need to keep the laser on target for tens of seconds at least. The target could move in an unpredictable path or simply be covered with a reflective coating or paint, which could increase the time required for a successful kill by a factor of 10 or more. A layer of titanium oxide powder, for instance, could reflect 99.9 percent of the incident laser energy. Even a shallow pool of dyed water would offer serious protection for structures. Detonating a nuclear warhead in space would disable hundreds of satellites 46 IEEE Spectrum | March 2005 | NA Since a 20-MW laser boils water at a rate of 10 kg/s, a pool of water about 3 centimeters deep on the flat roof of a two-car garage would protect against 100 seconds of illumination by a space-based laser. This all adds up to abundant opportunity to thwart laser weapons. Meanwhile, the laser would be burning its supply of hydrogen and fluorine at a rate of 500 kg/s. Over the course of 100 seconds, it would consume 50 tons of fuel, for which the launch costs alone are about half a billion dollars. The issue of energy requirements warrants a closer look. Today, the most efficient high-power lasers typically consume 2 to 3 kg of chemical fuel per megawattsecond. So a pulse of 20 seconds from a 10-MW laser corresponds to about 400 to 600 kg of fuel per target in the absence of any countermeasures. At current launch costs of some $22 000/kg into low Earth orbit, each 20-second laser shot would cost approximately $11 million. For a constellation of 17 lasers, each loaded with a 12-shot capacity, the launch cost to maintain on-orbit fuel alone would exceed $2 billion. Weigh that against a stock of highly effective $6 smoke grenades, a stray cloud, or a 3-cm-deep pool of water, and this multibillion-dollar weapon system starts to look like a poor investment. If lasers are prohibitively expensive, might long tungsten rods used as high-speed penetrators be a relative bargain? Not really. To guarantee that a single target (located near the equator, to take the easiest case) could be attacked at will, and not only when a single orbiting rod happened to pass overhead, a distributed constellation of some 40 rods would be necessary, with launch costs totaling some $8 billion. The additional problems of targeting at supersonic speeds and coping with the intense heat of reentry demand extremely advanced, and therefore costly, technologies. Although one can steer the rod by shifting its center of mass, one would still need to obtain error signals to guide the penetrator to the target. Communicating with the penetrator is complicated by the fact that the surrounding air is heated into a radiopaque plasma, obstructing even the reception of GPS navigation signals. Although none of these problems is insoluble, they defy inexpensive solutions. For attacking hardened or deeply buried targets, the long rods would not outperform existing missiles equipped with conventional penetrating warheads. That’s because the physics of highvelocity impacts limits the penetration depth; basically, too much energy at impact causes the projectile to distribute its energy laterally rather than vertically. Tests done since the 1960s by Sandia National Laboratories, in Albuquerque, N.M., confirm that for even the hardest rod materials, maximum penetration is achieved at a velocity of about 1 to 1.5 km/s. Above that speed, the rod tip liquefies, and penetration depth becomes essentially independent of impact speed. Therefore, for maximum penetration, the long rods would need to be slowed to about 1 km/s, thereby delivering only one-ninth the destructive energy per gram of a conventional explosive—or about 1.5 percent of the potential energy the rod had in LEO. The wasted energy would be immense, and the effort, cost, and complexity of such an orbital system would be entirely out of proportion to the results. For soft targets on the surface, such as aircraft, ships, or even tanks, the United States already has many quicker, simpler alternatives to space-based kinetic energy systems such as long rods. Explosives delivered by long-range cruise missile, ICBM, or submarine-launched ballistic missile are all more attractive options. The space-based common aero vehicle also comes out a loser in comparison with weapons delivered by ICBM or shorter-range missile. Although the CAV may take only 45 minutes from launch to detonation, that would be preceded by as much as 12 hours for the target to come into range. Recall that an ICBM can get almost anywhere on Earth in 45 minutes. Of course, populating many orbits with CAVs would reduce the response time, but that would also run up the cost. Aircraft carriers, submarines, and even CAVs launched on demand by Earth-based missiles would all provide better performance than a space-based CAV

**5. US leadership doesn’t solve war.**

**Conry ’97** (Barbara, Foreign Policy Analyst – Cato, Policy Analysis No. 267, 2-5, “U.S. ‘Global Leadership’: A Euphemism for World Policeman,” <http://www.cato.org/pubs/pas/pa-267.html>)

Other proponents of U.S. political and military leadership do not point to particular benefits; instead, they warn of near-certain disaster if the United States relinquishes its leadership role. Christopher paints a bleak picture: Just consider what the world would be like without American leadership in the last two years alone. We would have four nuclear states in the former Soviet Union, instead of one, with Russian missiles still targeted at our homes. We would have a full-throttled nuclear program in North Korea; no GATT agreement and no NAFTA; brutal dictators still terrorizing Haiti; very likely, Iraqi troops back in Kuwait; and an unresolved Mexican economic crisis, which would threaten stability at our border. [55] Gingrich has pronounced a future without American leadership "a big mess." [56]And former British prime minister Margaret Thatcher has warned, What we are possibly looking at in 2095 [absent U.S. leadership] is an unstable world in which there are more than half a dozen "great powers," each with its own clients, all vulnerable if they stand alone, all capable of increasing their power and influence if they form the right kind of alliance, and all engaged willy-nilly in perpetual diplomatic maneuvers to ensure that their relative positions improve rather than deteriorate. In other words, 2095 might look like 1914 played on a somewhat larger stage. [57] In other words, if America abdicates its role as world leader, we are condemned to repeat the biggest mistakes of the 20th century--or perhaps do something even worse. Such thinking is **seriously flawed**, however. First, to assert that U.S. leadership can stave off otherwise inevitable global chaos **vastly overestimates** the power of any single country to influence world events. The United States is powerful, but it still can claim only 5 percent of the world's population and 20 percent of world economic output. Moreover, regardless of the resources Americans might be willing to devote to leading the world, today's problems often **do not lend themselves well to external solutions**. As Maynes has pointed out, Today, the greatest fear of most states is not external aggression but internal disorder. The United States **can do little** about the latter, whereas it used to be able to do a great deal about the former. In other words, the coinage of U.S. power in the world has been devalued by the change in the international agenda. [58] Indeed, many of the foreign policy problems that have confounded Washington since the demise of the Soviet Union are the kinds of problems that are likely to trouble the world well into the next century. "Failed states," such as Somalia, may not be uncommon. But, as the ill-fated U.S. and UN operations in that country showed, there is **very little** that outside powers can do about such problems. External powers usually lack the means to prevent or end civil wars, such as those in Rwanda and the former Yugoslavia, unless they are willing to make a tremendous effort to do so. Yet those types of internecine conflicts are likely to be one of the primary sources of international disorder for the foreseeable future. Despite the doomsayers who prophesy global chaos in the absence of U.S. leadership, however, Washington's limited ability to dampen such conflicts is not cause for panic. Instability is a **normal feature** of an international system of sovereign states, which the United States can tolerate and has tolerated for more than two centuries. If vital American interests are not at stake, instability itself becomes a serious problem only if the United States blunders into it, as it did in Somalia and Bosnia. [59]

# Rogue States 1 – Won’t attack

**The probability of a rouge state attack is low. Even without NMD that is true because diplomacy will work – that’s Glaser and Fetter**

# Rogue States 2 – Can’t stop missiles

**The only orbit where a satellite can stay located above one spot is the GEO orbit. This orbit is 35,800 kilometers above Earth, which is too far away to actually stop ballistic missiles in boost phase – that’s Spinardi.**

**Missiles don’t need to use boost phase.**

Graham **Spinardi**, Senior Research Fellow Research Centre for Social Sciences, Science Studies Unit **09**

University of Edinburgh, “Technological Controversy and US Ballistic Missile Defence: Star Warriors versus the Huntsville Mafia”, 1/1/09, <http://www.stis.ed.ac.uk/__data/assets/pdf_file/0009/30600/SpinardiBMDTechControversyWP.pdf> [Marcus]

The practicality of space-based systems, on the other hand, hinges on the cost of putting them into orbit, but cost estimates depend on the weight of the interceptors and number required, and this calculation in turn is based on assumptions about the duration of enemy missiles’ boost phase and the speed of the interceptors. This calculus is further complicated by the potential countermeasures that could be used by enemies seeking to overcome a boost phase defence. Thus, the claim that boost phase interception eliminates the problem of midcourse discrimination can be countered by the argument that opponents could deploy missiles with such short boost phases as to make interception practically impossible. Even with a boost phase lasting four minutes (typical for liquid-fueled ICBMs compared to three minutes for solid-fueled ones), the time left for interception is very short once detection, tracking and decision-making are taken into account.129 In addition, the APS study noted other countermeasures that could defeat boost-phase defences -- whether terrestrially or space based – ‘such as maneuvering and deployment of thrusted decoys during upper stage boost, and even multiple upper stages (all of which were employed in one form or another as early as 40 years ago.)’130

**Decoys limit the effectiveness of space NMD.**

Charles **Glaser and** Steve **Fetter,** Professor in the Irving B. Harris Graduate School of Public Policy Studies at the University of Chicago and Professor in the School of Public Affairs at the University of Maryland, **01**

International Security, “National Missile Defense and the Future of U.S. Nuclear Weapons Policy”, Summer, 2001, Vol. 26, No. 1, P. 40-92 [Marcus]

For missiles armed with a nuclear warhead, an attacker could deploy decoys to overwhelm U.S. NMD. Decoys take advantage of the fact that all objects with the same initial velocity travel along identical paths in the vacuum of space, regardless of their mass. With the proposed NMD system, the kill vehicle would attempt to distinguish between simple balloon decoys and warheads on the basis of their infrared signatures. Tests done so far leave serious doubts about whether the system will be able to reliably distinguish warheads from balloons.35

# Rogue States 3 – Transport in new ways

**Terrorists have the capabilities to attack the US with WMDs in ways other than ICBMs. These include short-range ballistic and cruise missiles – that’s Glaser and Fetter.**

**Terrorists have means of attacking the US other than ICBMs.**

Kevin **Norgaard**, LT. Colonel, professor at US Army War College, **02**

US Army War College, “Where Now National Missile Defense?”, 4/9/02, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404491&Location=U2&doc=GetTRDoc.pdf>, [Marcus]

The events of September 11th raised many legitimate questions about the ballistic missile threat to the United States? Should we worry about ballistic missiles because terrorists will use airplanes instead? Should we forget about NMD and spend the money on airport security and customs screening instead? Are we wrong to worry about State actors and should we now focus on radical fundamentalists? While each of these questions is academically debatable, this author proposes that the1 1th of September proved two important things about the threat. First, the United States Homeland and its citizens are vulnerable to devastating attacks from a determined foe with global reach, and second, if the determined foe has the means to act, he will.

**Cruise missiles will be a viable option for terrorists in the future.**

Thomas **Mahnken,** Deputy Assistant Secretary of Defense for Policy Planning, **05**

Center for Strategic and Budgetary Assessments, “The Cruise Missile Challenge”, 3/05, <http://openscenarios.ida.org/scenarios/261-The_Cruise_Missile_Challenge.pdf> [Marcus]

A diagnostic assessment of the cruise missile challenge should also include an exploration of plausible scenarios in which cruise missiles could be used against the United States, highlighting particular challenges to the United States, its forces, and allies. A representative range of scenarios should examine the employment of different types of cruise missiles (i.e., both anti-ship and land-attack missiles). It should also cover a range of threats, from small numbers of relatively unsophisticated missiles to larger, more sophisticated integrated attacks including not just cruise missiles but other attack means. It should examine the use of cruise missiles by both states and non-state actors, such as terrorist groups. Finally, it should highlight particular challenges to US national security, including the ability of potential adversaries to deny the United States access to key areas, or to threaten the US homeland. Cruise missiles are likely to be increasingly attractive to US adversaries. The success of the US air forces has made competing head-to-head with the United States in the air a singularly unattractive prospect. Moreover, the demonstrated effectiveness of US theater ballistic missile defense units may divert some competitors away from investment in ballistic missiles. As the Chief of Staff of the 32nd Army Air and Missile Defense Command commented regarding Iraq’s cruise missile force, “this was a glimpse of future threats. It’s a poor man’s air force. A thinking enemy will use uncommon means such as cruise missiles and unmanned aerial vehicles on multiple fronts.”

# Rogue States 4 – Earth Based Better

**Extend 1nc 4 SBMD is way to costly and is almost guaranteed to fail in its mission, the assurance provided by BMD is more than sufficient and solves better**

**SBMD expensive and useless of countermeasures- ground BMD solves better**

**Deblois et al** Bruce M. is director of systems integration for BAE Systems, in Reston, Va. Richard L. Garwin (F) is IBM Fellow Emeritus at the Thomas J. Watson Research Center, (,R. Scott Kemp is a member of the research staff of the Program on Science and Global Security at Princeton University, in New Jersey. Jeremy C. Marwell is a Furman Scholar at the New York University School of Law.**’05** (IEEE Spectrum, “Star-Crossed: From Orbiting Lasers to Metal Rods that Strike form the Heavens, the Potnetial to Wage War from Space Raises Startling Possibilities- and Serious Problems, http://ieeexplore.ieee.org/xpls/abs\_all.jsp?arnumber=1402717March 2005)

MISSILE DEFENSE FROM SPACE The partial deployment of the U.S. ground-based missile defense system in recent months—and more specifically, its technical failures—naturally raises the question of basing a ballistic missile defense system in space. Would such a system work? A ballistic missile is most vulnerable during its boost phase, when it is not maneuvering and the stillburning rocket presents a strong infrared signature. The boost phase for a liquid-fuel intercontinental ballistic missile (ICBM) lasts some 250 seconds, while a solid-fuel ICBM may burn out in 170 seconds. The U.S. military has understandably shown a great deal of interest in boost-phase missile defense. A recent study by the American Physical Society, in College Park, Md., analyzed two types of space weapons that have been proposed for intercepting incoming missiles during the boost phase: spacebased interceptors (SBIs) that would propel a kinetic “kill vehicle” into a collision with the missile (much like the ground-based interceptors currently being deployed) and space-based lasers. As the study noted, the size of the constellation of SBIs or lasers that would be needed grows in proportion to the number of simultaneous launches that might occur. For example, if a missile-defense constellation can handle at most three simultaneous missiles from a small region, an adversary could surely defeat this defense by launching four. For use against missiles launched from, say, the small state of North Korea, boost-phase interceptors on nearby ships, or on Russian territory south of Vladivostok, would likely be considerably more capable, not to mention cheaper, than space-based interceptors. What’s more, these fragile battleships of space would need to be protected from preemptive attack; we describe in the main text how low-Earthorbit satellites are relatively easy to destroy. Another proposal for space-based missile defense involves intercepting ICBMs in the 20 minutes of their midcourse fall through space. Though this has been a mainstay of missile-defense advocates since the Star Wars days of the mid-1980s, it is not part of the current administration’s program for national missile defense. In large part, this is because midcourse SBIs have no technical advantage over ground-based interceptors and are more expensive. Although the purpose of this article is not to analyze in depth the prospects for intercepting ICBMs, it is worth mentioning that systems limited to destroying missiles in the vacuum of space (that is, midcourse systems) will be **useless** unless they can deal with the countermeasure of cheap and easily deployed balloon decoys.

**Space Based Lasers fail – Short range missiles render it useless**

**Deblois et. Al**. [ Bruce M. DeBlois director of systems analysis, Center for Transformation Systems, BAE Systems , Richard L. Garwin IBM Fellow Emeritus at the Thomas J. Watson Research Center, Professor-at-Large at Cornell University. , R. Scott Kemp Former science advisor for the US dept. of State Associate Research Scholar at Princeton , Jeremy C. Marwel, “Space Weapons crossing the US Rubicon” International Security, Vol. 29, No. 2 (Fall **2004**), pp. 50-84]

In the first three roles for space weapons-protecting U.S. satellites, countering adversary capabilities in space, and force projection-we find little merit in comparison with more readily available terrestrial military tools and tactics. A different issue is that of defense of the United States against hostile ballistic missiles. If properly developed and widely deployed, U.S. space weapons in the form of constellations of dozens or hundreds of powerful orbiting lasers and thousands of orbiting kill vehicles would seem to have significant effec- tiveness against ICBMs armed with nuclear warheads launched against the continental United States (perhaps even including Alaska and Hawaii). We have summarized some examples of SBL constellations for destroying in boost phase a few ICBMs launched simultaneously from a small region such as North Korea (or a Russian missile field). We touched only generally on the pas- sive countermeasures that would make boost-phase intercept more difficult. These include light-weight improvements for increasing a missile's resistance to laser beams and rotating the missile during boost to limit temperature rise by spreading the heat over a belt on the booster. An adversary might also choose to deliver nuclear weapons by short-range missile from a ship 20 to 100 kilometers from U.S. shores, which would be much simpler than ICBM deliv- ery and could potentially draw on a large number of Scud missiles of 300- kilometer range. The report of the Commission to Assess the Ballistic Missile Threat to the United States (to be distinguished from the 2001 Space Commis- sion) states: "Sea launch of shorter range ballistic missiles is another possibil- ity. This could enable a country to pose a direct territorial threat to the U.S. sooner than it could by waiting to develop an ICBM for launch from its own territory."77 The short burn time and low burnout altitude of the Scud make it largely immune to SBL beams. In addition to these passive counters, we have stressed the vulnerability of the enormous and costly SBLs to destruction, especially by space mines.

# Rogue States 5 – Leadership doesn’t solve war

**Even if the United States has leadership, the US does not have the power to stop internal conflicts like those in Rwanda and Somalia. These eventually escalate into larger international conflicts and breed terrorists – that’s Conry. Also, empirics like World War 2 prove that strong military capability does not prevent other countries from going to war.**

\*\*China Frontline

**1. China won’t be crazy – will result to legal action first**

L.M. **Wortzel,** Vice-President for Foreign Policy and Defense Studies Area(s) of Expertise: China, Asia, intelligence issues, foreign policy, national security, and military strategy, 20**08.** Astropolitics, “THE CHINESE PEOPLE’S LIBERATION ARMY AND SPACE WARFARE.”

While students of warfare are thinking through Beijing’s military doctrine in space, other Chinese strategists and legal scholars are engaged in an internal debate on how traditional ideas of sovereignty and the laws of war apply in space. It is critical for those who follow China’s military development to consider these internal debates because they imply that, before using military force in space, China will telegraph its intentions or justify its planned operations through political or legal action.

**2. TMD solves better – provides stability and avoids provocation**

**Freese and Nichols 10**[Joan Johnson-Freese Director of the Center for Space Policy & Law at the University of Central Florida She is on the editorial board of China Security, a member of the International Academy of Astronautics, the International Institute for Strategic Studies . & Thomas Nichols Professor of National Security Affairs at Harvards Belfer science institute, Ph.D. from Georgetown University, an M.A. from Columbia University China Security, Vol. 6 No. 2, 2010, pp. 3-24 2010 World Security Institute “ Space, Stability and Nuclear Strategy: Rethinking Missile Defense”

A reasonable question here is why NMD threatens the Chinese deterrent in a way that TMD does not. Without doubt, TMD efforts complicate the Chinese ability to act in their own region—viewed by the United States and many other countries as good—since that would be the point of deploying a system in that theater. But rejecting a larger NMD system designed to protect the United States is a signal, however tenuous, that Washington is not trying to steal a march on the Chinese by suppressing its strategic deterrent. In a sense, a TMD deployment in the Pacific could replicate the US-Soviet dynamic, with a great deal of stability at the strategic level, even if that means somewhat less stability at lower levels of conflict. The object is to avoid a central nuclear exchange and NMD threatens (or implies that the Americans want to threaten) China's small deterrent. TMD by contrast tries to maintain peace by telling the Chinese that the Americans are seeking not a perfect defense, but an updated version of escalation dominance: neither side can prevail at the level of regional conflict and neither side can escalate because the consequences at that level will be ghastly—and thus even a small conflict is pointless. This is not a threat to China’s existence, but it is unquestionably a warning that strategic deterrence does not then create a situation where the PRC can run roughshod over it neighbors. Even if we accept that NMD would seem to be a threat on a global level, this does not then logically mean we must accept that any protection from missiles at any level is likewise a bellicose attempt to establish a “peace shield”. This was the rationale for scaling back the European program and it is a perfectly logical approach to apply to Pacific security as well. Chinese objections to any defenses at all in this context have to seem equally as disingenuous as those heard last year from Moscow. Theater missile defense is a threat to no one—except, of course, powers interested in launching theater-range ballistic missiles.

# China 1 – Won’t be crazy

China won’t attack the US –cooperation and diplomatic strength

**Rosemont, 8** (Henry, expert on East Asian philosophy, “Greater China” Asia Times China threat. What threat? <http://www.atimes.com/atimes/China/JB12Ad01.html>

Head to Head? A significant number of people profit greatly from the present U.S. defense budget. Since even people with little knowledge of military tactics realize that aircraft carriers and nuclear attack submarines are worthless for deterring ideologically driven young people from strapping IEDs to their waists, a more compelling threat must be conjured up is to justify increased Pentagon spending. Since the end of the Cold War, China has become the candidate of choice among illusionist hawks.15 Confrontation with China is not, however, inevitable. Perhaps the best reason for China not to seek a blue-ocean navy comes from an initially most unlikely source: The U.S. Navy. Its former head, Admiral Michael Mullen [proposed](http://www.isn.ethz.ch/pubs/ph/details.cfm?lng=en&v33=110615&id=45945) a “Thousand Ship Navy” (TSN) that would mark “a new chapter in cooperation as it emphasizes the management of shared security interests of all maritime nations.” China could become a significant component of this TSN, and thus keep its shipping lanes secure at relatively little cost beyond present expenditures. Given the fact that 90% of all world trade and almost 70% of all petroleum is transported by sea, it clearly behooves both countries to cooperate closely to keep the maritime commons free of pirates, terrorists, and drug traffickers. Cooperation at sea is equally needed for missions of humanitarian assistance and disaster relief. Unfortunately, the highly invasive foreign policies of the United States, combined with its overwhelming military superiority, provide the Chinese with very good reasons to continue distrusting U.S. motives (including the TSN). It is therefore the responsibility of the United States to take meaningful initiatives to build support for closer cooperation with the soon-to-be world’s second largest economic power. Some of those initiatives would deal directly with China, such as providing materiel and advanced training for the Chinese military to conduct search-and-rescue missions. The United States could also foster far greater trust and cooperation specifically with the Chinese by clarifying the U.S. position toward Taiwan. Taipei should understand that the United States will come to its immediate aid in case of attack. But should Taipei seek independence and a seat at the UN, Washington will use all its diplomatic strength to insure that other nations do not recognize these claims. The United States could also signal to China that it is willing to be a more cooperative international player. For instance, the United States could significantly reduce its nuclear stockpile and renounce the first-strike use of nuclear weapons, as China did long ago. It should also [sign and ratify](http://www.maximsnews.com/107mnunnovember07ianwilliamsunitednationslawofsea.htm) the UN Convention on the Law of the Sea as 155 nations have done (including China) since it was promulgated in 1982. Ending the brutal occupation of Iraq is another global measure, as would placing U.S. troops in Afghanistan under UN administration and signing a peace treaty with North Korea (55 years after the cease-fire). Holding out an olive branch to Iran, and stopping the one-sided U.S. support of the Israelis would also provide clear signals to the Chinese and the rest of the world of a major shift in U.S. foreign policy. A reduction of U.S. threats to the world – from nuclear weapons, regional wars such as Iraq and Afghanistan, and potential conflicts with Iran and North Korea – would decrease the likelihood of confrontation with China as well as undercut any rationale for China’s own increased military spending. Such a shift in U.S. national security strategy would not only increase the security of China and the United States but the world as well.

# China 2 – TMD better

**TMDs solve better in a world of Chinese aggression – space-based missile defense looks as if we are trying to dominate space – That’s Freese and Nichols**

**TMD is key to deter aggression through US resolve**

Robert Soofer, Special Assistant to the Under Secretary of Defense, 09, [“Joint Theater Missile Defense Strategy”, January 8, 2009, www.fas.org/spp/eprint/1809.pdf [Ghosh]]

During pre-hostilities, TMD deployment is intended to deter aggression by demonstrating U.S. resolve and coalition solidarity. Such deploy- ments can dampen incentives for preemption by denying an enemy ballistic missile force quick and undefended access to key targets. If conflict is unavoidable joint doctrine states that TMD can protect deployed coalition forces, critical assets, and vital interests; detect and target TBM plat- forms; detect, warn, and report TBM launches; co- ordinate multifaceted responses to attack with other combat operations; and reduce or minimize the effects of TBM damage.

**TMD is the only welcomed solution in context of an alliance**

Robert Soofer, Special Assistant to the Under Secretary of Defense, 09, [“Joint Theater Missile Defense Strategy”, January 8, 2009, www.fas.org/spp/eprint/1809.pdf [Ghosh]]

Pre-hostilities. In a crisis U.S. forces may be re- quired to deter aggression while reassuring friends and allies. This may require a demonstra- tion of force such as joint exercises; moving land, sea, or air forces into the area; or deploying theater ballistic missile defenses as recently seen in South Korea. In some instances, TMD deployments would be welcome and pro- ceed in the context of alliance or coalition agree- ments. Ground-based systems could be moved into place as a visible sign of U.S. commitment. But land force deployments may not be welcome in other instances or when the United States does not wish to make its deployment obtrusive for fear of exacerbating the crisis, which makes off- shore TMD preferable. In any event, in crises where ballistic missile use is possible, TMD gives commanders greater flexibility in deploying and employing forces—whether in theater or poised to react to imminent hostilities. The Patriot bat- talion sent to South Korea last year is an example: half of the missiles were positioned to protect de- ployed U.S. forces (although the bulk remained unprotected) and others protected a major rein- forcement area, the port of Pusan.

# \*\*Leadership Frontline

**1.Space hegemonists are wrong: Military dominance in space doesn’t reinforce hegemony and leads to backlash**

**Hardesty** Captain David C. is is a member of the faculty of theNaval War College’s Strategy and Policy Department **’05** (Naval War College Review, “Space-Based Weapons: Long-Term Strategic Implications and Alternatives”, Spring 2005, Hopkins)

THE ARGUMENT S FOR SPACE-BAS ING WEAPONS Basing weapons in orbit, then, will not be in the long-term interests of the United States. Still, there are those who disagree. The two most commonly heard arguments that full weaponization of space would be beneficial for the United States are that it is inevitable, and that space is a “center of gravity” that the nation must weaponize in order to protect. A third argument less frequently heard is that moving first to weaponize space would achieve complete dominance in that domain and thus permanently secure U.S. national interests through a benevolent hegemony. U.S. Space Hegemony Everett Dolman argues that the downsides of space-basing weapons can be avoided by using current and near-term capabilities “to . . . seize military control of low-Earth orbit. From that high ground vantage . . . space-based laser or kinetic energy weapons could prevent any other state from deploying assets there, and could most effectively engage and destroy terrestrial enemy ASAT facilities.” 28 Other states would be allowed to compete commercially in space with the United States, but only after notification and approval of each launch. Underlying this view and the arguments adduced in its support is the idea that by seizing space the United States will have seized a vantage point from which the earth itself can be dominated. This is the “ultimate high ground” argument, which, as we have seen, has serious weaknesses; **it is not at all clear that even in strictly military terms dominance in space means dominance on earth**. In fact, its benefits are likely to be both marginal and temporary if an enemy shifts the terms of the engagement. The more important questions would be the political and legal. The preemptive destruction of another nation’s space-based weapon would be a direct violation of the 1967 Outer Space Treaty, which states that outer space “shall be free for exploration and use by all States without discrimination of any kind.” 29 If U.S. deployment of space-based weapons is a peaceful use of space under the treaty, deployment by another state is protected as well. This is not in itself a problem for space hegemonists, who advocate “withdrawing from the current space regime” and announcing “a principle of free-market sovereignty in space.” 30 However, potential foes are not in the least likely to accept unilateral American assertion of space dominance, negating as it would many countries’ deterrence strategies and implying permanent and irreversible asymmetric U.S. advantage in space. In the absence of a direct threat to their existence, such as existed during the Cold War, it is unlikely that allies would accept it either. Both would probably, as the United States does now, view “purposeful interference with space systems” as “an infringement on sovereign rights.” 31 Heavy political and economic costs would likely be imposed on the United States, which is unlikely to find the political will to uphold such a dramatic change in policy against both friends and enemies. A more limited approach, denying “rogue states” access to space, could also be proposed. This could be construed as in accordance with the current National Security Strategy objective to “prevent our enemies from threatening us, our allies, and our friends with weapons of mass destruction,” since it is difficult to verify that there are no weapons of mass destruction on orbital space weapons platforms, and even conventional space-based ordnance could attack such facilities as nuclear power sites and so produce WMD-like effects. 32 This concept might be accepted internationally, or imposed unilaterally with acceptable political cost, against a state like North Korea, with a history of attacking its neighbors, clear links to terrorist acts, a record of violating treaties, and an authoritarian regime. Even this example poses problems, however. Debris from a boost-phase EAGLE engagement of a missile launched from North Korea would presumably not hit the United States, but other nations in the region might be struck. It is not hard to envision the outcry should debris rain on Japan, China, or Russia from a booster that North Korea claimed had been merely placing a communications satellite into orbit. Other rogue state space “lockout” issues are even more problematic. Iran is frequently quoted as a potential future threat to the United States, but it seems almost certain that a space “lockout” against a country that has not attacked its neighbors in recent history and has functioning democratic institutions would cause a severe international backlash. Additionally, any deployment of space-based weapons against a “rogue state” is likely to elicit space-based weapons deployments by third parties. China is likely to be one of the first countries to follow suit. The destabilizing aspects of space-based weapons would be particularly unhelpful in any future crisis over Taiwan. Thus, **a decision to space-base weapons should not be made under the illusion that it will result in unilateral U.S. advantage**. Some limited “lockout” from space of a rogue state may be possible under certain circumstances, but the space-basing of weapons in response by other states that could become enemies must be considered.

**2. No relationship between US capabilities and peace**

**Fettweis 10** – Professor of national security affairs @ U.S. Naval War College. [Christopher J. Fettweis, “Threat and Anxiety in US Foreign Policy,” Survival, Volume 52,

Issue 2 April 2010 , pages 59 – 82//informaworld]

One potential explanation for the growth of global peace can be dismissedfairly quickly: US actions do not seem to have contributed much. The limited evidence suggests that there is little reason to believe in the stabilising power of the US hegemon, and that there is no relation between the relative level of American activism and international stability. During the 1990s, the United States cut back on its defence spending fairly substantially. By 1998, the United States was spending $100 billion less on defence in real terms than it had in 1990, a 25% reduction.29 To internationalists, defence hawks and other believers in hegemonic stability, this irresponsible 'peace dividend' endangered both national and global security. 'No serious analyst of American military capabilities', argued neo-conservatives William Kristol and Robert Kagan in 1996, 'doubts that the defense budget has been cut much too far to meet America's responsibilities to itself and to world peace'.30 And yet the verdict from the 1990s is fairly plain: the world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable US military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums; no security dilemmas drove insecurity or arms races; no regional balancing occurred once the stabilis-ing presence of the US military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in US military capabilities. Most of all, the United States was no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Bill Clinton, and kept declining as the George W. Bush administration ramped the spending back up. Complex statistical analysis is unnecessary to reach the conclusion that world peace and US military expenditure are unrelated.

**3.Hegemony is resilient – self-reinforcing.**

**Wohlforth ’07** (William, Professor of Government at Dartmouth College, “Unipolar Stability”, Harvard International Review, Spring, <http://hir.harvard.edu/articles/1611/3/>)

US military forces are stretched thin, its budget and trade deficits are high, and the country continues to finance its profligate ways by borrowing from abroad—notably from the Chinese government. These developments have prompted many analysts to warn that the United States suffers from “imperial overstretch.” And if US power is overstretched now, the argument goes, unipolarity can hardly be sustainable for long. The problem with this argument is that it fails to distinguish between actual and latent power. One must be careful to take into account both the level of resources that can be mobilized and the degree to which a government actually tries to mobilize them. And how much a government asks of its public is partly a function of the severity of the challenges that it faces. Indeed, one can never know for sure what a state is capable of until it has been seriously challenged. Yale historian Paul Kennedy coined the term “imperial overstretch” to describe the situation in which a state’s actual and latent capabilities cannot possibly match its foreign policy commitments. This situation should be contrasted with what might be termed “self-inflicted overstretch”—a situation in which a state lacks the sufficient resources to meet its current foreign policy commitments in the short term, but has untapped latent power and readily available policy choices that it can use to draw on this power. This is arguably the situation that the United States is in today. But the US government has not attempted to extract more resources from its population to meet its foreign policy commitments. Instead, it has moved strongly in the opposite direction by slashing personal and corporate tax rates. Although it is fighting wars in Afghanistan and Iraq and claims to be fighting a global “war” on terrorism, the United States is not acting like a country under intense international pressure. Aside from the volunteer servicemen and women and their families, US citizens have not been asked to make sacrifices for the sake of national prosperity and security. The country could clearly devote a greater proportion of its economy to military spending: today it spends only about 4 percent of its GDP on the military, as compared to 7 to 14 percent during the peak years of the Cold War. It could also spend its military budget more efficiently, shifting resources from expensive weapons systems to boots on the ground. Even more radically, it could reinstitute military conscription, shifting resources from pay and benefits to training and equipping more soldiers. On the economic front, it could raise taxes in a number of ways, notably on fossil fuels, to put its fiscal house back in order. No one knows for sure what would happen if a US president undertook such drastic measures, but there is nothing in economics, political science, or history to suggest that such policies would be any less likely to succeed than China is to continue to grow rapidly for decades. Most of those who study US politics would argue that the likelihood and potential success of such power-generating policies depends on public support, which is a function of the public’s perception of a threat. And as unnerving as terrorism is, there is nothing like the threat of another hostile power rising up in opposition to the United States for mobilizing public support. With **latent power** in the picture, it becomes clear that unipolarity might have more built-in **self-reinforcing mechanisms** than many analysts realize. It is often noted that the rise of a peer competitor to the United States might be thwarted by the counterbalancing actions of neighboring powers. For example, China’s rise might push India and Japan closer to the United States—indeed, this has already happened to some extent. There is also the strong possibility that a peer rival that comes to be seen as a threat would create strong incentives for the United States to end its self-inflicted overstretch and **tap** potentially **large wellsprings of latent power**.

4. **Lack of Launcher capability prevents US Space leadership – overwhelms all other factors**

Ken **Kremer, ’10**, Feb 6, 2010, (Universe Today, Orion can Launch Safely in 2013 says Lockheed, <http://www.universetoday.com/54703/orion-can-launch-safely-in-2013-says-lockheed/>)

"We can fly Orion in 2013", says John Karas, the VP and General Manager of Human Space Flight for Lockheed Martin. Lockheed is the prime contractor for NASA's Orion capsule. "There is no doubt in my mind we can do this. And Orion is very safe". He strenuously repeated this statement to me several times with absolutely no doubt in his mind during a wide ranging interview. I spoke at length with Karas today (Feb. 6) at the NASA Press Center shortly before the scheduled Feb. 7 launch of shuttle Endeavour on the STS 130 mission to the ISS.   
Lockheed Martin has issued an official statement saying, "We are keenly disappointed in the Administration's budget proposal for NASA that would cancel Project Orion as part of an elimination of NASA's Constellation Program. Orion's maturity is evident in its readiness for a first test flight in a matter of weeks. In fact, Orion can be ready for crewed flights to low Earth orbit and other exploration missions as early as 2013, thus narrowing the gap in U.S. human space flight capability when the shuttle is retired later this year". Karas decried the complete lack of vision and realism by the Obama Administration and NASA in deciding to terminate Project Constellation, which includes the new Orion Capsule, the Ares 1 booster rocket for Orion and the Ares 5 Heavy Lift booster required to reach the Moon, Mars and beyond. "I was very surprised by the cancellation. We expected and felt that a middle ground with some changes to Constellation was reasonable. We did not expect to be left with nothing". "**Where is the US Leadership in space if we don't have a heavy lifter soon** ? "Russia, China and India will all have Heavy Lift boosters better than the US. Why would anyone have an incentive to work with us if they have already developed their own Heavy Lifter. **The nations of the world will look elsewhere, not to the US"**, Karas told me emphatically. "We will not maintain Space leadership if the US will only be spending money on technology development under the new proposals by the Obama Administration, and not on an actual rocket program that builds, tests and launches flight hardware."

# Leadership 1 – Dominance =/= heg

**The idea that space dominance reinforces heg is an illusion: Countries will be angry at the US attempts and will impose political and economic consequences that will hurt any unilateral advantage**

**NMD provides no deterrent benefits.**

Charles **Glaser and** Steve **Fetter,** Professor in the Irving B. Harris Graduate School of Public Policy Studies at the University of Chicago and Professor in the School of Public Affairs at the University of Maryland, **01**

International Security, “National Missile Defense and the Future of U.S. Nuclear Weapons Policy”, Summer, 2001, Vol. 26, No. 1, P. 40-92 [Marcus]

We argue that the United States should reject full-scale NMD against Russia and China because the prospects for achieving an effective defense are small (even if NMD becomes feasible against small rogue forces) and because the political costs would be large. Turning to effective limited NMD, we find that on balance the expected benfits are small, and possibly negative. Rogue states should be deterred by the United States’ massive conventional and nuclear retaliatory capabilities. There is, however, some chance that deterrence might fail, in which case NMD might then reduce the attack’s damage. Contrary to the hopes of many proponents, effective NMD is unlikely to provide other benefits. Limited NMD would not bolster deterrence of a rogue attack, nor would it restore much leeway to U.S. foreign policy, because its effectiveness would be uncertain and U.S. leaders would still be concerned about the vulnerability of U.S. cities. Still worse, limited NMD could bring military dangers of its own: Russian reactions to U.S. NMD could increase the probability of accidental Russian missile launches, and NMD is unlikely to afford protection against such attacks.

# Leadership 2 – Heg =/= peace

**No impact- no real threats**

**Fettweis 10** – Professor of national security affairs @ U.S. Naval War College. [Christopher J. Fettweis, “Threat and Anxiety in US Foreign Policy,” Survival, Volume 52, Issue 2 April 2010 , pages 59 – 82//informaworld]

Today's security debate often seems to be driven less by actual threats than vague, unnamed dangers. Former Secretary of Defense Donald Rumsfeld warned about 'unknown unknowns': the threats 'we don't know we don't know', which 'tend to be the difficult ones'.32 Kristol and Kagan worry that if the United States fails to remain highly engaged, the international system 'is likely to yield very real external dangers, as threatening in their own way as the Soviet Union was a quarter century ago'.33 What exactly these dangers are is left open to interpretation. In the absence of identifiable threats, the unknown can provide us with an enemy, one whose power is limited only by the imagination. This is what Benjamin Friedman and Harvey Sapolsky call 'the threat of no threats', and is perhaps the most frightening danger of all.34 Even if, as folk wisdom has it, anything is possible, not everything is plausible. Vague, generalised dangers should never be acceptable replacements for specific threats when crafting national policy. There is no limit to the potential dangers the human mind can manufacture, but there are very definite limits to the specific threats the world contains. 'To make anything very terrible, obscurity seems in general to be necessary', noted Edmund Burke. 'When we know the full extent of any danger, when we can accustom our eyes to it, a great deal of the apprehension vanishes.'35 The full extent of today's dangers is not only knowable, but relatively minor.

# Leadership 3 – Heg resilient

**Leadership is strong and not going anywhere – it is self-reinforcing.**

**Wohlforth ’07** (William, Professor of Government at Dartmouth College, “Unipolar Stability”, Harvard International Review, Spring, <http://hir.harvard.edu/articles/1611/3/>)

US military forces are stretched thin, its budget and trade deficits are high, and the country continues to finance its profligate ways by borrowing from abroad—notably from the Chinese government. These developments have prompted many analysts to warn that the United States suffers from “imperial overstretch.” And if US power is overstretched now, the argument goes, unipolarity can hardly be sustainable for long. The problem with this argument is that it fails to distinguish between actual and latent power. One must be careful to take into account both the level of resources that can be mobilized and the degree to which a government actually tries to mobilize them. And how much a government asks of its public is partly a function of the severity of the challenges that it faces. Indeed, one can never know for sure what a state is capable of until it has been seriously challenged. Yale historian Paul Kennedy coined the term “imperial overstretch” to describe the situation in which a state’s actual and latent capabilities cannot possibly match its foreign policy commitments. This situation should be contrasted with what might be termed “self-inflicted overstretch”—a situation in which a state lacks the sufficient resources to meet its current foreign policy commitments in the short term, but has untapped latent power and readily available policy choices that it can use to draw on this power. This is arguably the situation that the United States is in today. But the US government has not attempted to extract more resources from its population to meet its foreign policy commitments. Instead, it has moved strongly in the opposite direction by slashing personal and corporate tax rates. Although it is fighting wars in Afghanistan and Iraq and claims to be fighting a global “war” on terrorism, the United States is not acting like a country under intense international pressure. Aside from the volunteer servicemen and women and their families, US citizens have not been asked to make sacrifices for the sake of national prosperity and security. The country could clearly devote a greater proportion of its economy to military spending: today it spends only about 4 percent of its GDP on the military, as compared to 7 to 14 percent during the peak years of the Cold War. It could also spend its military budget more efficiently, shifting resources from expensive weapons systems to boots on the ground. Even more radically, it could reinstitute military conscription, shifting resources from pay and benefits to training and equipping more soldiers. On the economic front, it could raise taxes in a number of ways, notably on fossil fuels, to put its fiscal house back in order. No one knows for sure what would happen if a US president undertook such drastic measures, but there is nothing in economics, political science, or history to suggest that such policies would be any less likely to succeed than China is to continue to grow rapidly for decades. Most of those who study US politics would argue that the likelihood and potential success of such power-generating policies depends on public support, which is a function of the public’s perception of a threat. And as unnerving as terrorism is, there is nothing like the threat of another hostile power rising up in opposition to the United States for mobilizing public support. With **latent power** in the picture, it becomes clear that unipolarity might have more built-in **self-reinforcing mechanisms** than many analysts realize. It is often noted that the rise of a peer competitor to the United States might be thwarted by the counterbalancing actions of neighboring powers. For example, China’s rise might push India and Japan closer to the United States—indeed, this has already happened to some extent. There is also the strong possibility that a peer rival that comes to be seen as a threat would create strong incentives for the United States to end its self-inflicted overstretch and **tap** potentially **large wellsprings of latent power**.

# Leadership 4 – Need launchers

**Lack of Launcher capability prevents US Space leadership – overwhelms all other factors**

Ken **Kremer, ’10**, Feb 6, 2010, (Universe Today, Orion can Launch Safely in 2013 says Lockheed, <http://www.universetoday.com/54703/orion-can-launch-safely-in-2013-says-lockheed/>)

"We can fly Orion in 2013", says John Karas, the VP and General Manager of Human Space Flight for Lockheed Martin. Lockheed is the prime contractor for NASA's Orion capsule. "There is no doubt in my mind we can do this. And Orion is very safe". He strenuously repeated this statement to me several times with absolutely no doubt in his mind during a wide ranging interview. I spoke at length with Karas today (Feb. 6) at the NASA Press Center shortly before the scheduled Feb. 7 launch of shuttle Endeavour on the STS 130 mission to the ISS.   
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**Launch capability is key to global leadership.**

Mark **Stout, 2009**, a researcher and analyst at Air University’s [National Space Studies Center](http://space.au.af.mil/) 29 October 2009, (U.S. Space Leadership: Reverting to the Mean?, <http://webcache.googleusercontent.com/search?q=cache:_C0FcFny93AJ:www.au.af.mil/au/awc/awcgate/nssc/op-ed/american_spacepower_reverting_to_the_mean.pdf+United+States+%22space+leadership%22&hl=en&gl=us>)

The phrase „reverting to the mean‟ is often used in the financial industry to address the nearly- inevitable likelihood that a fund or stock‟s spectacular success over the long term (think ponzi- scheme king Bernie Madoff) is **simply unsustainable**. Reverting to the mean is viewed with such certainty it is sometimes linked two other high-probability events, death and taxes. But just what causes something to revert to the mean? Often it‟s because of changed conditions like market competition, consumer preferences, or government intervention (which itself is capable of pulling a company‟s returns back to earth or conversely, back from Chapter 11). Gaming is another great example of reverting to the mean: think about how many people had to lose money so that guy shilling for the gambling house on the radio could say “I won a hunnert fifty- six thousand dollars and you can be a winner too.” For some time, U.S. space programs have been reverting towards the mean. Ok, while there really isn‟t a real mean for space programs, the general idea is relative to the U.S., others are catching up, and relative to these others, the United States is not nearly as dominant as it has been. This seems to be especially true regarding the United States as a space launching nation. Need proof? Let‟s see--China now has a serious commercial space program and a robust manned space flight effort as well. When they get their heavy lift Long March 5 on line in 2014, they‟ll be capable of launching a wide variety of very heavy payloads including up to 55000 pounds to a low earth orbit, as well as to geosynchronous orbit and beyond. Russia? They possess the know-how behind the amazing RD-180 engines and some exceedingly mature space launch systems. Besides the space shuttle, the Russian Soyuz and Proton systems provide rides to the International Space Station. Arianespace? That French-led endeavor, along with its nine other European partners, are probably pretty happy with the Ariane 5‟s 32 consecutive successful launches. How about some other space launching nations that few seldom think of like India, Japan, and Iran? So far, indigenous South and North Korean space programs have only been suborbital…so far. Reverting to the mean for U.S. human space flight isn‟t too bothersome--unless you‟re NASA-- as the value of manned space flight is basically a spectacular stunt, kind of like a grizzly bear dunking a basketball. First you say “Wow!” Then you say “Weird.” Next, it‟s “Are you going to eat the rest of that hot dog?” Finally you say “Why is that bear dunking a basketball anyway?” From a military perspective however, a loss of U.S. space launch leadership is more problematic: space launch **is that necessary first enabler for all other operations in the space domain**, such as the traditional unmanned space missions of providing ISR, communications, weather, and GPS that not only enable the U.S. military but are also thoroughly intertwined with our economy. Just as the United States has a national security requirement to be capable of performing military missions in the air, on the ground, and on and under the sea, we similarly have a need to be able to get to space and to operate our space systems. If we lose the ability to get to space, we put our capacity to operate in the space domain at serious risk. Because of the decision made to get military payloads off the space shuttle following the 1986 Challenger disaster and because we were then in the Cold War, a number of already developed space launch systems came quickly into great prominence.

\*\*\*AT: Add-ons

# AT: Space Debris

**1. No risk of an impact, space debris has been building up while orbiting the Earth for several decades, there impacts should have already occurred.**

**2. Squo solves – we have models for destroying space debris.**

Jon **Cartwright**, Scientific American staff writer, **3/15**

Scientific American, “Lasers Could Nudge Orbiting Space Debris Aside”, **3/15/11,** <http://www.scientificamerican.com/article.cfm?id=lasers-nudge-orbiting-space-debris-aside> [Marcus]

Scientists in the United States have devised a new way to avoid collisions among space debris, and possibly even reduce the amount of debris in orbit. The method uses a medium-powered, ground-based laser to nudge the debris off course -- but some are concerned that the laser could be used as a weapon. Debris orbiting Earth is a mounting problem. Two years ago, a satellite owned by the communications provider Iridium, based in McLean, Virginia, smashed into a defunct Russian satellite at ten times the speed of a rifle bullet, putting an end to the 'big sky' theory that assumed space was too vast for chance collisions. That incident alone created more than 1,700 pieces of debris, raising the total amount by nearly 20%. Space analysts are particularly concerned about the possible onset of Kessler syndrome, when enough debris is present to make collisions so likely there would be an avalanche effect that would leave the Earth's orbit uninhabitable for satellites. Sweeping up the mess Scientists at NASA have considered using a ground-based laser to mitigate debris collisions before. However, in their 'laser broom' concept, a powerful, megawatt-class laser would vaporize the surface of a piece of debris that is heading for another, causing the debris to recoil out of harm's way. But critics argued that the laser could be used as a weapon, as it could easily damage an enemy's active satellites. Indeed, both the United States and China have in the past 15 years been accused of testing the ability of ground-based lasers to 'dazzle' satellites and render them inoperable. Now, James Mason, a NASA contractor at the Universities Space Research Association in Moffett Field, California, and his colleagues have come up with a variation on the laser broom concept that they claim is unlikely to be useful as a weapon. In a paper uploaded to the arXiv preprint server, Mason and colleagues suggest using a medium-powered laser of 5-10 kilowatts to illuminate debris with light a few times more intense than sunlight, imparting just enough momentum to nudge the debris off course. "We think this scheme is potentially one of the least-threatening ways to solve a problem that has to be addressed," says Mason. In the researchers' proposal, a piece of debris that has a high risk of collision would be tracked by another laser and a telescope. As the debris comes over the horizon, technicians would switch on the main laser and illuminate the debris until it reaches its highest point. If the debris isn't nudged far enough to avoid a collision the first time, the technicians would repeat the procedure for several days until the collision risk becomes negligible. Risk reduction With just one laser facility, Mason's group says, the number of debris collisions could be almost halved. What's more, by mitigating the number of collisions, the amount of debris would lessen as it slowly burns up in Earth's atmosphere. And that would avoid the onset of Kessler syndrome, the researchers say.

**3. Turn - Space Weaponization creates more space debris**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**<http://www.amacad.org/publications/militarySpace.aspx>(Pitman)

Many scientists are concerned that once space debris reaches a “critical density” a process of collisional cascading—a chain reaction where collision fragments trigger further collisions—will start. As a result, the density of debris surrounding Earth would be too great to allow the stationing or penetration of any satellites. Some experts estimate that a critical density of space debris would be reached in LEO with only a few-fold increase over current levels.73 Some scientists estimate that the density may already be sufficiently great at 900–1000 km and 1500–1700 km to sustain a cascade of collisions.74 Thus, it is not implausible to suggest that fragmenting several satellites at LEO could lead to a chain reaction, which would result in the elimination of satellites and vehicles in LEO. This includes those used for space exploration, such as the Hubble Space Telescope (at about 600 km), the Space Shuttle, International Space Station, Earth-observing satellites, photo-reconnaissance satellites, and some navigation satellites. As Joel Primack points out, “Weaponization of space would make the debris problem much worse, and even one war in space could encase the entire planet in a shell of whizzing debris that would thereafter make space near the Earth highly hazardous for peaceful as well as military purposes.”75

**4. Weaponizing space Worsens space Debris**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

Weaponizing space would worsen the space debris problem. Under U.S. space plans, a larger number of space weapons could be deployed. A BMD system would include dozens or possibly hundreds of SBL weapons, and hundreds or thousands of SBI and sensor satellites; additional weapons for attacking satellites or Earth targets could be added to the total.Most of these systems would be stationed in LEO. The deployment of these weapons would increase the object population, and the launching and testing of these weapons would increase space debris.Moreover, the deployment of unlimited space-based weapons in the increasingly crowded LEO would limit orbit resource usage for civilian purposes.

# AT: Exploration

**1.More space missions and technology means more accidents-each collision makes the debris cloud larger**

Jeremy **Hsu**,SPACE.com Senior Writer, 12/23/2010 [“Space Junk Rivals Weapons as a Major Threat”, December 23, 2010, http://www.space.com/10537-space-junk-rivals-weapons-major-threat.html]

The possibility of a damaging collision between spacecraft and orbital junk only continues to grow with more functional and nonfunctional hardware flying above Earth. Both the International Space Station and space shuttle missions have been forced to dodge space debris in the past. More than 21,000 objects larger than 4 inches (10 centimeters) in diameter are being tracked by the Department of Defense's U.S. Space Surveillance Network. Estimates suggest there are more than 300,000 objects larger than 0.4 inches (1 cm), not including several million smaller pieces. "The shuttle was more likely to be wiped out by something you didn't see than something you were dodging," said Donald Kessler, a former NASA researcher and now an orbital debris and meteoroid consultant in Asheville, N.C. But the problem has become much worse since Kessler began studying the issue decades ago with Burton Cour-Palais, a fellow NASA researcher. Their 1978 research described how the debris cloud might continue expanding on its own because of an ever-higher probability of collisions that built upon each past collision.

**2.** **Space debris stops exploration- proliferation of debris and high velocity**

**Universe today** 7/21/20**09** [“Space Debris”, July 21st, 2009, http://www.universetoday.com/35190/space-debris/]

One of the emerging concerns in space exploration is space debris; the outer space equivalent of pollution on Earth. Over the past 40 years, abandoned or obsolete man made space objects have been left in orbit around the Earth. In general we don’t worry much about them because most will eventually fall out of their orbit and burn up in the Earth’s atmosphere. However, these objects can collide creating the scattered fragments we call space debris. The problem is further exacerbated by two facts. First, these objects are traveling at very high velocities around the earth. To put this in perspective, a bullet is deadly because it is an object traveling at high speeds; its momentum comes mainly from its high velocity. Now think of much smaller objects traveling at speeds 10 times faster than a bullet; there are thousands of them out there, and they can come from any direction at any time. This is the environment most space craft and astronauts operate under on a regular basis. The second problem is the proliferation of space debris. As space debris scatters, they collide with other objects to create even more debris and so on. This phenomenon is call the Kessler syndrome. While space debris might be a manageable threat now, it can seriously hinder space exploration in the future if not dealt with. The seriousness of the situation came with two recent events in space. The International Space Station had to alter its orbit to avoid a particularly dangerous patch of space debris. The damage, even to a station as well armored as this one, would have been in the millions and halted a lot of important research. The second event was the first collision of two satellites in February of 2009. What if this had happened to a major communications satellite? The damage would also have high cost and only further exacerbate the problem with more space debris.

\*\*\*Solvency

# 1nc Frontline

**1. Space Based Lasers Fail – 120 are needed to destroy 3 boosters and countermeasures solve**

**Deblois et. Al**. [ Bruce M. DeBlois director of systems analysis, Center for Transformation Systems, BAE Systems , Richard L. Garwin IBM Fellow Emeritus at the Thomas J. Watson Research Center, Professor-at-Large at Cornell University. , R. Scott Kemp Former science advisor for the US dept. of State Associate Research Scholar at Princeton , Jeremy C. Marwel, “Space Weapons crossing the US Rubicon” International Security, Vol. 29, No. 2 (Fall **2004**), pp. 50-84]

Space-based lasers have been proposed for boost-phase ballistic missile defense, potentially both a denied-access and time-sensitive threat. As intercept would occur at a high altitude, the laser beam would not need to penetrate the Earth's atmosphere or to correct for beam broadening from dynamically changing atmospheric condi- tions. But even given the greater relative susceptibility of booster missiles com- pared to warheads in their reentry vehicles, the laser system would face many of the obstacles discussed above, including the logistical challenges of launching, orbital storage, and refueling, as well as the launch cost of the needed tons of laser fuel. Boost-phase intercept via SBL was beyond the ten-year horizon of the APS Study Group, so we lack the detailed technical analysis analogous to that provided in their report for space-based interceptors. The 2002 RAND report mentioned earlier, however, provides insight into the requirements and capability of an SBL constellation.5" Here we examine the number of lasers necessary to defend the United States against a "rogue state" ICBM threat, in this case, four or five missiles launched simultaneously from North Korea. Under highly favorable assumptions, approximately twelve lasers at altitude 3,367 kilometers would be necessary to destroy a cluster of four missiles.6" Because the constellation would move rela- tive to a fixed point on Earth, its overall missile defense capability would at times be greater-about six targets. An adversary capable of building ballistic missiles, however, would surely take advantage of the predictable fluctuations of the constellation's capability, choosing the moment of launch to correspond with the lasers' minimum coverage. Figure 1 shows the RAND calculations of this case. Restricting the calculation to more readily achievable laser technology increases the number of required lasers and therefore overall system cost. For example, **a constellation of 120 lasers in 550-kilometer orbit, with 10-meter di- ameter optics, and 1-megawatt power output would be needed to destroy three boosters**."6 These results are for boost-phase intercept, on the assumption that the nuclear warheads once separated from their rocket boosters would be accompanied by decoys sufficiently numerous and effective to preclude attack by the SBL. It might be more productive to use a less-capable SBL constellation to support a ground-based midcourse missile-defense system by "popping balloon decoys," but that case is yet to be made in the face of feasible counter- measures. The problem with SBL for missile defense is not the ineffectiveness of an ultimate system, if it can be developed and judged worthy of deployment. ablative materials, dyed water that would absorb energy by boiling,62 or low-technology countermeasures such as smoke or fog generators. Naturally, while projected to be inexpensive, the costs of such countermeasures must be considered

**2. SBL fails – Tech cant be used for conventional purposes and the price tag is out of this world**

**Deblois et. Al**. [ Bruce M. DeBlois director of systems analysis, Center for Transformation Systems, BAE Systems , Richard L. Garwin IBM Fellow Emeritus at the Thomas J. Watson Research Center, Professor-at-Large at Cornell University. , R. Scott Kemp Former science advisor for the US dept. of State Associate Research Scholar at Princeton , Jeremy C. Marwel, “Space Weapons crossing the US Rubicon” International Security, Vol. 29, No. 2 (Fall **2004**), pp. 50-84]

Space-based Lasers. Another weapon proposed for fast response times is the space-based laser."3 A constellation of high-powered, orbiting lasers of the ap- propriate wavelength to penetrate the Earth's atmosphere could attack terres- trial targets over a range of some 3,000 kilometers. Propagating at the speed of light, the laser beam would reach its target almost instantaneously-in about 0.01 seconds. Space-based lasers, however, face significant operational barriers. Because the satellite would move with respect to a fixed point on Earth, continuously covering strategically important regions (in clear weather) would require a constellation of several dozen lasers. The lasers would be effective only against a narrow class of targets, such as combustibles, aircraft canopies, and thin- skinned storage tanks. Common military objectives such as bunkers, armored vehicles, and buildings would be basically immune to laser attack. Rudi- mentary shielding by smoke screens, ablative cork coatings, or even pools of water can provide a substantial and cheap defense for nearly any target. Fur thermore, space-based lasers could not attack targets under cloud cover-on average 30-40 percent of the Earth's surface and some 70 percent of the time in parts of Germany or North Korea. Space-based lasers would be enormously expensive. For a typical proposed laser system at an altitude of 3,000 kilometers, a target protected by 3 centime- ters of cork could withstand about twenty minutes of laser burn time before its surface would be exposed to laser heat.54 With the orbiting laser consuming fuel at a rate of some 9 kilograms per second, a single twenty-minute "shot" would use 11 tons of fuel. The cost of putting this fuel in orbit would be some $240 million per target." At a lower orbit for the lasers, say 1,000 kilometers, allowing a range of 1,500 kilometers, the necessary lasing time per target would drop to five minutes. Fuel costs would fall to $60 million per target, al- though a greater number of lasers would then be required to achieve the same terrestrial coverage. By comparison, a single Tomahawk cruise missile costs some $600,000, could attack heavily armored and nonflammable targets, would not be affected by clouds, and would be expended only when needed. Nearly the entire surface of the Earth, including North Korea, most of the Middle East, and more than half of China (including its principal industrialized regions), is reachable by Tomahawk Block III cruise missiles."5 Launched from outside the 12-nautical- mile territorial limit, cruise missiles would have a flight time of several hours. Although early selective strike will continue to be an important component of U.S. military capabilities, in light of such cost-equivalent comparisons of a few-dozen space-based, limited-use lasers and a virtual armada of multiuse cruise missiles, even enthusiasts admit that space-based lasers would be a spe- cialist, "leading-edge" tool for attacking a narrow class of targets. They would not replace conventional military means.57 The open question is whether marginally increasing the vulnerability of targets susceptible to laser attack (while factoring in the likelihood and low cost of effective countermeasures) is worth the time, effort, and political fallout associated with building a U.S. space- based laser constellation.

**3. Short ranged missiles render SBLs useless**

**Deblois et. Al**. [ Bruce M. DeBlois director of systems analysis, Center for Transformation Systems, BAE Systems , Richard L. Garwin IBM Fellow Emeritus at the Thomas J. Watson Research Center, Professor-at-Large at Cornell University. , R. Scott Kemp Former science advisor for the US dept. of State Associate Research Scholar at Princeton , Jeremy C. Marwel, “Space Weapons crossing the US Rubicon” International Security, Vol. 29, No. 2 (Fall **2004**), pp. 50-84]

In the first three roles for space weapons-protecting U.S. satellites, countering adversary capabilities in space, and force projection-we find little merit in comparison with more readily available terrestrial military tools and tactics. A different issue is that of defense of the United States against hostile ballistic missiles. If properly developed and widely deployed, U.S. space weapons in the form of constellations of dozens or hundreds of powerful orbiting lasers and thousands of orbiting kill vehicles would seem to have significant effec- tiveness against ICBMs armed with nuclear warheads launched against the continental United States (perhaps even including Alaska and Hawaii). We have summarized some examples of SBL constellations for destroying in boost phase a few ICBMs launched simultaneously from a small region such as North Korea (or a Russian missile field). We touched only generally on the pas- sive countermeasures that would make boost-phase intercept more difficult. These include light-weight improvements for increasing a missile's resistance to laser beams and rotating the missile during boost to limit temperature rise by spreading the heat over a belt on the booster. An adversary might also choose to deliver nuclear weapons by short-range missile from a ship 20 to 100 kilometers from U.S. shores, which would be much simpler than ICBM deliv- ery and could potentially draw on a large number of Scud missiles of 300- kilometer range. The report of the Commission to Assess the Ballistic Missile Threat to the United States (to be distinguished from the 2001 Space Commis- sion) states: "Sea launch of shorter range ballistic missiles is another possibil- ity. This could enable a country to pose a direct territorial threat to the U.S. sooner than it could by waiting to develop an ICBM for launch from its own territory."77 The short burn time and low burnout altitude of the Scud make it largely immune to SBL beams. In addition to these passive counters, we have stressed the vulnerability of the enormous and costly SBLs to destruction, especially by space mines.

**4. Adversary action and space debris destroy SBMD**

**Hitchens and Samson** Theresa is Vice President of the Center for Defense Information and Victoria is a research associate at the Center for Defense Information and was a Senior Policy Associate at the Coalition to Reduce Nuclear Dangers **’04** (Georgetown Journal of International Affairs, “Space-Based Interceptors: Still Not a Good Idea”, Summer/Fall 2004, <http://heinonline.org/HOL/Page?handle=hein.journals/geojaf5&div=29&g_sent=1&collection=journals>, Hopkins)

The mere act of weaponizing space will set in motion a series of moves by other countries that would threaten U.S. space assets. Despite the wide gap in capabilities and spending between the U.S. military and the rest of the world in space plans, the United States can be rendered vulnerable by relatively inexpensive, rudimentary tech nologies. If other countries genuinely believe that the United States intends them harm using space assets, these counteractions cannot be ruled out. Regular ballistic missiles could possibly be modified to provide anti-satellite capabilities. U.S. ground stations could be attacked, harming command and control to the point where space systems would be made worthless. A low-yield nuclear warhead placed on a ballistic missile could menace satellites in Low Earth Orbit. Or something as basic as gravel, unleashed at the right time against a satellite, might degrade U.S. space capabilities to a dangerous low.30 Along those lines, orbital debris from space weapons cannot be overlooked. The smallest chips can prove lethal at the astonishing high speeds in which objects orbit the Earth—some 10 km per second in Low-Earth Orbit.31 The destruction of satellites or space weapons would undoubtedly spawn scores of dangerous new objects that could collide with satel lites and spacecraft. Presently, the U.S. Air Force's Space Surveillance Network tracks some 13,000 on-orbit objects, only about 6 percent of which are working satellites and spacecraft, the rest being debris.32 While improving U.S. space situational awareness is currently a high priority for the Air Force, space weapons would only add to this already challenging space surveillance mission.33

# XT: Not Feasible

**Missile Defense will not work cost a ton and would crowed space**

**Union of concerned scientists (**The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world. UCS combines independent scientific research and citizen action to develop innovative, practical solutions and to secure responsible changes in government policy, corporate practices, and consumer choices.)**2011**(report/study) “space based missile defence” May 2011 http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf(Pitman)

A space-based boost-phase defense is intended to intercept attacking missiles during the first few minutes of their flight, while the missiles’ engines are still burning. To reach attacking missiles during this very short time, SBIs must be stationed in low-altitude orbits. However, in these orbits SBIs move rapidly with respect to the ground and cannot stay over any one location on Earth. To keep at least one interceptor within reach of a given missile launch site at all times therefore requires many SBIs in orbit. A 2003 American Physical Society study showed that many hundreds or thousands of SBIs would be required to provide limited coverage against ballistic missiles launched from areas of concern. This estimate is consistent with the size of the space layer in the Global Protection Against Limited Strikes (GPALS) missile defense system, which was proposed (but not built) by the George H.W. Bush administration in the early 1990s. GPALS called for 1,000 to 5,000 SBIs. Doubling the number of missiles that such a defense could engage would require doubling the size of the entire constellation of SBIs. Moreover, given the technology expected for the next decade, each SBI would weigh up to a ton or more. As a result, deploying such a system would be enormously expensive and actually would exceed U.S. launch capabilities. Additionally, such a system would raise significant issues for crowding and traffic management in space.

**Missile Defense is flawed it would require hundreds of interceptors and could not protect its self leavening wholes**

**Union of concerned scientists (**The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world. UCS combines independent scientific research and citizen action to develop innovative, practical solutions and to secure responsible changes in government policy, corporate practices, and consumer choices.)**2011**(report/study) “space based missile defence” May 2011 http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf(Pitman)

Yet even if such a large system were built and the technology worked perfectly, it would not provide a reliable defense, for two reasons. First, even if the constellation of hundreds to thousands of interceptors described above were in place, only one or two SBIs would be in position to reach any given launching missile in time to destroy it. Consequently, the defense could be overwhelmed by simultaneously launching multiple missiles from one location. Second, the system could not protect itself from attacks intended to remove interceptors. Because SBIs would be in low-altitude orbits they could easily be detected and tracked from the ground; an adversary would know their current and future locations. As a result, any SBI would be vulnerable to attack by inexpensive short- or medium-range missiles. These missiles would burn out at too low an altitude to be intercepted by the SBI, but they could loft homing ASAT weapons at it. By destroying relatively few SBIs in this way, an attacker could create a gap in the defense through which it subsequently could launch its long-range missiles. In short, a defense based on deploying hundreds or thousands of SBIs at enormous cost could be defeated by a handful of enemy missiles.

# XT: Would be destroyed

**New space military centers are likely to be attacked – empirics prove.**

Tom **Wilson**, United States Space Commission Staff Member, **01**

Global Security, “Threats to United States Space Capabilities”, 1/01, <http://www.globalsecurity.org/space/library/report/2001/nssmo/article05.pdf> [Marcus]

As history has shown—whether at Pearl Harbor, in the killing of 241 U.S. Marines in their barracks in Lebanon, or in the attack on the USS Cole in Yemen—if the U.S. offers an inviting target, it may well pay the price of attack. With the growing commercial and national security use of space, U.S. assets in space and on the ground, offer just such targets. Widely dispersed counterspace threat capabilities coupled with space situational awareness platforms threaten the U.S. ability to freely operate in space. We can no longer look at traditional adversaries as the only threat as there will likely be various space threats from several nations. History is replete with instances in which warning signs were ignored and change resisted until an external, “improbable” event forced resistant bureaucracies to take action. The question is whether the U.S. will be wise enough to act responsibly and soon enough to reduce U.S. space vulnerability. Or whether, as in the past, a disabling attack against the country and its people—a “Space Pearl Harbor”—will be the only event able to galvanize the nation and cause the U.S. Government to act.

**Space weapons are both vulnerable and predictable.**

David **Hardesty**, captain in the US Navy, **05**

Naval War College Review, “ SPACE-BASED WEAPONS – Long-Term Strategic Implications and Alternatives, 3/22/05, <http://goliath.ecnext.com/coms2/gi_0199-4424295/Space-based-weapons-long-term.html> [Marcus]

Space is frequently referred to as the “ultimate high ground. ”While few would dispute that space provides an excellent vantage point, “high ground” implies a great deal more, and in fact space is far from being the “ultimate high ground.” On earth, high ground has physical resources near at hand for shielding and hiding behind. In space, the “high ground” has nothing: it’s a vacuum and there is nothing there that you don’t bring with you. On earth, high ground is often a peak with a castle on it like the Krak des Chevaliers, a choke point, a symbol of power. In the “high ground” of space, you’re a thin-skinned sitting duck with a bull’s-eye painted on your side. Anybody has a chance to shoot at you whenever they feel like it. High ground on earth provides you with a view of everything below you, while the people down below can’t see you, because you’re up over the edge of the fortification. In space, everybody can see you and people on the ground can hide from you, so all those advantages are gone. On earth, from high ground you can strike anywhere around you while those below are limited in reaching you. In space, the attacks that you might make, the trajectories that your vehicles might follow, follow paths that are predictable in advance, predictable in both space and time. Ground attacks, meanwhile, on a point in space can be almost random; they are highly variable in time and space and are unpredictable. On earth, on the high ground, you have weapons that are more effective when you aim downward, but the “high ground” in space is the easier target, being unprotected. Attacking uphill involves difficulty and delay on the ground but in space, uphill and downhill attacks take about the same amount of time and your “high ground” is very much harder to resupply and rearm. Lastly, on earth, high ground allows a permanent control over some strategic road or territory, a choke point that interdicts all hostile traffic around it. In space, the so-called high ground is a shifting Maginot line that is easily avoided, outwaited and circumvented.7

**Countries have the technology to destroy space NMD.**

David **Hardesty**, captain in the US Navy, **05**

Naval War College Review, “ SPACE-BASED WEAPONS – Long-Term Strategic Implications and Alternatives, 3/22/05, <http://goliath.ecnext.com/coms2/gi_0199-4424295/Space-based-weapons-long-term.html> [Marcus]

The multiplicity of potential threats posed to U.S. space-based systems is highlighted in the Transformation Flight Plan itself. In addition to the space-based weapons already described that have space control missions, several terrestrial systems are also pertinent—such as the Ground Based Laser, which would “propagate laser beams through the atmosphere to Low-Earth Orbit satellites to provide robust defensive and offensive space control capability.”8 Opponents with mobile or hardened lasers could conduct speed-of-light attacks on space-based systems at times of their choosing. The Air-Launched Anti-Satellite Missile would “be a small air-launched missile capable of intercepting satellites in low earth orbit.”9 Launching antisatellite weapons from aircraft could increase the unpredictability of attack and provide additional kill mechanisms against our space-based systems. Opponents desiring to attack our space-based capabilities in the future would seem to have plenty of options.

\*\*\*Earth BMD vs Space NMD

# 1NC- SBLs Bad

**1. The Space-Based Laser are deadly – it just changes the target**

Geoffrey **Forden,**Analyst of Russian and Chinese space system at MIT and Strategic Weapons Analyst in the National Security Division of the Congressional Budget Office,**02**[Bulletin of the Atomic Scientists, Volume 58, No. 5, p. 48, “Laser defenses: What if they work?”, September 1, 2002, http://web.ebscohost.com/ehost/detail?sid=

427dec45-6a44-4317-8484-7f83fbdfe47e%40sessionmgr4&vid=1&hid=24&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=slh&AN=7306318, (Ghosh)]

The idea behind missile defenses has always been to save people from the disastrous consequences of nuclear attack. How ironic it is, then,thatsome of the defensive systems the United States is actively planning-- including the U.S. Air Force's Airborne- and Space-Based Laser systems--could well result in the deaths of many innocent people. In the case of a successful laser intercept, the difference would be that those who were killed would not be among those who had been targeted. The number killed would vary dramatically, depending on what country launched the missile and at what point in its powered flight the boost-phase defense struck. If a missile aimed at a major U.S. city were launched from a point in the Middle East, the destruction of the missile would cause an intact warhead(or warheads)to fall short of the target, landing and exploding somewhere in Europe or in Turkey instead.On the other hand, a warhead carried on a missile launched from North Korea, aimed at the same U.S. city, could very likely come down in an isolated area of the Pacific Ocean, resulting in far fewer immediate deaths.

**2. SBLs only create a hole within the missile causing a devastating explosion – Challenger proves**Geoffrey **Forden,** Analyst of Russian and Chinese space system at MIT and Strategic Weapons Analyst in the National Security Division of the Congressional Budget Office,**02**[Bulletin of the Atomic Scientists, Volume 58, No. 5, p. 48, “Laser defenses: What if they work?”, September 1, 2002, http://web.ebscohost.com/ehost/detail?sid=

427dec45-6a44-4317-8484-7f83fbdfe47e%40sessionmgr4&vid=1&hid=24&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=slh&AN=7306318, (Ghosh)]

The U.S. Air Force's Airborne Laser is currently the most fully developed boost-phase missiledefense systemthat could lead to warhead shortfalls, with a prototype entering final development.The Space-BasedLaser is a variantthat is being discussed as a next-generation system.

Both ofthese systems would be likely to cause substantial damage to third parties if U.S. missiledefenses caused warheads to simply fall short of their intended targets.That is because the lasers will not be powerful enough to attack the warhead, which will be thermally insulated for its reentry into Earth's atmosphere.Instead, a high-powered laser beam must be aimed at a section of the missile's fuel tanks, eventually heating them enough to cause a rupture in the missile's skin.

There are three ways a laser attack might cause liquid-fueled missiles--the design most likely to be fielded by a developing nuclear power-to fail.First, a missile may lose thrust when the pressure in the fuel tank drops, with a subsequent decrease in range. Second, changes in the ratio of fuel to oxidizer delivered to the engine might cause it to burn up from an excessively high combustion-- chamber temperature. And third, there could be a catastrophic structural failure caused by a sufficiently large hole. (This would be the most likely failure mode for more advanced solid-fueled missiles using composite skins like fiberglass.)In the latter case, the force of the missile's own acceleration acting along the length of the missile could cause the rocket to bend in two. However, most large, intercontinental-range liquid-fueled missiles do not rely solely on their outer skin to supply structural support. Instead,there is a system of internal support rings and struts that carry a significant portion of the load, making catastrophic failure much less likely.

We know that one thing will not happen: The missile will not explode. There have been enough accidents involving space-launch vehicles with holes in their sides, including the Challenger space shuttle tragedy,to know that rocket fuels do not explode in the upper atmosphere, even if they are subjected to enormous temperatures. This is true for both solid- and liquid-fueled missiles.

**3. Any chance of hitting a nuclear warhead with SBLs would cause a nuclear explosion results in the spread of radiation**Geoffrey **Forden,** Analyst of Russian and Chinese space system at MIT and Strategic Weapons Analyst in the National Security Division of the Congressional Budget Office,**02**[Bulletin of the Atomic Scientists, Volume 58, No. 5, p. 48, “Laser defenses: What if they work?”, September 1, 2002, http://web.ebscohost.com/ehost/detail?sid=

427dec45-6a44-4317-8484-7f83fbdfe47e%40sessionmgr4&vid=1&hid=24&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=slh&AN=7306318, (Ghosh)]

Chances are that a U.S. or Russian nuclear warhead would reenter the atmosphere but crash to the ground without detonating. Andalthough the crash would spread radioactivity over a small area, perhaps several hundred square meters, such an incident would in no way be comparable to the death and destruction that would accompany a nuclear explosion. Detonation would be avoided because both the United States and Russia reportedly use "environmental sensors" on their nuclear warheads. The warheads cannot detonate until after a certain set of measurable events have occurred: The warhead must experience a certain maximum acceleration or G-force corresponding to the expected powered flight of its missile, followed by an appropriate period of weightlessness as it coasts through space, followed by another period of high acceleration as it reen-- ters the atmosphere.

**4. It is much easier to hit down a space-based interceptor then incoming missiles**Joan **Johnson-Freese,** Professor of Space & Security at Harvard and National Security Affairs at Naval War College, **07** [Issues in Science and Technology, Volume 23, No.2, p.33, “The New U.S. Space Policy: A Turn Toward Militancy?”, January 1, 2007, http://www.issues.org/23.2/p\_johnson-freese.html (Ghosh)]

Hence, the real danger of the new space policy could well be the perpetuation of the false belief that space assets can be defended. In reality, it is impractical if not impossible from a technical perspective to defend space assets. They are easily seen objects traveling in known orbits and hence much easier to target than the incoming missiles that the United States seems convinced it can shoot down with missile defense.The only way to protect assets is to outlaw attacks and the technologies that enable attacks, and to try to implement a regime under which attacks can be verified. But the new policy specifically rejects new legal regimes or other restrictions that would inhibit U.S. access to space. Attacks on satellites should be strongly stigmatized, in the same way that the use of chemical or biological weapons is stigmatized, with assurances of severe retribution sanctioned by the international community

# 1NC Earth BMD Good

**1. Earth based NMD solves better- SBMD is expensive and ineffective**

**Deblois et al** Bruce M. is director of systems integration for BAE Systems, in Reston, Va. Richard L. Garwin (F) is IBM Fellow Emeritus at the Thomas J. Watson Research Center, (,R. Scott Kemp is a member of the research staff of the Program on Science and Global Security at Princeton University, in New Jersey. Jeremy C. Marwell is a Furman Scholar at the New York University School of Law.**’05** (IEEE Spectrum, “Star-Crossed: From Orbiting Lasers to Metal Rods that Strike form the Heavens, the Potnetial to Wage War from Space Raises Startling Possibilities- and Serious Problems, <http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1402717>, March 2005, Hopkins)

A reasonable response time, then, means having an overlapping constellation of many satellites. A satellite capable of destroying a target up to 3000 km away could cover a circular area of 28 million square kilometers, or about one-18th of Earth’s total area. In theory, 18 identical laser-weapon satellites would be needed to cover every location on Earth. Unfortunately, the circular coverage areas of the individual satellites would provide overkill at some points and no effectiveness at others. For example, in a 2002 Air Force-sponsored RAND report, “Space Weapons, Earth Wars,” Bob Preston and his coauthors describe how a constellation of twenty-four 5-MW hydrogenfluorine lasers with 10-meter-diameter mirrors would usually be able to destroy two to four ballistic missiles launched simultaneously from a small area, but if one missile was launched every 5 minutes or so, the constellation would be able to destroy just one. For lower-power lasers, the number of satellites escalates. For 1-MW beam power, 120 satellites could kill a launch of four missiles most of the time, but occasionally would be able to destroy only three. The main point is that many weapons (of any type) need to be orbiting to ensure that at least one weapon is within range to strike any possible target at any given time. An additional challenge for space-based lasers is their vulnerability to countermeasures. As we have noted, even the highest-power lasers do not penetrate clouds or smoke, and some wavelengths cannot penetrate Earth’s atmosphere, including those used by the HF laser currently proposed for space-based missile defense. For ground targets, smoke pots could disrupt an attack already in progress. Vulnerability is increased by the need to keep the laser on target for tens of seconds at least. The target could move in an unpredictable path or simply be covered with a reflective coating or paint, which could increase the time required for a successful kill by a factor of 10 or more. A layer of titanium oxide powder, for instance, could reflect 99.9 percent of the incident laser energy. Even a shallow pool of dyed water would offer serious protection for structures. Detonating a nuclear warhead in space would disable hundreds of satellites 46 IEEE Spectrum | March 2005 | NA Since a 20-MW laser boils water at a rate of 10 kg/s, a pool of water about 3 centimeters deep on the flat roof of a two-car garage would protect against 100 seconds of illumination by a space-based laser. This all adds up to abundant opportunity to thwart laser weapons. Meanwhile, the laser would be burning its supply of hydrogen and fluorine at a rate of 500 kg/s. Over the course of 100 seconds, it would consume 50 tons of fuel, for which the launch costs alone are about half a billion dollars. The issue of energy requirements warrants a closer look. Today, the most efficient high-power lasers typically consume 2 to 3 kg of chemical fuel per megawattsecond. So a pulse of 20 seconds from a 10-MW laser corresponds to about 400 to 600 kg of fuel per target in the absence of any countermeasures. At current launch costs of some $22 000/kg into low Earth orbit, each 20-second laser shot would cost approximately $11 million. For a constellation of 17 lasers, each loaded with a 12-shot capacity, the launch cost to maintain on-orbit fuel alone would exceed $2 billion. Weigh that against a stock of highly effective $6 smoke grenades, a stray cloud, or a 3-cm-deep pool of water, and this multibillion-dollar weapon system starts to look like a poor investment. If lasers are prohibitively expensive, might long tungsten rods used as high-speed penetrators be a relative bargain? Not really. To guarantee that a single target (located near the equator, to take the easiest case) could be attacked at will, and not only when a single orbiting rod happened to pass overhead, a distributed constellation of some 40 rods would be necessary, with launch costs totaling some $8 billion. The additional problems of targeting at supersonic speeds and coping with the intense heat of reentry demand extremely advanced, and therefore costly, technologies. Although one can steer the rod by shifting its center of mass, one would still need to obtain error signals to guide the penetrator to the target. Communicating with the penetrator is complicated by the fact that the surrounding air is heated into a radiopaque plasma, obstructing even the reception of GPS navigation signals. Although none of these problems is insoluble, they defy inexpensive solutions. For attacking hardened or deeply buried targets, the long rods would not outperform existing missiles equipped with conventional penetrating warheads. That’s because the physics of highvelocity impacts limits the penetration depth; basically, too much energy at impact causes the projectile to distribute its energy laterally rather than vertically. Tests done since the 1960s by Sandia National Laboratories, in Albuquerque, N.M., confirm that for even the hardest rod materials, maximum penetration is achieved at a velocity of about 1 to 1.5 km/s. Above that speed, the rod tip liquefies, and penetration depth becomes essentially independent of impact speed. Therefore, for maximum penetration, the long rods would need to be slowed to about 1 km/s, thereby delivering only one-ninth the destructive energy per gram of a conventional explosive—or about 1.5 percent of the potential energy the rod had in LEO. The wasted energy would be immense, and the effort, cost, and complexity of such an orbital system would be entirely out of proportion to the results. For soft targets on the surface, such as aircraft, ships, or even tanks, the United States already has many quicker, simpler alternatives to space-based kinetic energy systems such as long rods. Explosives delivered by long-range cruise missile, ICBM, or submarine-launched ballistic missile are all more attractive options. The space-based common aero vehicle also comes out a loser in comparison with weapons delivered by ICBM or shorter-range missile. Although the CAV may take only 45 minutes from launch to detonation, that would be preceded by as much as 12 hours for the target to come into range. Recall that an ICBM can get almost anywhere on Earth in 45 minutes. Of course, populating many orbits with CAVs would reduce the response time, but that would also run up the cost. Aircraft carriers, submarines, and even CAVs launched on demand by Earth-based missiles would all provide better performance than a space-based CAV

**2. SBMD expensive and useless because of countermeasures- there is no technical advantage over Earth-based NMD**

**Deblois et al** Bruce M. is director of systems integration for BAE Systems, in Reston, Va. Richard L. Garwin (F) is IBM Fellow Emeritus at the Thomas J. Watson Research Center, (,R. Scott Kemp is a member of the research staff of the Program on Science and Global Security at Princeton University, in New Jersey. Jeremy C. Marwell is a Furman Scholar at the New York University School of Law.**’05** (IEEE Spectrum, “Star-Crossed: From Orbiting Lasers to Metal Rods that Strike form the Heavens, the Potnetial to Wage War from Space Raises Startling Possibilities- and Serious Problems, <http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1402717>, March 2005, Hopkins)

MISSILE DEFENSE FROM SPACE The partial deployment of the U.S. ground-based missile defense system in recent months—and more specifically, its technical failures—naturally raises the question of basing a ballistic missile defense system in space. Would such a system work? A ballistic missile is most vulnerable during its boost phase, when it is not maneuvering and the stillburning rocket presents a strong infrared signature. The boost phase for a liquid-fuel intercontinental ballistic missile (ICBM) lasts some 250 seconds, while a solid-fuel ICBM may burn out in 170 seconds. The U.S. military has understandably shown a great deal of interest in boost-phase missile defense. A recent study by the American Physical Society, in College Park, Md., analyzed two types of space weapons that have been proposed for intercepting incoming missiles during the boost phase: spacebased interceptors (SBIs) that would propel a kinetic “kill vehicle” into a collision with the missile (much like the ground-based interceptors currently being deployed) and space-based lasers. As the study noted, the size of the constellation of SBIs or lasers that would be needed grows in proportion to the number of simultaneous launches that might occur. For example, if a missile-defense constellation can handle at most three simultaneous missiles from a small region, an adversary could surely defeat this defense by launching four. For use against missiles launched from, say, the small state of North Korea, boost-phase interceptors on nearby ships, or on Russian territory south of Vladivostok, would likely be considerably more capable, not to mention cheaper, than space-based interceptors. What’s more, these fragile battleships of space would need to be protected from preemptive attack; we describe in the main text how low-Earthorbit satellites are relatively easy to destroy. Another proposal for space-based missile defense involves intercepting ICBMs in the 20 minutes of their midcourse fall through space. Though this has been a mainstay of missile-defense advocates since the Star Wars days of the mid-1980s, it is not part of the current administration’s program for national missile defense. In large part, this is because midcourse SBIs have no technical advantage over ground-based interceptors and are more expensive. Although the purpose of this article is not to analyze in depth the prospects for intercepting ICBMs, it is worth mentioning that systems limited to destroying missiles in the vacuum of space (that is, midcourse systems) will be **useless** unless they can deal with the countermeasure of cheap and easily deployed balloon decoys.

**3. Sea-based NMD solves**

**Hicks** Admiral Alan B., USN, is Program Director and Commander, Aegis Ballistic Missile Defense **’08** (Joint Force Quarterly, “Seabased Ballistic Missile Defense”, Issue 50, 3rd quarter 2008, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA517942&Location=U2&doc=GetTRDoc.pdf>, Hopkins)

To fulfill the seabased portion of the initial missile defense capabilities, the MDA, working closely with the Naval Sea Systems Command and other Navy organizations, has brought the Aegis BMD 3.6 Weapon System into service. The Aegis BMD element of the BMDS consists of the Aegis BMD Weapon System armed with the Standard Missile–3 (SM–3) Block IA missiles. Aegis BMD 3.6 contributes two major warfighting capabilities to the BMDS. The first warfighting capability provides the engagement of short- to intermediate-range, unitary, and separating ballistic missiles in the midcourse phase of flight with the SM–3 Block IA missiles. This capability is integrated into a weapons system configuration that includes LRS&T. Aegis ships, manned with naval Sailors and officers, have recently completed a series of firing missions to validate the operational capabilities of Aegis BMD against a progressively more complex set of targets and scenarios, compiling a record of 12 successful intercepts in 14 attempts. The flexibility of this capability was demonstrated by the recent intercept of an errant U.S. satellite. The satellite was higher, faster, and larger than any previous target. Modifications were made to the Aegis BMD Weapon System and the SM–3 missile to accommodate these new target challenges. The USS Lake Erie detected the satellite in its orbit with the AN/SPY–1 radar. A fire control solution was calculated and a SM–3 missile was fired. The missile collided with the target, destroying it with lethal force and therefore rupturing the hydrazine tank. The intercept speed was calculated at approximately 22,000 miles per hour. The second capability is provided by LRS&T installations that can search, detect, and track ballistic missiles of all ranges, including intercontinental ballistic missiles, and transmit the track data to the BMDS via C2 BMC. This tracking data cues other BMDS sensors, as well as assisting in the fire control solution of the GMD system. At Sea, on Patrol The USS Curtis Wilbur, equipped with the LRS&T capability, made history when it began the Nation’s first BMD patrol, arriving on station September 30, 2004. 8 Forward deployed ships tracking ballistic missiles and transmitting track data to the BMDS extend the battlespace. Earlier detections enable earlier GMD fire control solutions, winning back critical reaction time. Earlier fire control solutions enable engagements at longer ranges and the opportunity to reengage. Due to their mobility, Aegis ships can quickly maneuver to different locations for surveillance operations. Undoubtedly, the Aegis BMD LRS&T capability significantly complements the initial BMDS and therefore devalues the military value of a long-range ballistic missile system. The Aegis BMD engagement capability supports forcible entry and protects forward deployed forces, population areas, debarkation ports, amphibious objective areas, expeditionary forces, and coastal airfields from the ballistic missile threat. Stationed close to a launch site, these Aegis ships increase the engagement battlespace with the ascent phase intercept capability. For homeland defense, the engagement capability would protect U.S. coastal cities against an off-shore ballistic missile launch. The MDA, Aegis BMD, and Navy are aggressively moving out to deploy this engagement capability against short- to intermediate-range, unitary, and separating ballistic missiles on more Aegis ships to add to the combatant commanders’ arsenal in times of crisis.

\*\*\*China DA

# 1nc Shell

**Chinas Nuclear Arsenal is small and not advanced**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

China’s strategic nuclear force is among the smallest forces of all declared nuclear powers and also the most outmoded in quality. China’s silo-based, single-warhead ICBMs (the DF-5A), of which there are approximately twenty, are liquid-fueled missiles with warheads and fuel stored separately from the missile. They require about two to four hours of preparation time before launch. China has one nuclear-armed submarine, which entered service in the late 1980s; however, the twelve submarine-launched ballistic missiles (SLBMs) it carries have a fairly short range (Julang I, with a range of about 1700 km). The submarine patrols close to the Chinese mainland and is infrequently at sea.81 China’s pursuit of nuclear modernization is understandable.

**Space NMD would provoke and threaten China.**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

Chinese analysts and policy makers are discussing whether and how to respond to U.S. missile defense and space weaponization plans. A few Chinese scholars argue that China should not respond at all because the U.S. missile defense program is not feasible and will likely be given up. However, conversations with Chinese experts and officials demonstrate that most Chinese believe that China must respond. Historically, China developed nuclear weapons for the sole purpose of guarding itself against the threat of nuclear blackmail. Many Chinese officials and scholars believe that China should maintain the effectiveness of its nuclear deterrent by every possible means, to negate the threats from missile defense and space weaponization plans.78 As one Chinese official 48 stated, “China is not in a position to conduct [an] arms race with [the] U.S. and it does not intend to do so, particularly in the field of missile defense. However, China will not sit idly by and watch its strategic interests being jeopardized without taking necessary measures. It is quite possible and natural for China to review its military doctrine and a series of policies on [its] relationship with big powers, Taiwan issues, arms control and nonproliferation, etc.”79

**That causes China to expand its military**  
John **Newhouse**, Senior Fellow at the Center for Defense Information, **01** [Foreign Affairs p.97, “The Missile Defense Debate”, August 2001, http://www.foreignaffairs.com/articles/57057/john-newhouse/the-missile-defense-debate (Ghosh)]

Deeply conscious of its vulnerability, China believes a system such as the one Clinton put forward would wholly neutralize China's small strategic force and could therefore threaten China's survival. And since China undoubtedly thinks of North Korean strategic weapons as nonexistent and conjectural, its leadership assumes that a U.S. missile defense along those lines would actually be directed against Chinese forces. China will almost certainly hedge against the prospect by expanding its strategic forces beyond the modest upgrade now underway. China could equip them with multiple warheads, a step that missile defense makes more attractive.

**Military build-up spreads, causes Asian instability.**  
John **Newhouse**, Senior Fellow at the Center for Defense Information, **01** [Foreign Affairs p.97, “The Missile Defense Debate”, August 2001, http://www.foreignaffairs.com/articles/57057/john-newhouse/the-missile-defense-debate (Ghosh)]  
  
A similar cycle could beget a nuclear arms buildup in South Asia. Washington tends to see Pakistan as India's major concern, even though China, which has been the main supplier of Pakistan's nuclear technology, is the abiding source of Indian insecurity. Indeed, India can deploy a more than ample retaliatory capacity against Pakistan but has almost no such ability to strike the Chinese heartland. And if China's upgrade enlarges its threat to India, as it probably will, India will expand its forces accordingly. Pakistan will follow suit. The world will indeed have become a more dangerous place. Missile defense can produce this scenario.

**Asian instability goes nuclear**

**Dibb, 2001**, Prof – Australian National University, 2001 (Paul, Strategic Trends: Asia at a Crossroads, Naval War College Review, Winter, <http://www.nwc.navy.mil/press/Review/2001/Winter/art2-w01.htm>)

The areas of **maximum danger and instability** in the world today are in Asia, followed by the Middle East and parts of the former Soviet Union. The strategic situation in Asia is **more uncertain and** potentially **threatening** than anywhere in Europe. Unlike in Europe, it is possible to envisage **war in Asia involving the major powers**: remnants of Cold War ideological confrontation still exist across the Taiwan Straits and on the Korean Peninsula; India and Pakistan have **nuclear** **weapons** and ballistic missiles, and these two countries are more confrontational than at any time since the early 1970s; in Southeast Asia, Indonesia—which is the world’s fourth-largest country—faces a highly uncertain future that could lead to its breakup. The Asia-Pacific region spends more on defense (about $150 billion a year) than any other part of the world except the United States and Nato Europe. China and Japan are amongst the top four or five global military spenders. Asia also has more nuclear powers than any other region of the world. Asia’s security is at a crossroads: the region could go in the direction of peace and cooperation, or it could slide into confrontation and **military** **conflict**. There are positive tendencies, including the resurgence of economic growth and the spread of democracy, which would encourage an optimistic view. But there are a number of negative tendencies that must be of serious concern. There are deep-seated historical, territorial, ideological, and religious differences in Asia. Also, the region has no history of successful multilateral security cooperation or arms control. Such multilateral institutions as the Association of Southeast Asian Nations and the ASEAN Regional Forum have shown themselves to be ineffective when confronted with major crises.

# 2nc link extensions

**Obama’s anti-BMD and space weaponization policies make China comfortable in their strategic deterrence abilities- space based NMD would kill relations**

**Zhang** Baohui is an associate professor of political science in the Chinese University Lignan **’11** (International Affairs, “US missile defence and China's nuclear posture: changing dynamics of an offence–defence arms race”, May 2011, Hopkins)

Although the analysis presented above indicates a rising potential for strategic competition, recent developments have presented opportunities to change the future course of the Sino-US nuclear relationship. Important new policies of the Obama administration have significantly reduced Chinese concerns about missile defence, with positive prospects for avoidance of strategic rivalry between the two countries. Specifically, the Obama administration has pursued new positions on US space policy, missile defence and nuclear deterrence. These changes could have a profound impact on the emerging nuclear relationship between China and the United States. First of all, the Obama government has significantly modified the space policy of the Bush administration, which steadfastly opposed any international agreements to ban weapons in space. The Obama administration officially opposes the deployment of weapons in space and is willing to take the leadership role in constructing a multilateral framework to prevent the weaponization of space.38 This important strategic adjustment has already relaxed Chinese concerns about space-based missile defence. For example, a recent PLA analysis made a very positive assessment of Obama’s new space policy. As the analysis points out, ‘Obama’s willingness to reach an international treaty banning space-based weapons and to establish a global cooperative mechanism will have positive impacts on the world’s efforts for space arms control and prevention of an arms race.’ 39 Second, the Obama government has shown an unprecedented willingness to restrain US missile defence. To improve relations with other Great Powers, notably China and Russia, the administration has reduced the budget for missile defence and cancelled new weapon systems. For the 2010 budget year the Obama administration sought a funding cut of about $1.2 billion from the 2009 level. 40 Moreover, his government has cancelled new weapons systems, including Northrop’s KEI and Lockheed Martin’s Multiple Kill Vehicle (MKV) programmes. The KEI system sought to achieve boost-phase interception of ballistic missiles in a multilayered missile defence system. The system requires forward deployment to achieve boost-phase interception, which could pose a close-range threat to China and Russia. Thus its cancellation has removed a potentially controversial issue between the United States and these countries. The cancellation of the MKV programme had even more significant implications for China’s nuclear deterrence. To counter threats from missiles equipped with multiple warheads or decoys, the US Missile Defense Agency (MDA) has been developing the MKV, which can intercept multiple warheads with a single launch. The system carries multiple submunitions to achieve this goal. 41 As one analysis points out, the MKV concept could be ‘a real game changer for MDA’ by restoring ‘numerical parity’ between the number of potential targets per hostile launch and the number of interceptors needed to destroy them. 42 The Chinese military has attributed the cancellation of the MKV programme to Obama’s efforts to relax tensions with itself and Russia. For example, one PLA analysis argues that the administration’s decision can be understood only in the larger context of US strategic adjustment and as ‘a compromise in its long-term strategic goals’. 43 The Obama administration’s Ballistic Missile Defense Review, which was released in February 2010, certainly indicated an intention on the part of the United States to limit its missile defence in the strategic context of Great Power relations. The report specifically pointed out the need to placate China’s concerns about US missile defence: ‘China is one of the countries most vocal about US ballistic missile defenses and their strategic implications, and its leaders have expressed concern that such defenses might negate China’s strategic deterrent.’ 44 The report accordingly tries to assure China that its strategic nuclear deterrent will not be compromised by US missile defence, confirming that US ‘homeland missile defense capabilities are focused on regional actors such as Iran and North Korea’ and that the US ground-based mid-course defence system ‘does not have the capacity to cope with large scale Russian or Chinese missile attacks and is not intended to affect the strategic balance with those countries’. 45 Third, Obama’s ideal of a nuclear-weapons-free world has also moderated worries about what the Chinese perceived as the US pursuit of nuclear hegemony, which was reflected in their interpretation of the Bush administration’s Nuclear Posture Review. Because its achievement would necessarily require the elimination of offensive nuclear weapons, the espousal of this ideal has lessened Chinese apprehensions about US nuclear power. As Major-General Peng Guangqian, a leading PLA strategist, observed, ‘Obama’s idea of a nuclear-free world, compared to the Bush government’s nuclear policy, represents very big changes.’ 46 More importantly, after the Obama administration released its 2010 Nuclear Posture Review the Chinese military gave a positive assessment of new directions in US nuclear deterrence. This report indicates that, for the first time, the United States is willing to accept mutual deterrence with China. According to the report, ‘maintaining strategic stability in the US–China relationship is as important to this Administration as maintaining strategic stability with other major powers’. 47 Michael Chase, a scholar at the US Naval War College, observed that the Review ‘appears to resolve a fundamental debate regarding the US–China strategic relationship—whether to base it on recognition of the reality of mutual deterrence or a potentially destabilizing quest for strategic dominance.’ 48 This assessment is shared by Chinese nuclear experts. According to PLA nuclear strategist Zhang Tuosheng, US acceptance of mutual deterrence with China represents the most significant development in US nuclear policy. As Zhang emphasizes, this new position by the Obama government ‘represents a recognition and acceptance of China’s nuclear power. It reflects the reality of China’s elevated nuclear status.’ He argues that US acceptance of mutual deterrence ‘means that the probability of a Sino-US nuclear conflict has been reduced, while the probability of the two sides resolving differences through dialogues has increased’. 49 Prospects for arms control It is clear from the discussion above that major policy changes by the Obama administration have improved the possibility of China and the United States reaching a strategic understanding on nuclear issues. For the first time since the 1990s the Chinese security community’s concerns about US missile defence, and Chinese nuclear experts’ anxieties about US pursuit of nuclear dominance, have been reduced. Thus the strategic restraint adopted by the Obama government has created a starting point for achieving a Sino-US strategic nuclear understanding. The Obama administration’s Nuclear Posture Review called for ‘high-level, bilateral dialogues on strategic stability with both Russia and China’, 50 and the United States has already taken concrete measures to promote nuclear dialogue with China. For example, in June 2008 the two countries conducted both official and track-two security dialogues centred on nuclear deterrence and missile defence. For the former, John Rood, then US Assistant Under Secretary of State for Arms Control and International Security, exchanged views with his Chinese counterparts on nuclear issues and missile defence. 51 For the latter, Dennis Blair, former commander-in-chief of the US Pacific Command, led a delegation of American nuclear experts attending the third ‘China–US strategic nuclear relationship and strategic mutual trust’ seminar, co-sponsored by several US think-tanks and the China Foundation for International Strategic Studies. 52 Now, amid China’s nuclear modernization and expansion, there are calls for the two countries to upgrade the level of dialogue on strategic arms control. In an interview with the Chinese media, David Shambaugh suggested that the strategic dialogue mechanism currently employed by the Obama administration to engage China should incorporate the issue of strategic arms control. 53 This is also the view of Defense Secretary Robert M. Gates, who called for the two countries to engage in strategic nuclear dialogues ‘so as to avoid any miscalculations or misunderstanding down the road’. As he remarked, I am not sure those talks actually reduced any arms, but the dialogue over a long period of time with great candor about nuclear capabilities, thinking about nuclear options, thinking about how each side looked at nuclear weapons and at their military modernization, I think played a significant role over time in preventing miscalculations and mistakes in the relationship between these superpowers during the Cold War. I think that kind of a dialogue with China would be most productive and frankly in the best interests of global security. 54 This call by Gates is very timely with a view to preventing a strategic offence– defence arms race between China and the United States. A strategic nuclear understanding is vital for achieving this goal. Such an understanding must be based on US restraint in missile defence and Chinese restraint in nuclear modernization. This principle would inevitably require the United States not only to accept nuclear mutual deterrence as the foundation of its strategic relationship with China, but to communicate this acceptance unambiguously to China. The Obama administration’s Nuclear Posture Review indicates for the first time that the United States is prepared to tolerate a stable nuclear relationship with China. While Chinese security experts have taken notice of this ‘positive’ development, the United States must do more to assure China that it does not seek unilateral dominance. This strategic assurance will go a long way towards convincing China that it can afford to stop its current round of nuclear modernization once four to six next-generation strategic submarines are deployed. Moreover, the United States needs to pursue specific measures to provide strategic assurance to China. For instance, it must refrain from resuming the development of missile defence technologies, such as the cancelled MKV programme, that are capable of intercepting multiple warheads. Further, the United States needs to forsake space-based missile defence altogether. Given the opposition of the Obama administration to weaponization of outer space, this goal should not prove too difficult to achieve.

**SBMD makes China angry**

**Van Ness** Peter, PhD (Berkley), lectures on security and peace building in the Department of International Relations in the College of Asia and the Pacific at the ANU. Previously faculty at the Graduate School of International Studies, University of Denver **’10** (ASIAN PERSPECTIVE, “ THE TIME HAS COME FOR A TREATY TO BAN WEAPONS IN SPACE” Vol. 34, No. 3, 2010, pp. 215-225)

First and foremost in designing an agreement is the need to ban space-based weapons before any are deployed. Both China and Russia are adamantly opposed to these weapons, and Chinese analysts make a strong case that a U.S. space-based, boost-phase missile defense system would indeed threaten the PRC’s basic nuclear deterrent.12 Space-based weapons, if they are ever devel-oped, would be hugely expensive, difficult to deploy, and vulnera-ble to attack by China’s and Russia’s existing ASAT capabilities. What China seems to be saying to the United States, by its actions more than its words, is: If you go to the expense of devel-oping and deploying space-based weapons, we will be able to defend against them with our current ASAT, missile defense, and cyber war capabilities. If it should come to a military conflict between us, we could destroy those weapons in space or con-found their command and control by means of cyber attacks. As a result, the United States would be engaged in a one-sided arms race in space, trying to gain dominance by means of space-based weapons, while ignoring the fact that the weapons are vulnerable to asymmetrical attack. Protection of satellites is a more difficult problem. One fact that should help in their defense is that all countries are increas-ingly dependent upon the communication, surveillance, and geo-positioning functions of earth satellites, so they all have a huge stake in their defense. Secondly, attacks on satellites are likely to produce debris (as the Chinese ASAT test of January2007 did), which endangers the proper operation of everyone’s satellites. A major attack on several satellites could have a disas-trous impact on global military and commercial communica-tions. So there exists a contradictory situation in which the Unit-ed States, China, and Russia all have the capability to attack and destroy each other’s satellites, but if they did attack, they would very likely destroy as well their own use of satellites in space. In that sense, an attack would be suicidal. One answer with regard to the protection of satellites might be to use the lesson of the Limited Nuclear Test Ban Treaty of1963. After the Cuban missile crisis of 1962, both the United States and the USSR realized that they had weapons that could not be used, and they agreed with each other to begin to limit their use. They maintained the capacity to use them, but realized that any use would be counterproductive. If the United States and China began to think about their ASAT capabilities in these terms, it seems to me that agreement could be reached to limit the testing, deployment, and use of ASAT weapons.

**China Threatened By US Missile Defense**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**<http://www.amacad.org/publications/militarySpace.aspx>(Pitman)

Within China, it is widely believed that U.S. missile defense and space planning targets China.Many Chinese are skeptical of U.S. statements that the purpose of missile defense is to protect against “rogue” states. Even if North Korea successfully deployed a small number of nuclear-tipped ICBMs— a principal U.S. concern—it is highly unlikely that it would use them.What leader would risk national suicide by launching a nuclear attack on the United States? From China’s perspective, it seems untenable that the United States would expend massive resources on a system that has only “rogue” states in mind.45 Some missile defense advocates in the United States have not minced their words about the utility of the system for addressing Chinese capabilities. For example, Peter Brookes, advisor on East Asian affairs to the international relations committee of the U.S. Congress, said that the major motive that drives the United States to develop and deploy missile defense systems is China’s missile capability.46 Recently, Lieutenant General Henry A. Obering III of the U.S. Air Force, director of the MDA, expressed clearly that the United States is expanding its preliminary missile defense system to address potential threats from China and others. He told defense reporters, “What…we have to do is, in our development program, be able to address the Chinese capabilities, because that’s prudent.”47 Chinese government officials are more inclined to believe these comments than stated U.S. purposes. As Ambassador Sha Zukang said, “Though the U.S. government has publicly denied that China is a major target of its NMD program, the history of missile defense programs and the acknowledged design capabilities of NMD show that the proposed system can be directed against China and can seriously affect China’s limited nuclear capability.”48

# 2nc internal link extensions

**China will weaponize space if US pursues space weapons**

**Zhang** Hui is leading a research initiative on China’s nuclear policies for Harvard and is a physicist and a specialist in nuclear arms control and Chinese nuclear policy issues **’10** (The Washington Quarterly, “China’s Nuclear Strategy”, April 2010, Hopkins)

Most likely, Beijing’s ratification of the CTBT will follow Washington’s ratification, which Obama had stated would be a priority. If Washington fails to ratify the treaty again for whatever reason, Beijing may continue to wait. Even worse, if the United States intends to resume nuclear tests and its missile defense and space weaponization plans move forward and threaten the Chinese deterrence capability even more, it could make Chinese ratification more difficult. Under those circumstances, China may feel the need to conduct additional nuclear tests and develop new warheads that include decoys or maneuverable warheads to counter any developments in U.S. missile defense capability. Participate in the FMCT Negotiations Beijing’s recent position on an FMCT is that such a treaty would be ‘‘conducive to preventing nuclear weapons proliferation and promoting nuclear disarmament.’’ China has advocated negotiations to ‘‘conclude at an early date a multilateral, non-discriminatory and internationally and effectively verifiable FMCT, based on a comprehensive and balanced program of work acceptable to all.’’ 39 China is believed to have stopped its production of highly enriched uranium (HEU) in 1987 and production of plutonium for weapons purposes around 1991. Beijing supports four key interim steps by the nuclear weapons states. Hui Zhang Due to its concerns about U.S. missile defense and space weapons plans, however, China had stated its willingness to simultaneously discuss an FMCT and the prevention of an arms race in outer space (PAROS). In 2003, China dropped its insistence on a formal linkage between an FMCT and the PAROS negotiations and agreed to a negotiation of an FMCT alone. The United States, however, proposed an FMCT without verification in 2004, essentially blocking the restarting of negotiations yet again, although Obama declared in Prague that ‘‘the United States will seek a new treaty that verifiably ends the production of fissile materials intended for use in state nuclear weapons.’’ 40 Although China’s recent position on an FMCT is to support the negotiations, the reference to ‘‘a comprehensive and balanced program of work acceptable to all’’ could mean a consideration of space weapons issues. In practice, if Beijing remains concerned about U.S. missile defense, one optional countermeasure for China is to build more ICBMs (even though its current stockpile is sufficient), which would mean a need for more plutonium and HEU to fuel those weapons, ultimately hurting China’s support of an FMCT. China may go so far as to be unwilling to negotiate or join an FMCT under those circumstances. 41 In other words, U.S. missile defense and space weapons plans will affect China’s willingness to participate in an FMCT negotiation. Key Challenges Beijing has paid close attention to the missile defense issue. Chinese officials have expressed a growing concern that U.S. space and missile defense plans will stimulate a costly and destabilizing arms race. 42 In its 2008 white paper, Beijing maintains that ‘‘the global missile defense program will be detrimental to strategic balance and stability, undermine international and regional security, and have a negative impact on the process of nuclear disarmament.’’ 43 Responding to continued U.S. missile defense cooperation with Taiwan and Japan, China further contended that: . . . the establishment of a global missile-defense system, including the deployment of the system in some parts of the world and related cooperation . . . is neither conducive to global arms control and non-proliferation efforts nor favorable to mutual trust among states and regional stability. We hope that parties concerned could seriously consider other countries’ position and concern, so as to address this issue properly. 44 Some Chinese officials are concerned that even a limited missile defense system could neutralize China’s fewer and smaller nuclear forces. ‘‘It is evident that the U.S. [national missile defense system] will seriously undermine the effectiveness of China’s limited nuclear capability from the first day of its deployment,’’ said Sha Zukang, while he served as the Chinese disarmament China’s Perspective on a Nuclear/-Free Worldambassador to the UN and a former director general of the Department of Arms Control and Disarmament at the Ministry of Foreign Affairs. ‘‘This cannot but cause grave concerns to China,’’ he said. 45 Many Chinese officials assume that China is the real target for U.S. missile defense and space planning. From Beijing’s perspective, it is inconceivable that Washington would expend such massive resources on a system that would be purely defensive and aimed only at ‘‘rogue’’ states. Although the Obama administration had changed the Eastern European elements of the missile defense program, thus temporarily relaxing Russian concerns and encouraging Moscow’s willingness to negotiate a START followup, the United States still plans to develop its missile defense systems, which could impede further reduction of U.S. and Russian arsenals. Even worse, the changes in the Eastern European elements do nothing to relax China’s concerns about U.S. domestic ground-based midcourse defense systems based in California and Alaska, which U.S. officials claim are mainly there to target rogue missiles, but are assumed in Beijing to indirectly target China. Eventually, as a countermeasure to U.S. missile defense, China would likely be forced to build more warheads to maintain its nuclear deterrent, which could encourage India and then Pakistan to follow suit. China also continues to oppose any space weapons plans. 46 As Beijing stated in August 2009: Under current circumstances, especially amid the advancement of outer space technologies and rapid change of international security situations, the risk of weaponization of outer space is increasing. This is against the interests of all countries . . . . China always stands against the weaponization of or an arms race in outer space. China is of the view that to negotiate and conclude an international legally-binding instrument is the best option to prevent the weaponization of and an arms race in outer space. 47 Beijing maintains that the deployment of space weapons ‘‘will disrupt strategic balance and stability, undermine international and national security and do harm to the existing arms control instruments, in particular those related to nuclear weapons and missiles, thus triggering new arms races.’’ 48 Also, China worries that the combination of future U.S. space weapons and its missile defense system could neutralize its limited nuclear deterrence and thus subject China to political or strategic blackmail. In addition, such systems would give the United States much more freedom to intervene in China’s efforts at reunification with Taiwan. This concern is enhanced by U.S. moves in recent years to boost cooperation in research and development of missile defense in East Asia. Beijing maintains that space weaponization would seriously disrupt the arms control and disarmament process. The inherent offensive and first-strike capabilities offered by space weapons would likely provoke destabilizing military and political responses from other countries. As Hu Xiaodi, then the Chinese disarmament ambassador to the UN Office in Geneva, 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, [and] hence be detrimental to the fundamental interests of all states. 49 Beijing, therefore, has urged the Conference on Disarmament to ‘‘negotiate and conclude relevant international legal instrument(s) as soon as possible so as to prevent the weaponization of and an arms race in outer space, and to promote the nuclear disarmament process.’’ 50 In the past, Washington denied an arms race in outer space and was against negotiating a PAROS treaty. On January 11, 2007, a Chinese weather satellite (the FY-1C polar orbit satellite of the Fengyun series, at an altitude of 537 miles) was destroyed by a kinetic kill vehicle that was launched with a multistage solid-fuel missile from China. Beijing perhaps hoped to use this antisatellite test to push Washington to seriously consider the risks of a space weapons race and to start a PAROS treaty negotiation. Eventually, if the diplomatic effort fails, the test could be used as a hedge and mark the beginning of China’s own space weapons program.

**US space weaponization will cause China Arms Build up**

**Blazejewski,** “private practice in New York City, focusing primarily on international corporate and financial transactions. He received his master’s degree in public affairs from the Woodrow Wilson School at Princeton University and his JD degree from the New York University School of Law.”, **8** [Kenneth S. Blazejewski, Strategic Studies Quarterly, Spring 2008; http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf; Pitman]

To determine the optimal policy, the United States must decide which of these three potential justifications for space weaponization provides benefits in excess of costs. In making this determination, the United States should consider not only the immediate consequences of its actions but also the way in which its behavior will influence Chinese interests and shape Chinese policies. It must eschew myopic policy recommendations and consider the long-term reactions and realignments that US policy is likely to incite. We do little service to the long-term security of the United States by considering our defensive and offensive space options in the context of simplified hypotheticals presented by some advocates of space weaponization. Would we hesitate to use space-based defensive weapons to intercept an incoming ballistic missile armed with a nuclear payload? The answer is as obvious as it is unhelpful. The more difficult question is, what risks do we run in deploying such a space-based interceptor in the first place? How would such a deployment affect the larger strategic context in which the United States operates? In considering these questions, the United States must be wary of policies that provide short-term military advantages at the cost of long-term national security. In light of the uncertainty surrounding Chinese policy on space weaponization, I would recommend that the United States focus on what I consider the two core observations of Chinese space weapons policy. One, China will likely react to space weaponization with its own military buildup. Two, China may ultimately plan to pursue an aggressive space weaponization or ASAT program. Against this background, I offer some recommendations for US policy.

# Disad turns China/Russia

**1. NMD advancement only Nuclearizes China and Russia further – leads to provocations**

**Mutimer** David, in **2001** [Assistant professor of political science at York university, and former Director of the York Centre for international and security studies, “Good Grief! The Politics of Debating NMD: A Reply to Frank Harvey” “The International Journal” in Spring 2001 <http://www.jstor.org/stable/40203560>]

Both Russia and China have expressed grave reservations about the United States NMD programme and have threatened responses that include building up their nuclear arsenals if the United States proceeds. Their reasoning is fairly easy to reconstruct. The United States is proposing a defence system 'to protect the United States against a Attack by long range ballistic missiles.'7 If a country wants to ensure that its forces are not threatened by that defence system, it must have the capacity to launch something more than a 'limited' attack. For Russia or China that means building more missiles or using MIRV technology to put more warheads on those they already have. It is important to recognize that the logic of the response holds true even if the tech- nology of NMD is uncertain. The most difficult technical task con- fronting NMD is one of information - acquiring, identifying, distin- guishing, and tracking targets. The easiest way to put stress on an infor- mation processing system is to overload it with information, in this case put up more missiles with more warheads and more countermeasures. Put another way, unless the technology of NMD is, and is known with cer- tainty to be, absolutely useless, there is no contradiction between the arguments that the technology is questionable and that the Russians and Chinese are likely to build more weapons in response to its deployment and Russians will likely build in response to NMD is threefold. First, he argues that such a 'causal chain ... ignores evidence compiled over years of research on why states proliferate' (p 550). The problem with his argument is that the evidence Harvey cites concerns the decision of states to build nuclear weapons when they have none, not a decision to increase or decrease arsenal sizes and to determine the nature and mix of those arsenals. In other words, the argument is one of vertical pro- liferation, and Harvey's evidence is of horizontal proliferation. His second argument is that the Russians and Chinese have nothing to fear: 'What credible scenario would take us to the brink of a con- temporary crisis in which American officials would contemplate (for a second) a pre-emptive strike - even assuming the United States has developed and perfected a shield capable of defending against every single missile, decoy, and countermeasure Russia and China would launch in retaliation?' (p 553).8 While Harvey may even be right that the United States would never act this way, I am not certain that I would be willing to trust the American governments word if I were a decision-maker in Moscow with a memory of forty years of cold war, or in Beijing with a memory of a United States so implacably hostile it refused for more than twenty years to recognize my regime. What is more, given the state of the political culture in the United States and the possibility of a change in government at least every four years, how could one expect that kind of trust from the Russians and the Chinese? Even now, the United States is a country in which Jesse Helms has con- siderable influence on foreign policy! For his third argument, Harvey makes a remarkable claim. He sug- gests that those who foresee that Russia and China will build weapons in response to NMD deny their own earlier argument that huge super- power arsenals were overkill9 because 'who would be foolish enough to risk provoking even one retaliatory missile?' (p 553) The answer, of course, is quite simple: someone hiding behind a shield they believe capable of stopping that retaliatory missile!

# AT: Ground BMD should have triggered

**China would View Space-Based Missile Defense as more Threatening than Ground-Based**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

From a Chinese perspective, a non-space-based BMD system would be less threatening to national security than a space-based missile defense system. As discussed above, countermeasures for mid-course missile defense systems would be less expensive and easier for China to develop. However, a space-based, boost-phase missile defense system would pose more threat than a non-space-based BMD system, because a boost-phase missile defense would have fewer targets, the target ICBM would be much larger and more fragile than the normal re-entry vehicle, and the target would be easily detectable due to the bright plumes of the burning booster. Moreover, a non-space-based, boost-phase missile defense system would not be able to cover ICBMs launched from China's interior. In fact, an ICBM at an altitude of 200 km is only detected within 1600 km by a sensor on the ground, and within 2000 km by a sensor at an altitude of 15 km. Because of the vastness of China's land holdings, the United States would have to destroy a Chinese missile in boost phase from space. As such, even a limited ban on space weapons would sig- nificantly reduce the threat to China posed by U.S. missile defense systems, assuming that Chinese military planners have confidence in countermeasures for midcourse missile defense systems.

**Missile Defense Causes China to Build More Nukes**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

One optimal countermeasure for China is to build more ICBMs.80 Although some supporters of U.S. missile defense claim that China’s nuclear modernization will go forward whether or not the system is deployed, many Chinese analysts believe that U.S. missile defense efforts will encourage an acceleration of China’s nuclear modernization and influence its force both quantitatively and qualitatively.

\*\*\*Arms Race DA

# 1nc Shell

**Other countries are wary of US actions in space and ready to react.**

**Union of concerned scientists (**The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world. UCS combines independent scientific research and citizen action to develop innovative, practical solutions and to secure responsible changes in government policy, corporate practices, and consumer choices.)**2011**(report/study) “space based missile defence” May 2011 <http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf(Pitman)>

In past years, the Missile Defense Agency has requested funding for the Space Testbed program, to develop a space-based interceptor; to develop the command, control, battle management and communications structures for space-based missile defense; and to launch interceptors into orbit and test them against ballistic missiles. Although this program has been described as only research and development, Congress should not support such a program. As discussed above, space-based interceptors would not provide a credible defense against ballistic missiles, yet the technology being developed would be useful for offensive attacks on satellites. Placing even a few prototype interceptors in orbit would be seen as providing an anti-satellite (ASAT) capability. A decision to fund this program could send a message to other countries that the United States is developing a space-based ASAT capability. This apparent pursuit of space control technologies may encourage similar development by other countries, which would reduce U.S. security. Funding a Space Testbed is not an acceptable compromise between banning and deploying a space-based missile defense. Moreover, by putting dedicated space-based weapons in orbit for the first time, a program like the Testbed— under the guise of research and development—would effectively preempt broader Congressional decisionmaking about space weapons. Congress has not had a thorough debate of the wisdom of deploying spacebased weapons, nor has it considered the desirability, feasibility, or costs of attempting to build a space-based anti-missile system or space-based ASAT weapons.

**Putting weapons into space fuels an international arms race.**

Charles **Peña and** Edward **Higgins**, senior defense policy analyst and former director of regulatory studies at Cato institute, **02**

Policy Analysis, “Should the United States “Weaponize” Space? Military and Commercial Implications”, 3/18/02, <http://www.cato.org/pubs/pas/pa427.pdf> [Marcus]

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.

**That leads to nuclear wars and anarchy.**

**Snyder and Snyder** (Timothy Snyder is a historian at the Harvard Academy for International and Area Studies. Philip Snyder is a physicist in San Diego. The views expressed here are their own.) **01** “Why missile defense is a bad idea” 2001 “ <http://www.csmonitor.com/2001/0202/p11s2.html”(Pitman)>

For one thing, they know how Russia and China will react. Although missile defense will not work, the Russians and Chinese must assume the contrary. Since it is much cheaper to build nuclear missiles than it is to build missile defense, they can afford to make this assumption. The Chinese, who today have only a modest nuclear arsenal, would probably become a major nuclear power. A Chinese buildup, combined with what the Japanese would see as irresponsible US policy, would force the Japanese to consider building nuclear weapons. After a Chinese buildup, India would enlarge its nuclear arsenal, and Pakistan would do the same. Iran would probably go nuclear. Peacemaking efforts in the Mideast and Korea would suffer. Like the Chinese, the Russians would protect their own interests by having enough missiles to be sure to overwhelm the system. Fearing that missile defense would allow us to plan a nuclear first strike, Russia would ensure that it has enough missiles to strike back. In so doing, Russia would bury the treaty system developed by Washington and Moscow over the past 30 years to prevent nuclear war. The fault would be ours. The foundation of nuclear arms control is the ABM Treaty, which bans missile defense. If we build missile defense, we must either violate or withdraw from that treaty, and we issue Russia carte blanche to do its worst. If the US builds national missile defense, we create a world full of nuclear weapons, where our allies strike out on their own, rivals become enemies, and no one feels bound by previous agreements. Missile defense is likely to contribute to new world anarchy, and will not protect us from the consequences. These are matters to be considered before any final decision is taken.

**Independently, US space militarization creates an arms race.**

Charles **Peña and** Edward **Higgins**, senior defense policy analyst and former director of regulatory studies at Cato institute, **02**

Policy Analysis, “Should the United States “Weaponize” Space? Military and Commercial Implications”, 3/18/02, <http://www.cato.org/pubs/pas/pa427.pdf> [Marcus]

Critics of such a policy shift are concerned that weaponizing space could trigger a dangerous arms race. They are quick to point out that no country currently has weapons in space and that a U.S. move to deploy weapons (either offensive or defensive) would only provide unneeded impetus for other countries to follow suit. Jonathan Pike of Globalsecurity.org states, “It [weaponizing space] runs fundamentally against the main theme of our space policy for the last half century—to demonstrate America’s power in space in a nonthreatening way.”25 And U.S. Air Force Lt. Col. Peter Hays and Karl Mueller (both faculty at the School of Advanced Airpower Studies) argue that “it is no longer clear that the relationship between space and national security is, or should be, shaped primarily by international military competition.”26

# 2nc uniqueness extension

**Space NMD would make China and Russia feel threatened.**

Charles **Glaser and** Steve **Fetter,** Professor in the Irving B. Harris Graduate School of Public Policy Studies at the University of Chicago and Professor in the School of Public Affairs at the University of Maryland, **01**

International Security, “National Missile Defense and the Future of U.S. Nuclear Weapons Policy”, Summer, 2001, Vol. 26, No. 1, P. 40-92 [Marcus]

What makes NMD special is its unavoidable connection to U.S. strategic nuclear policy and to the United States’ political relationships with Russia and China. Both states view U.S. NMD as a threat to their strategic nuclear capabilities and their relationship with the United States. If technically successful, even the limited NMD planned by the Clinton administration might in some scenarios undermine the capability of Russian nuclear forces. Russia will find limited NMD still more worrisome, anticipating that initial U.S. deployments would be followed by larger ones. The NMD system under development poses a larger and more immediate challenge to Chinese nuclear capabilities, which currently include only about 20 single-warhead intercontinental-range missiles. The Bush administration has called for more robust and ambitious NMD—possibly increasing the number of ground-based interceptors and adding sea- and space-based interceptors—which promises to make it still more threatening.2 Moreover, some proponents favor deploying NMD not only against rogue states, but also against China and possibly Russia. For example, Senator Jon Kyl (R-Arizona) reportedly said that “it’s easy to talk about North Korea , Iran, and Iraq, but . . . behind closed doors you hear some people expressing some concerns about ultimate threats like China.”

**Other countries oppose US missile defense.**

Gregory **Billman**, Lt Col. and USAF national defense fellow, General Ridgeway Center for International Security Studies **2000**

Pittsburgh University, “The "Space" of Aerospace Power: Why and How”, 5/2000, <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA394062> [Marcus]

The "Treaty on the Limitation of Anti-Ballistic Missile Systems" was signed by the US and the USSR in Moscow on May 26, 1972, and was ratified on October 3, 1972.17 It is important to note that many in Congress today are calling for either its modification or abrogation to allow the US to field a viable National Missile Defense (NMD). In yet another inductive example of spacepower's ability to influence, there is loud and unambiguous dissatisfaction being expressed by other world powers, with China and Russia topping the list. Among other things, this treaty restricts the following:

# 2nc link extension

**US Space NMD development fuels an arms race with China and Russia.**

Jackson **Maogoto and** Steven **Freeland**, masters in Law from University of Cambridge, and member of London Space Law Committee, **07**

Connecticut Journal of International Law, “THE FINAL FRONTIER: THE LAWS OF ARMED CONFLICT AND SPACE WARFARE”, 2007, Connecticut Journal of International Law 23.1 p. 165-195. [Marcus]

At the same time, China has been rapidly consolidating its status as a space power, racheting up the stakes very significantly with the test of an anti-satellite weapon. In January 2007, the Chinese military launched a KT-1 rocket that successfully destroyed a redundant Chinese Feng Yun 1-C weather satellite, which it had launched in 1999, in Low Earth Orbit approximately 800 kilometres above the earth. This generated a great deal of alarm and unease in Washington and elsewhere, particularly as it indicated quite starkly the increasing technological capabilities of the Chinese military.17 With China predicted to become the ascendant ‘superpower’ in the twenty-first century, this space-technology rivalry (particularly its military utility) among the space powers appears to be intensifying. It is to be remembered that in 2000, China unveiled an ambitious ten-year space program. 18 While one of the strongest immediate motivations for this program appears to be political prestige, China’s space efforts almost certainly will contribute to the development of improved military space systems.19 With the United States actively pursuing a national missile defense program, in 2003 a Chinese military official commented that China’s army had already introduced the concept of space force strength,20 in apparent reference to a similar United States military concept.21 An indication that Chinese space programs are significantly driven by military and security considerations is the fact that the Chinese space program has always been under the command of senior officers of the People’s Liberation Army.22 Each of these developments indicates a rapidly expanding perception among the major powers of the need for space–based systems in support of military operations. This perception is being translated into reality by the very significant resources now devoted by each of them to the development of ever-more effective (and potent) space-related weaponry. Without wishing to appear melodramatic, the prospect of a celestial war can no longer be regarded as mere fantasy. Just as States have already been undertaking what might be termed ‘passive’ military activities in outer space since the advent of space technology, outer space is increasingly being used as part of active engagement in the conduct of armed conflict.23 Not only is information gathered from outer space – through, for example, the use of remote satellite technology and communications satellites – used to plan military engagement on earth, space assets are now used to direct military activity and represent an integral part of the military hardware of the major powers. It is now within the realms of reality to imagine outer space as an emerging theatre of warfare. Space warfare is the focus of serious planning as the militaries of major powers brace for new forms of high–tech combat in the twenty-first century.24 For example, the United States Air Force (USAF) is increasingly focusing on space—“ not just on how to operate there, but how to protect operations and attack others in space.”25 USAF has established a “space operations directorate” at Air Force headquarters, and has started a new Space Warfare School and activated two new units: the 76th Space Control Squadron (tasked with fighting in space) and the 527th Space Aggressor Squadron (whose mission is to probe the United States military for new vulnerabilities).26 As mentioned above, it is not just the United States and Russia (the successor of the Soviet Union) that are currently seeing space warfare as a distinct possibility in the future.27 The first Gulf War also convinced China’s military leadership of the importance of high–tech integrated warfare platforms, and the ability of sophisticated space–based command, control, communications, and intelligence systems to link land, sea and air forces.28 With the United States’ abrogation of its ABM Treaty commitments and the implications of its ballistic missile defence system, Russia and China are accelerating development of space weaponry to counteract the envisaged capabilities of America’s Ballistic Missile Defence program.29 The straight–line prediction would be that over the next decade or so, we should expect a discernible effort to achieve a ‘strike–back assured’ destruction posture, which would ensure that Russia and China remain America’s peer military competitors.

**Countries will produce ASATs in response to threat of SBMD**

**Peña and Hudgins** Charles V. is senior defense policy analyst and Edward L. is former director of regulatory studies at the Cato Institute **’02** (Cato Institute, Policy Analyst No. 427, “Should the United States “Weaponize” Space? Military and Commercial Implications”, March 18, 2002, <http://www.cato.org/pubs/pas/pa427.pdf>)

Although it can be considered part of the space control mission, ballistic missile defense (BMD) is usually treated separately. And distinctions are usually made between theater missile defense (TMD) and national missile defense (NMD). The whole subject of NMD and the debate surrounding it is beyond the scope and purpose of this paper.55 However, in the Bush administration, it is important to understand that there is a relationship between NMD and space defense policy. The Bush administration has made clear its intentions to build and deploy an NMD system. Despite opposition and concerns from many different sources—domestic, allied, and foreign (notably Russia and China)56—the administration intends to build a missile defense test site in Alaska (presumably as a precursor to a land-based deployment) and begin development within four years of a multilayered shield that will include ship-launched missiles and lasers mounted on airplanes.57 Although the Bush administration has yet to lay out in detail an exact plan or architecture for a national missile defense system, during the presidential campaign Bush argued forcefully that a U.S. missile defense system must protect not only the United States but also friends, allies, and forces deployed overseas.58 Bush also repeatedly made clear that to move forward on NMD, he intended to abandon the ABM Treaty.59 He recently carried out this pledge by giving Russia the requisite six months’ notice of U.S. withdrawal from the treaty.60 Certainly, any NMD system will need to rely on space systems—at a minimum for launch detection and early warning (currently provided by the DSP satellites, which are supposed to be replaced by the SBIRS high satellites).61 Even a ground-based system (i.e., interceptors and radars) might be supported by space-based sensors for midcourse tracking and discrimination (such as the proposed SBIRS low satellites).62 The question the president has left open, at least for now, is whether NMD will include space-based weapons. Bush has not specifically excluded space-based weapons as part of NMD and has abandoned the ABM Treaty—hints that space-based weapons could eventually become a reality. Perhaps more important, however, is the fact the Secretary of Defense Rumsfeld is viewed by many as the architect and moving force behind both missile defense63 and space policy in the Bush administration. If Rumsfeld is indeed the architect, then it is reasonable to conclude that the prescription for space policy outlined in the Space Commission report might represent a blueprint for action. Specifically, the report argues that the United States needs space-based weapons (to defend satellites) and implies that we should employ them as part of national missile defense.64 United States space policy and capabilities— as they have been described in the Space Commission report and discussed by some in the military—are, by their very nature, global. As such, they only serve to foster a global, space-based NMD system. In other words, the only way to defend the panoply of satellites orbiting the earth is to have a constellation of space-based weapons to provide “space superiority.” And those space-based weapons will have an inherent capability to shoot at ballistic missiles (whether they threaten the satellites or not). Thus, a military requirement to protect satellites (even in the absence of a true anti-satellite or ASAT threat) may be a way to pursue development and deployment of a global NMD in a potentially less visible and publicly debated way. Previous Cato Institute reports have argued that a national missile defense system should be a truly national defense to protect the United States homeland and not a global defense to provide worldwide protection.65 The reasons that NMD should be limited to protecting the United States include the following: • The technology for a limited landbased system is the most mature and is currently in its early stages of operational testing. • U.S. allies are wealthy enough to build their own missile defenses. 11 A vibrant commercial space industry will support and enhance U.S. military capabilities far better than letting military requirements dominate space policy. • Any defense expenditure must be commensurate with the threat, and the limited ballistic missile threat does not justify the large expenditures required for a global, layered defense system. • If thicker and wider missile defenses cause U.S. policymakers to feel more secure against missile attacks, they may be more tempted to engage in reckless overseas military adventures, which would actually reduce U.S. security. The concern here is that—much as missile defense advocates have used sea-based missile defense as an attempt to open the door to a larger, more expensive global missile defense66—space defense policy will be used as a way justify and achieve a global—as opposed to national—missile defense. Indeed, if space policy is implemented as outlined in the Space Commission report, a global missile defense may be inevitable. And if there are any doubts about the inextricable relationship between space policy and NMD under Rumsfeld, consider the following statement by Senator Smith: With the completion of the Rumsfeld national missile defense and space commissions, followed by the choice of Rumsfeld to serve as the first Secretary of Defense for the 21st century, we were already batting threeforthree. . . . Now, if Rumsfeld is able to weave space and missile defense into our national defense posture in a way that makes them absolutely essential, which I’m convinced he is determined to do, then the potential is there for a historic grand slam.67 Yet building a global NMD system may actually be **counterproductive**. Such a system would be able to shoot down not only ballistic missiles but also ASATs as well as orbiting satellites and spacecraft. Nations that feel that the United States is trying to hold their satellites at risk or prevent them from launching satellites will have incentives (that would be nonexistant in the absence of such a threat) to develop ASATs, regardless of the technological hurdles, and will be more likely to expend the necessary resources to acquire such a capability. Those ASATs could put the whole constellation of U.S. military and civilian satellites at risk. With the greatest dependence of any nation on space assets (both civilian and military), U.S. security could ultimately be reduced if hostile nations are spurred to develop and deploy ASATs (which they currently do not have) in response to U.S. deployment of spacebased NMD.

**SBMD triggers Russian weapon development**

**Hitchens and Samson** Theresa is Vice President of the Center for Defense Information and Victoria is a research associate at the Center for Defense Information and was a Senior Policy Associate at the Coalition to Reduce Nuclear Dangers **’04** (Georgetown Journal of International Affairs, “Space-Based Interceptors: Still Not a Good Idea”, Summer/Fall 2004, <http://heinonline.org/HOL/Page?handle=hein.journals/geojaf5&div=29&g_sent=1&collection=journals>, Hopkins)

Even if SBIs were technologically feasible and cost effective, there would still be one major concern regarding their development: basing interceptors in space would open the door to weaponizing space, a move that would prove extremely destabilizing to international security and thus to the United States. If the United States decides to deploy weapons in space, then it is guaranteed that other countries will follow: the United States is not only a model for accepted behavior by state actors all around the world, but other powers will also grow uneasy if the United States aggressively pursues space hegemony.24 One only needs to look at how Russia, no longer considered an adversary, has reacted to the planned U.S. missile defense deployment to gain an indication of the unease with which other nations are regarding U.S. efforts. In February 2004, Russia held the biggest exercise for its strategic forces in nearly two decades. Afterwards, Russian President Vladimir Putin announced that his strategic forces will soon “receive new hypersound-speed, high-precision new weapons systems that can hit targets at intercontinental distance and can adjust their altitude and course as they travel.”25 According to Col.-Gen. Yuri Baluyevsky, first deputy chief of the General Staff of the Russian Armed Forces, this maneuver reentry vehicle “would make any missile defense useless.” 26 This whole new class of weapons is being developed to make sure that Russia is still relevant in the face of the U.S. missile defense deployment.27 This gives some context to the way U.S. actions can motivate arms development by other nations, and sets the stage for how Russia might react to the development of space-based defenses. Current allies regard U.S. intentions in space with apprehension as well. The European Union has decided to establish its own version of a satellite navigation network, known as Galileo, so that it will not be beholden to the United States’ Global Positioning System (GPS). The overall Galileo project is projected to cost 3.25 billion euros, with 200 million euros now expected from China and a similar contribution from India.28 That is a significant investment to confirm that the Europeans will not be harmed by a possibly uncooperative U.S. government in the future. U.S. allies in Europe are all on record as supporting U.N. sponsored talks, known as the Prevention of an Arms Race in Outer Space (PAROS) aimed at an eventual space weapons ban. Indeed, the United Nations General Assembly has passed a resolution supporting PAROS every year since 1981; and PAROS became an item on the agenda of the Geneva-based Conference on Disarmament in 1982 where it remains on the table today.29 While PAROS is supported by a majority of the world's nations, it has in the past fallen afoul of big-power politics among the United States, China, and Russia. Today, the discussions remain stalemated in large part due to shifting U.S. priorities and the Bush administration's disdain for international treaties.

# 2nc link/impact card

**Deploying space NMD would throw the world into turmoil.**

Jacques **Gansler,** Former Under Secretary of Defense for Acquisition, Technology and Logistics, **10**

CENTER FOR TECHNOLOGY AND NATIONAL SECURITY POLICY NATIONAL DEFENSE UNIVERSITY WASHINGTON, DC, “ Ballistic Missile Defense Past and Future, 4/10, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA527876&Location=U2&doc=GetTRDoc.pdf> [Marcus]

It will trigger an arms race. Russia will not only move toward increased offensive capability, and perhaps also defensive capability, but will certainly break all arms control agreements with the United States. China will dramatically expand its nuclear arsenal, which would then accelerate nuclear weapons programs in India and in India’s rival, Pakistan; and possibly prompt their development and deployment in Taiwan and in Japan (both of whom are concerned about China’s expanding power). It might also jeopardize any Chinese diplomatic efforts to achieve a freeze on North Korea’s or Iran’s nuclear and missile programs.13 Putting defensive weapons in space (which would provide worldwide boost-phase intercept coverage) would start both an offensive and defensive arms race (including anti-satellite systems). Also, a space-based anti-missile system would appear to be aimed at the Chinese (as a way to cover their large land mass) and would be highly inflammatory. Deployment of the NMD system would damage the diplomatic relations that the United States has been trying to improve with both Russia and China. Missile defenses will undercut arms control negotiations. Arms control has historically been the key to maintaining a peaceful relationship between the two “Super Powers,” and has been especially important to slowing the buildup of ballistic missiles, nuclear weapons, and other weapons of mass destruction. Even a limited missile defense will create greater instability. The defended nation will be tempted to initiate a massive first strike in a crisis (including against its adversary’s missiles), and then absorb the more limited retaliatory strike by the other side (a product of being able to shoot down surviving ICBMs). The technology is not available to achieve the hit-to-kill capability (i.e., “the systems won’t work”), and a nuclear kill mechanism (as planned in the 1960s systems) would have numerous problems, both offensively and defensively. Even if the system can be made to work against a single target, the opposition will shift to complex countermeasures, such as sophisticated decoys, maneuvering reentry vehicles, saturation with multiple re-entry vehicles, etc., and render the deployed system ineffective. The deployment of this system, even if it does work, will simply shift the focus of potential adversaries to other means of attacking the United States. These alternative scenarios are already considered to be “more likely,” and include terrorist attacks with biological, chemical, or nuclear weapons. No government would be foolish enough to try to launch a missile against the United States, knowing that its nation would be immediately wiped out with a nuclear counter-strike. Therefore, no real threat exists, and it does not make sense to develop and deploy a national missile defense system. And, even if it does work, and even if it makes sense to develop and deploy it, the system is far too expensive to be affordable.

# 2nc impact extension

**Space weapons escalate to nuclear war- military war games prove**

**Hitchens and Samson** Theresa is Vice President of the Center for Defense Information and Victoria is a research associate at the Center for Defense Information and was a Senior Policy Associate at the Coalition to Reduce Nuclear Dangers **’04** (Georgetown Journal of International Affairs, “Space-Based Interceptors: Still Not a Good Idea”, Summer/Fall 2004, <http://heinonline.org/HOL/Page?handle=hein.journals/geojaf5&div=29&g_sent=1&collection=journals>, Hopkins)

Blinded Eyes in the Sky. Space weapons also would be highly destabiliz ing for global security. Space-based weapons would be high-value but highly vulnerable military assets, thus imparting a “use it or lose it” mentality on their operators. That is, because such space assets might be quickly made useless by a first strike, the urge to employ them in a conflict before they are made ineffectual would no doubt be strong. Such hair trigger weapons could lead the United States very quickly into a disaster in a time of hostilities.34 During recent war games, military commanders have been stunned at how quickly the employment of space weapons escalated conflicts into nuclear war. If mil itary commanders cannot see what their adversaries are doing, an ability provided primarily by those same, highly vulnerable space based assets, they must assume the worst and act accordingly.35 The real-life implications of that fact are haunting. Aside from the threat of nuclear conflict stemming from the use of weapons in space, U.S. commanders would also have to worry about their basic military fighting capabilities. At present, the U.S. military is more dependent on the use of space than any other. Even the loss of civilian satellite capacity would harm the military. During Operation Iraqi Freedom in 2003, 80 percent of the military’s communications in-theater was provided by commercial satellite networks. 36 About one-third of the 30,000 munitions dropped on Iraq were GPSguided. 37 A disintegrated satellite picture, whether it was military or commercial, would have a ripple effect on U.S. national security.

# DA Turns Case

**Deploying weapons risks space arm races and a “space pearl harbor”**

**Peña and Hudgins** Charles V. is senior defense policy analyst and Edward L. is former director of regulatory studies at the Cato Institute **’02** (Cato Institute, Policy Analyst No. 427, “Should the United States “Weaponize” Space? Military and Commercial Implications”, March 18, 2002, <http://www.cato.org/pubs/pas/pa427.pdf>)

There are those who feel the United States is currently at risk and should act now to seize the military high ground in space. Senator Smith has stated: I do see an opportunity for us to exploit this period of unchallenged conventional superiority on Earth to shift substantial resources to space. I believe we can and must do this, and, if we do, we will buy generations of security that all the ships, tanks and airplanes in the world will not provide. . . . Control of space is more than a new mission area—it is our moral legacy, our next Manifest Destiny, our chance to create security for centuries to come.22 Not surprisingly, Senator Smith was instrumental in getting the Congress to charter the Space Commission. The chief of staff of the U.S. Air Force, Gen. Michael E. Ryan, has endorsed the deployment of space-based weapons to protect the nation’s satellites and predicted that the United States would develop the capacity to shoot down other countries’ satellites and spacecraft.23 According to General Ryan: “We have to in some way be able to protect those assets, at least defensively. . . . I would suggest that sometime in the future here, we’re going to have to come to a policy decision on whether we’re going to use space for defensive and offensive capabilities.”24 Critics of such a policy shift are concerned that weaponizing space could trigger a dangerous arms race. They are quick to point out that no country currently has weapons in space and that a U.S. move to deploy weapons (either offensive or defensive) would only provide unneeded impetus for other countries to follow suit. Jonathan Pike of Globalsecurity.org states, “It [weaponizing space] runs fundamentally against the main theme of our space policy for the last half century—to demonstrate America’s power in space in a nonthreatening way.”25 And U.S. Air Force Lt. Col. Peter Hays and Karl Mueller (both faculty at the School of Advanced Airpower Studies) argue that “it is no longer clear that the relationship between space and national security is, or should be, shaped primarily by international military competition.”26 Is there a clear and present danger in space? And is becoming more militarily active (including deploying weapons, either defensive or offensive) in space the next logical step? Does the United States Risk a Space Pearl Harbor? As noted above, the argument the Space Commission makes about the vulnerability of space and the need to “develop and deploy the means to deter and defend against hostile acts directed at U.S. space assets and against the uses of space hostile to U.S. interests”27 is relatively straightforward: • The United States is more dependent on space than any other nation. • The U.S. military is increasingly dependent on space systems. • U.S. security and economic well-being depend on the ability of the United States to operate successfully in space. • Nations hostile to the United States 5 Although U.S. satellites might be vulnerable to ASATs, the threat is more hypothetical than real. either possess or can acquire the means to destroy U.S. space systems. • U.S. space systems are vulnerable to a range of attacks. Thus, the Space Commission warns that the United States has not paid sufficient attention to the threat and, as a result, “the U.S. is an attractive candidate for a ‘Space Pearl Harbor.’”28 It is indeed true that the United States is more dependent on space than are other countries and that the U.S. military in particular is becoming increasingly dependent on space systems. Furthermore, space systems are currently undefended and, therefore, potentially vulnerable to attack.

**A Space-arms race turns their leadership advantage**

**Hitchens**  Theresa is Vice President of the Center for Defense Information **’02** Presentation to the Ballistic Missile Defense and the Weaponization of Space Project Space Policy Institute, “Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons”, April 18, 2002, <http://www.cdi.org/pdfs/Hitchens-April2002-silver-bullet.pdf>)

The United States already enjoys an overwhelming advantage in military use of space; space assets such as the Global Positioning System satellite network have proven invaluable in improving precision-targeting giving the U.S. military a decisive battlefield edge. There would be even a more formidable military advantage to possession of weapons in space – global power projection and the enormous difficulty in defending against space weapons aimed at terrestrial targets. “It is…possible to project power through and from space in response to events anywhere in the world. Having this capability would give the United States a much stronger deterrent and, in a conflict, an extraordinary military advantage,” notes the Space Commission report. Space weapons – even those primarily designed for defense of U.S. satellites – would have inherent offensive and first-strike capabilities, however, (whether aimed at spacebased or earth-based targets) and would demand a military and political response from U.S. competitors. “To be sure, not deploying weapons in space is no guarantee that potentially hostile nations (such as China) will not develop and deploy ASATs. However, it is virtually certain that deploying U.S. weapons in space will lead to the development and deployment of ASATs to counter such weapons,” notes a new policy brief by the Cato Institute.27 China and Russia long have been worried about possible U.S. breakout on space-based weaponry. Officials from both countries have expressed concern that the U.S. missile defense program is aimed not at what Moscow and Beijing see as a non-credible threat from rogue-nation ballistic missiles, but rather at launching a long-term U.S. effort to dominate space. Both Russia and China also are key proponents of negotiations at the UN Conference on Disarmament to expand the 1967 Outer Space Treaty to ban all types of weapons. The effort to start talks known as PAROS, for “prevention of an arms race in outer space,” has been stalled due in large part to the objection of the United States. For example, in November 2000, the United States was one of three countries (the others were Israel and 27 Charles V. Pena and Edward L. Hudgins, “Should the United States ‘Weaponize’ Space? Military and Commercial Implications,” March 18, 2002. 13 Micronesia) to refuse to vote for a UN resolution citing the need for steps to prevent the arming of space.28 It is inconceivable that either Russia or China would allow the United States to become the sole nation with space-based weapons. “Once a nation embarks down the road to gain a huge asymmetric advantage, the natural tendency of others is to close that gap. An arms race tends to develop an inertia of its own,” writes Air Force Lt. Col. Bruce M. DeBlois, in a 1998 article in Airpower Journal.29 Chinese moves to put weapons in space would trigger regional rival India to consider the same, in turn, spurring Pakistan to strive for parity with India. Even U.S. allies in Europe might feel pressure to “keep up with the Joneses.” It is quite easy to imagine the course of a new arms race in space that would be nearly as destabilizing as the atomic weapons race proved to be. Such a strategic-level space race could have **negative consequences for U.S. security in the long run** that would outweigh the obvious (and tremendous) short-term advantage of being the first with space-based weapons. There would be direct economic costs to sustaining orbital weapon systems and keeping ahead of opponents intent on matching U.S. space-weapon capabilities – raising the proverbial question of whether we would be starting a game we might not be able to win. (It should be remembered that the attacker will always have an advantage in space warfare, in that space assets are inherently static, moving in predictable orbits. Space weapons, just like satellites, have inherent vulnerabilities.) Again, the price tag of space weapons systems would not be trivial – with maintenance costs a key issue. For example, it now costs commercial firms between $300 million and $350 million to replace a single satellite that has a lifespan of about 15 years, according to Ed Cornet, vice president of Booz Allen and Hamilton consulting firm.30 Many experts also argue there would be costs, both economic and strategic, stemming from the need to counter other asymmetric challenges from those who could not afford to be participants in the race itself. Threatened nations or non-state actors might well look to terrorism using chemical or biological agents as one alternative. Karl Mueller, now at RAND, in an analysis for the School of Advanced Airpower Studies at Maxwell Air Force Base, wrote, “The United States would not be able to maintain unchallenged hegemony in the weaponization of space, and while a space-weapons race would threaten international stability, it would be even more dangerous to U.S. security and relative power projection capability, due to other states’ significant ability and 28 Theresa Hitchens, “Rushing to Weaponize the Final Frontier,” Arms Control Today, September 2001. 29 DeBlois, “Space Sanctuary.” 30 Nick Johnson, “Analyst: Smaller satellite companies likely to consolidate over 10 years,” Aerospace Daily, March 6, 2002. 14 probably inclination to balance symmetrically and asymmetrically against ascendant U.S. power.”31 Spurring other nations to acquire space-based weapons of their own, especially weapons aimed at terrestrial targets, would certainly undercut the ability of U.S. forces to operate freely on the ground on a worldwide basis – negating what today is a unique advantage of being a military superpower.32 U.S. commercial satellites would also become targets, as well as military assets (especially considering the fact that the U.S. military is heavily reliant on commercial providers, particularly in communications). Depending on how widespread such weapons became, it also could even **put U.S. cities at a greater risk than they face today from ballistic missiles**. The potential for strategic consequences of a space race has led many experts, including within the military, to tout a space arms control regime as an alternative. A ban on space weapons and ASATs could help preserve – at least for some time – the status quo of U.S. advantage (especially if coupled with U.S. moves to shore up passive satellite defenses). In a recent article in Georgetown Journal of International Affairs, Jeffrey Lewis, a graduate research fellow at the Center for International Security Studies at the University of Maryland, makes a good case for an arms control approach, arguing: “If defensive deployments in space cannot keep pace with offensive developments on the ground, then some measure of restraining offensive capabilities needs to be found to even the playing field.”33 In any event, it is clear that U.S. policy-makers must look at the potential strategic and direct military risks, and the costs, of weaponizing space.

**Having space weapons encourages pre-emptive use.**

David **Hardesty**, captain in the US Navy, **05**

Naval War College Review, “ SPACE-BASED WEAPONS – Long-Term Strategic Implications and Alternatives, 3/22/05, <http://goliath.ecnext.com/coms2/gi_0199-4424295/Space-based-weapons-long-term.html> [Marcus]

Space-based weapons, like all space systems, are predictable and fragile, but they represent significant combat power if used before they are destroyed— leading to a strong incentive to use these weapons preemptively, to “use them or lose them.” The problem is further complicated by the difficulty in knowing what is occurring in space. As the Commission to Assess United States National Security Space Management and Organization pointed out:

\*\*\*Cooperation DA

# 1nc Shell

**A. UNIQUENESS – The US is pursuing international cooperation over space activities now**

**Kenyon 11** [Henry Kenyon, “DOD wants space assets more secure, resilient to attack,” Defense Systems, Mar 17, 2011, pg. <http://www.defensesystems.com/Articles/2011/03/17/Satellite-2011-National-Space-Policy.aspx>//edlee]

DOD is following strategic approaches to support the administration's policy by promoting the peaceful use of space and partnering with other nations, Schaffer said. She noted that DOD is working to defend national space assets and that the National Security Space Strategy calls for more resilient systems and capabilities that would function even when they are degraded by an attack or jamming. The administration’s space policy seeks to meet the challenges of a space environment that is changing politically and physically. The policy **stresses international cooperation** while setting goals for developing a more robust and capable national infrastructure to support commercial and government space activities. Outlining the administration’s goals, Chirag Parikh, director of space policy at the National Security Council, said one of the main thrusts of the new National Space Policy was to energize and maintain a competitive domestic space industry that would help reinforce the commercial space and national industrial base. The policy also stresses international cooperation on the national and commercial levels. Parikh added that unlike most previous national space policies, the Obama administration's approach looks at the ground segment required to support the national satellite industry and its space assets. Besides emphasizing partnerships at the international and corporate levels, the policy also stresses the responsible use of space. Parikh said more nations and corporate entities are now launching spacecraft, a trend that makes it necessary to press for international guidelines on a range of issues, including safe and responsible launch and space operations and proper disposal of satellites and space debris.

**B. LINK – Deploying SBI would kill relations**

**Union of concerned scientists (**The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world. UCS combines independent scientific research and citizen action to develop innovative, practical solutions and to secure responsible changes in government policy, corporate practices, and consumer choices.)**2011**(report/study) “space based missile defence” May 2011 <http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf(Pitman)>

\*\*\*NOTE: SBI = SPACE BASED INTERCEPTOR

Deploying even a small number of SBIs might negatively affect strategic relations because the SBIs could have a significant ability to destroy satellites, which travel in predictable orbits and achieve speeds similar to those of long-range missiles. Homing on a satellite rather than a boosting missile would require a different (possibly additional) sensor on the SBI, but an observer on the ground would not be able to tell which sensor the SBI was carrying. U.S. budget descriptions have suggested that the boost phase missile defense system might also be designed to intercept warheads during the midcourse phase of flight. The sensor needed for such midcourse intercepts would allow an interceptor to home on a satellite. Additionally, the large amount of thrust of interceptors, which they would need to perform boost phase missile defense from space, means that they could reach and attack satellites in GEO as well as those in lower orbits.

**C. IMPACT –** **Lack of coop risks multiple earth and space wars.**

**Huntley et al 10** – US Naval Postgraduate School [Wade L. Huntley, Joseph G. Bock (Kroc Institute for International Peace Studies, Notre Dame) & Miranda Weingartner (Weingartner Consulting), “Planning the unplannable: Scenarios on the future of space,” Space Policy, Volume 26, Issue 1, February 2010, Pages 25-38//edlee]

4.3. Scenario A: “Back to the Future” - “Back to the Future” describes a future characterized by a high degree of technological breakthrough wherein power is projected by rule of force. In 2009 global tensions create an atmosphere where nations increasingly test new defensive technology. In 2010 India explodes a satellite out of Low-Earth orbit (LEO) and the USA tests an orbital interceptor. Gazprom invests $1 billion in the development of a nanotechnology research lab. There is also a steady erosion of Outer Space Treaty norms and limits to protect commerce. By 2013 **NATO is dissolved**, seen as no longer relevant. The EU alliance shifts towards defending its borders. Human spaceflight continues, in an increasingly competitive atmosphere. The USA launches Aries I, with a crew. Generation Y seems more interested in environmental issues than space. By 2014 many nations begin deploying anti-satellite (ASAT) technology. In 2015 China, the USA, India and Russia **field rival ASATs** in orbit, as LEO orbits are at risk from debris. Commercial interests give up on LEO and eye the Moon, which fuels the race to establish a presence there. An increasingly protectionist USA leaves the World Trade Organization (**WTO**). In response, China recalls its debts from the USA. Meanwhile, European and Asian growth continues and, in 2018, a Chinese factory begins production of bulk carbon nanotubes. The USA and China race to produce the first space elevator. The civil lunar programs move forward. By 2020 a joint US–EU team land on and ‘reclaim’ the Moon. Lunar bases and the space elevator are established, as resources continue to dwindle on earth. Rival moon bases compete over mining rights and orbital lasers promote a defensive **arms race in space**. NATO is replaced by a new European Defence Organization (EDO). A coalition emerges, including the USA, the EU and India, in opposition to Russia and China. By 2025 African nations reject the influence of major powers and, thanks to the proliferation of technology, become space powers in their own right. In 2028 major powers **withdraw from the O**uter **S**pace **T**reaty. Saudi oil fields are now officially empty, and the lunar colonies' major export is solar power. Military bases on the Moon defend against rival solar farms. A Russian–Chinese coalition attacks the space elevator, which essentially strands the US–EU lunar colonies and seriously impairs energy availability on Earth. The **UN breaks down** and is dismantled. Treaties are ignored and tensions increase. The earth is highly militarized, and **conflict occurs both on earth and in space**. The future is tense, dark and uncertain. By 2030 Californian scientists claim to have discovered an alleged artificial signal from outer space. The signal offers the possibility of a new reason for hope. 4.4. Group observations on Scenario A In this scenario technological breakthroughs add to the rule of force rather than providing a means for international cooperation. States come together and drift apart based on their perceived interests. The group acknowledged the importance of “giving teeth” to the Outer Space Treaty and other treaties in order to enhance means of overcoming conflict in the future. However, treaties do erode when states or blocs of states perceive these no longer to serve their interests. Further, norms of the Outer Space Treaty may be eroded through the commercialization of space, rather than by conflict and militarization. The group recognized that cooperation is possible on some, but not all, issues. Following the Chinese recent ASAT test there were efforts to clarify the situation for all parties concerned and prevent repeat occurrences. This suggests in part that the UN breaking down is not realistic, and that there might be greater political will to move in a collaborative direction than the scenario suggests. The competition for resources breaks down liberal order and traps states into a situation where the rule of force is perceived as the only option. In this scenario democracies are not less likely to militarize. Politicians bear the responsibility for the implications of their actions. NASA remains a remnant of the Cold War, while the EU space plan is geared towards a broader array of concerns. The voice of civil society is then squashed. (There is also an option of a scenario where, instead of the EU, China becomes a regional champion, bringing other regional leaders like Brazil under a new transparent framework.) The rule of force is also justified for the protection of investments. An entity such as the US-Soviet Standing Consultative Commission (SCC), which was convened when one side thought there had been a violation by the other, might be helpful. Driving factors come not necessarily from the bottom or the top, but rather from mid-level officials who can promote a discussion on the consequences of space weaponization. It is important to reach out to the non-space community, to help a wider constituency relate to the issues and take greater interest. Getting away from focusing on big, one-off, prestige programs is one way to elicit such an interest. Technological innovation, while important, does not necessarily lead to an advantage for the country of origin. Rapid dissemination of technologies among a certain community can affect the security of the countries of origin. For this reason, if weaponization of space is inevitable, **countries should operate as much as possible in a collaborative, transparent fashion**. This suggests the utility of a global regime controlling the technology. Cooperative leadership among youth could be developed to help ensure future cooperation. This group underlines the importance of reaching young people today in order to stimulate awareness in the next generation of leaders of the negative spirals that could develop. All parties must be made aware that it is in no one's interest to attack each other's satellites; both sides need the information and need freedom to access space. A non-interference pact could be developed, which might name the kinds of weapons not to be used.

**Those risk accidental nuclear wars**

**Ross 09** - Reporter for the Chicago Daily News [Sherwood Ross, “Space Race Increasing Risk of Nuclear War,” Atlantic Free Press, Saturday, 04 April 2009 08:21, pg. <http://www.atlanticfreepress.com/news/1/8948-space-race-increasing-risk-of-nuclear-war.html>//edlee]

An unchecked race to militarize space is underway that is “increasing the risk of an **accidental nuclear war** **while shortening the time for** sanity and **diplomacy to** come into play to **halt crises**,” an authority on space warfare says. By 2025, the space capabilities of the leading space powers---**the U.S., Russia, India and China**---will be roughly equal “due to information sharing in a globalized economy,” says noted space researcher Matt Hoey in an exclusive interview. Hoey is international military space technology forecaster who provides analysis on issues related to technology proliferation and arms control. He is also a former senior research associate at the Institute for Defense and Disarmament Studies and has contributed to publications such as the Bulletin of Atomic Scientists and the Space Review. Through their military and commercial research facilities, the world’s military powers are pursuing development of a reusable, unmanned, hypersonic, space-strike delivery platform that “would permit rapid precision strikes worldwide in 120 minutes or less,” Hoey said. The strike platform could loiter in near-space or in low earth orbit and assault terrestrial targets at incredible speed “with a nuclear or conventional payload and then return to any base in the world on demand,” he explained. While “there will not be a dedicated ‘space war’ in our lifetimes or our children’s,” Hoey said, “we are likely to witness acts of space warfare being committed…in concert with other theatres of combat” on land, sea, and air and cyber space.” Hoey said his research analysis suggests: “Back and forth escalation regarding military space capabilities would fuel each nation’s respective space industries as would commercial space races driven by national pride.” “If these systems are deployed in space we will be **tip**ping **the nuclear balance** between nations that has ensured the peace for decades,” Hoey continued. “The military space race will serve the defense industry much like the cold war and this is already being witnessed in relation to missile defense systems.” Hoey pointed out the arms control community “is still trying to put the nuclear genie from decades ago back in the bottle” and adds “once this new genie(space war) is out it is not going back in anytime soon, either.” The five treaties governing space “are highly outdated,” Hoey said, notably the milestone “Outer Space Treaty” of 1967. Theoretically, the U.S. is also bound by The National Aeronautics and Space Act of 1958 that declares our “activities in space should be devoted to peaceful purposes for the benefit of all mankind.” (Rep. Dennis Kucinich(D-Ohio), in introducing a bill to ban the weaponization of space, charged the Bush administration with breaking with that policy by “putting weapons in outer space to give the U.S. the power to control the world.” Kucinich charged “the Air Force is seeking permission to put both offensive and defensive weapons in space.”) Hoey said the research community is expecting space warfare systems to come from the Defense Advanced Research Projects Agency(DARPA) and the Air Force Research Laboratories (AFRL). But instead of doing straight military R&D in-house, the Pentagon is funding civilian research that has dual-purpose use capabilities---civilian applications as well as military. Because military space race technologies are the same as those needed to explore the heavens, service the international space station and defend against threats from near earth objects, the civilian-military partnerships “present the most challenging dilemma for the arms control community,” Hoey said. That’s because arms control proponents cannot object to their military applications without also opposing “technologies that benefit mankind.” And he warned this will continue to be the case as long as existing treaties fail to differentiate between commercial and military space technology. Because their overlap is “overwhelming,” Hoey noted, in that “systems that destroy can also create and facilitate discoveries,” it behooves the international arms control community to act before our military and commercial industries become “inextricably integrated with military space systems and unable to extract themselves.” Hoey said the defense community is actively scouting students still enrolled in high school who have demonstrated a talent in aerospace, cryptology and computer security for military research, “in an attempt to compete with emerging science and technology rivals such as China and India.” This would place future generations who dream of discoveries on a fast track towards the defense industry, Hoey said, even if they land jobs in the private sector. As dual-usage progresses, far more space technology roads will lead to careers that contribute to the development space warfare-enabling technologies. Companies engaged in nanotechnology, robotics and Artificial Intelligence are also being wooed by the military with fat checks, Hoey said. “These (space exploration and space warfare) systems are being developed through multi-tiered collaborations that include NASA, the Defense Department, universities, big defense contractors and small space start- ups. “The work force consists of military scientists and engineers, students, scientists, and even foreign nationals” ultimately enabling **tech**nology **prolif**eration **globally**. For an arms control community that is focusing primarily on banning specific space weapons currently in development, nearing deployment, and in some cases already deployed, efforts should also be focused towards lobbying the international community to begin establishing rules of the road that differentiate between peaceful commercial space technologies and destructive military space applications before the lines between the two are **irreversibly blurred**, Hoey urged. By doing so, “next generation space warfare systems and space security threats can, as a result, be prevented long before they have a chance to further undermine peace in outer space and increase the probability of **nuclear war**,” he said.

# 2nc link extension

**Missile Defense will lead to disastrous effects on international security**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**http://www.amacad.org/publications/militarySpace.aspx(Pitman)

Each scholar suggests that introducing weapons into space will have negative consequences for nuclear proliferation and international security. As Podvig points out, Russia’s main concern is likely to be maintaining strategic parity with the United States. This parity will be destroyed by the deployment of weapons in space, making a response from Russia likely. Podvig writes, “Russia does not have many options for the development of its own weapon systems in space or for its reaction to the development of this capability by other countries. . . . However, this does not mean that there will be no reaction.” He suggests that Russia will be more likely to undertake other countermeasures such as extending the life of its ballistic missiles, measures that are “the most significant and dangerous global effects of new military developments, whether missile defense or space-based weapons.” Zhang arrives at similar conclusions. He describes how U.S. plans will negatively affect peaceful uses of outer space, disrupting current civilian and commercial initiatives, but focuses on a much greater concern among Chinese officials—that actions by the United States in space will result in a loss of strategic nuclear parity. China’s options for response, as detailed by Zhang, include building more ICBMs, adopting countermeasures against mis sile defense, developing ASAT weapons, and reconsidering China’s commitments on arms control. Thus introducing weapons into space would destabilize the already vulnerable international non-proliferation regime. Zhang concludes, “U.S. space weaponization plans would have potentially disastrous effects on international security and the peaceful use of outer space. This would not benefit any country’s security interests.”

**Space Weaponization destroys Co-op**

[**Zhang, Hui**](http://www.spacedebate.org/author/1878) **and** [**Pavel Podvig**](http://www.spacedebate.org/author/1951)**.. .** Cambridge, MA: American Academy of Arts and Sciences, **08** “[Russian and Chinese Responses to U.S. Military Plans in Space](http://www.amacad.org/publications/militarySpace.aspx)”2008**.**<http://www.amacad.org/publications/militarySpace.aspx>(Pitman)

The Chinese government holds that a secure international environment and strategic stability are the foundations for advancing the international nuclear disarmament process.59 However, U.S. missile defense and space weaponization plans will destroy these foundations. Ambassador Hu made this point clearly in remarks to the CD

# DA Turns Case

**Multilateral approach to SBMD can solve and prevent conflicts- countries will work together to deter rogue states**

**Frederick Lt Col Lorinda A.,** MBA, Regis University; Master of Military Operational Art and Science, Air Command and Staff College; Master of Airpower Art and Science, School of Advanced Air and Space Studies, worked space and missile officer assignments and ICBM requirements **’08** (Graduate thesis, “DETERRENCE AND SPACE-BASED MISSILE DEFENSE”, June 2008, Hopkins)

There are many benefits the United States could accrue in the international community if it developed and deployed SBMD multilaterally. These benefits include increased security and global stability. Space-based missile defenses have more to offer than merely power projection and freedom of action. A multilateral approach to SBMD may open doors within the international community on many issues. The demand for missile defenses by other countries may create opportunities for SBMD as another way to address their security concerns. SBMD introduces a new dimension to missile defense. Some argue that effective missile defenses will merely lead adversaries to search for other vulnerabilities and find other means to threaten their foes. To which Dr Everett Dolman would reply “Good. The threat of missile attack is now over. If the state is protected from missile attack, which was once a serious threat, this is a laudable result.”11 The international community may appreciate the benefits of SBMD even if they do not necessarily agree with the method. Members of the international space regime could cooperate on missile defense initiatives to increase global stability. “If a large enough coalition can band together and agree to collectively repel an attack against any member, then war should be deterred. This requires the norms that participating states are both willing and able to come to the assistance of other members, and the rules and decision-making procedures that determine, among others, if an attack has occurred, how much each member is obligated to provide in the defense of the attacked state, which nations shall control the coalition forces, and the like.”12 States and rogue elements will not be able to strike surreptitiously if they know that the international community could quickly discern the origin of any launch and compute potential impact points. The shared international ability to identify launch and impact points might deter states and rogue elements from launching in the first place. The more nations cooperate with each other, the more stable the world becomes. A multilateral approach to SBMD may encourage the international community to cooperate in other areas critical to an effective SBMD. These areas include space situational awareness and precision navigation and timing. Perhaps states would be willing to make their systems interoperable, including the sharing of data and support infrastructure, with the United States to bolster the defense architecture. The United States could lead the way in improving these areas and sharing mission data among international partners to help maximize the effectiveness of SBMD. Challenges to sharing data include creating the interfaces between different systems and maintaining security classifications. However, commercial companies could create interfaces that would allow each country to control and filter the data they provide. Providing and exchanging data would increase everyone’s knowledge and encourage communication. Increased cooperation in other areas within the international community creates ties that could be used to further SBMD. Expanding SBMD into a Multilateral Effort The United States could steer the international community towards a multilateral approach towards SBMD. Using an argument made by William Riker, getting the international community to accept SBMD requires the United States to lead the agenda, frame the issue and tie it to other areas, split the opposition, and avoid old arguments. The United States would want to work from a position of advantage. This position is usually out in front of the issue. The United States must try and manipulate the international agenda in favor of SBMD, if it intends to pursue a multilateral approach. The United States already plays a dominant role in many international organizations, such as the United Nations and NATO, so presiding over committees that hear issues about SBMD could be relatively easy. The United States could work to structure decision-making situations to its advantage.13 Successful manipulation of the agenda could make a favorable outcome more likely.14 Leading the agenda allows the United States to set terms favorable to its interests. The United States could gain support from those who find fault with SBMD methods by framing the issue in another dimension, for instance the need to deter threats in new ways.15 “Today, the United States has only an extremely limited capability to defend its people, territory, foreign deployed forces, allies, and friends against ballistic missile attack.”16 Current US missile defenses cannot shoot down missiles in their boost phase. Many areas around the world may not be defended from ballistic missiles. The proliferation of ballistic missiles increases the chances of an attack against vulnerable nations with no defenses. These are all reasons the United States could use while making a case for placing missile defenses on the international agenda. The United States could also appeal to a larger audience to gain widespread acceptance of SBMD on the international stage. SBMD allows the United States to give deterrence a broader appeal because it could benefit many more countries than any other form of missile defense. Confidence in the US’ ability to defend itself from an attack may allow the US to extend this same protection to allies and coalition partners. These international partners may perceive the United States as being more apt to stand by them during conflict versus retreating into an isolationist position due to concerns about the homeland. Effective integrated defenses, which include SBMD, could reassure friends and allies of the US’ commitment to deter, and respond should deterrence fail. SBMD therefore may keep other countries out of conflicts because they are confident the United States could protect them from missile attack.

\*\*\*Other DA Links

# Prolif Link

**Missile defense fails and is causing proliferation**

**Hagen** (Regina Hagen international network of engineers and scientists against proliferation) **no date** “Missiles ,missile defense and space weaponization” http://www.reachingcriticalwill.org/legal/npt/prepcom08/ngostatements/Missiles.pdf (pitman)

Without adequate arms control strategies broadly supported by the international community, the risks of missile proliferation are likely to increase as long as technical capabilities are spreading and regional conflicts provide incentives to acquire advanced weapons. The United States seeks to counter the missile threat with preemptive strikes and missile defense, both of which are fuelling the missile arms race. There is an intensified drive to develop and deploy missile defense systems, despite widely-held skepticism over whether a multi-billion-dollar missile defense system actually will diminish the missile threat. Despite having spent more than $110 billion on missile defense since 1985, the United States still does not have a reliable and tested architecture in place.

**Missile Defense does not reduce nuclear arsenals**

**Hagen** (Regina Hagen international network of engineers and scientists against proliferation) **no date** “Missiles ,missile defense and space weaponization” http://www.reachingcriticalwill.org/legal/npt/prepcom08/ngostatements/Missiles.pdf (pitman)

Several NATO member states and European companies are developing missile defense systems in cooperation with the United States, as are non-NATO states, including the Republic of Korea, Japan, Australia and Israel. India recently tested a system designed to intercept short and medium-range missiles. This activity is underway despite the fact that strategic missile defense still is not a proven technology and has yet to be tested in operationally realistic conditions. Missile defense has potentially negative impacts on prospects for the reduction and elimination of nuclear forces. One example is the controversy over the US plan to deploy a missile defense system on two new military bases in Poland (for interceptors) and the Czech Republic (for a radar installation), purportedly intended to defend against Iranian missiles. Russia has objected strongly to this plan, arguing that the system could be used against its ICBMs and thus would undermine strategic stability. The controversy contributed to Russia’s decision to “suspend” implementation of the Conventional Forces in Europe Treaty and the threat to abandon the 1987 INF Treaty, and has prompted belligerent statements that Russia would target the missile defense sites. This demonstrates that military responses to the missile threat, such as nuclear deterrence, preemption, counter-proliferation and missile defense, may aggravate the risks and provoke proliferation rather than prevent it. An offense-defense missile race could undermine international stability and disrupt regional balances. Removal of these weapons is an urgent issue on the international agenda.

**Space Weaponization Is not worth it leads to proliferation and arms race**

**Blazejewski,** “private practice in New York City, focusing primarily on international corporate and financial transactions. He received his master’s degree in public affairs from the Woodrow Wilson School at Princeton University and his JD degree from the New York University School of Law.”, **8** [Kenneth S. Blazejewski, Strategic Studies Quarterly, Spring 2008; http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf; Pitman]

I recommend that the United States accept a commitment to forgo placement of weapons in outer space. The costs of space weaponization simply outweigh the benefits. Above, I argue that China would respond to US space weaponization with some level of military buildup. In the least, this response would include the deployment of a more robust ASAT system capable of attacking and potentially eliminating space weapons.52 After all, space weapons, like military satellites, make for vulnerable military targets.53 The use of space-based weapons in a conflict must be discounted by the likelihood that they would be eliminated by Chinese ASAT attack. More importantly, increased ASAT deployment would have the counterproductive effect of exposing US satellites to greater threat. Aside from ASAT issues, Chinese response to US space weaponization would include an increase in China’s ICBM fleet and nuclear arsenal. Vertical proliferation cannot be in the interests of the United States, if only for the increased peacetime risks of accidental launch or the terrorist risk associated with increased availability of weapons technology and components. Finally, the United States should not discount the possibility, often cited by opponents of space weaponization, that the deployment of US space weapons would instigate a space arms race.

# Spending Link

**SB-BMD irrational - Expensive and won't pass**

Theresa, **Hitchens**, Debris, Traffic Management, and Weaponization, **08** Opportunities for and Challenges to Cooperation in Space Politics, 2008, http://media.web.britannica.com/ebsco/pdf/801/33119801.pdf

In addition, China's ASAT test has reenergized both the so-called "China hawks" in Congress and at conservative think tanks and those supporting space-based missile defenses (who increasingly cite China, Iran, and North Korea as not only missile threats but ASAT threats to the United States). For example, Jeff Kueter, president of the right-leaning George C. Marshall Institute, said on 22 January 2007, "If the international community is truly worried about the debris-generating affects of ASAT weapons, then it ought to embrace, indeed demand, development and deployment of boost-phase missile defenses capable of intercepting ASAT missiles long before they reach their satellite targets. Some senior U.S. military leaders, such as Ceneral James Cartwright, head of U.S. Strategic Command, have recendy attempted to dampen concerns about a U.S.-China arms race in space and to advocate for a multi-faceted approach that includes diplomacy." Perhaps Cartwright and others are responding to some of the harsher rhetoric; or perhaps they are more cognizant of the fact that, with regard to U.S. space weapons development, budgetary realities have not kept pace with declaratory policy. A study of the unclassified fiscal year 2008 Pentagon budget request by the World Security Institute's Center for Defense Information, in cooperation with the Secure World Foundation, could find only about $1 billion in potential space weapons-related research and development funding. Given that Democrats have traditionally opposed space weaponization and control both houses of Congress in 2007, a near-term ramp up in such funding seems improbable. Further, a build up of space-based missile defenses and counter-space weapons would require a major investment at a time when the Pentagon budget is under pressure from the ongoing wars in Iraq and Afghanistan. Thus, the willingness of the United States to commit to a full-up strategy of space warfare continues to be somewhat in doubt. Nonetheless, a destabilizing ASAT and space weapons race between China and the United States—one characterized not by tit-for-tat matching of capabilities, but by asymmetric responses—cannot be ruled out.

**New space NMD hurts the economy and provokes an arms race**

Kevin **Norgaard**, LT. Colonel, professor at US Army War College, **02**

US Army War College, “Where Now National Missile Defense?”, 4/9/02, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404491&Location=U2&doc=GetTRDoc.pdf>, [Marcus]

The most significant drawbacks to the Bush plan may be time, money and the risk to the global strategic balance. Because the plan is not focused and so many elements and services are being included, the research, development and test period is likely to be protracted. Likewise, significant fiscal resources will need to be committed to sufficiently mature each of the elements and deploy them when they are ready. A recent Congressional Budget Office (CBO) estimate outlines that the land-based midcourse system could range from $25-$64 billion depending upon whether one, two or three sites are deployed, and a sea-based midcourse system could cost from $43 to 55 billion.61 For boost-phase intercept, the Space-Based Laser would cost $56-68 billion. 62 The CBO did not estimate the cost of a Sea-Based boost-phase intercept system. Because research, development and some elements of each of these systems is common, they can not be added together to get a total cost of the Bush program. However, the costs are useful for comparison purposes. The deployment of all types of missile defense forces advocated by the administration could not be near-term given the need to mature, analyze and select from so many elements. Finally, the Administration's intent to withdraw from the ABM Treaty could cause increased risk to the global strategic balance because Russia and China may perceive our deployment of an NMD system as tipping the balance in favor of the United States. Deployment of the NMD system could drive Russia and China to increase and modernize their strategic arsenals and proliferate ballistic missile technology to third parties.

**Missile Defense costs a lot and fails**

**Snyder and Snyder** (Timothy Snyder received his doctorate from the University of Oxford in 1997, where he was a British Marshall Scholar.  He has held fellowships in Paris and Vienna, and an Academy Scholarship at Harvard. Philip Snyder Unknown) **01** “Why missile defense is a bad idea” 2001 “ http://www.csmonitor.com/2001/0202/p11s2.html”(Pitman)

Missile defense has two basic problems: It can't do what it is supposed to do, and it creates the very threats to American national security it is supposed to resolve. Why won't missile defense work? As a technical matter, it is enormously easier to send a missile up into the air than to destroy a missile coming down from the sky. No known technology could protect Americans from a missile attack. Every test so far has been rigged; even so, nearly every test has been a failure. Physicists largely agree that the technology to build effective national missile defense does not exist. (See the December 2000 issue of Physics Today, or the website of the American Physical Society, [www.aps.org](http://www.aps.org).) Let's assume we were able to hit a missile coming down from the sky, which we are not. Any state that wished to defeat our system could build cheap countermeasures. Just as it will always be easier to send a missile into the sky than to shoot it down from the ground, it will always be cheaper to build countermeasures than it will be to improve missile defense. Against basic physics even the most expensive government programs are powerless.

**Fiscal issues prevent space militarization.**

Gregory **Billman**, Lt Col. and USAF national defense fellow, General Ridgeway Center for International Security Studies **2000**

Pittsburgh University, “The "Space" of Aerospace Power: Why and How”, 5/2000, <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA394062> [Marcus]

The United States could benefit from fully capable spacepower for all of the reasons noted in Part I -- most notably its inherent political and military flexibility. The nation could possibly realize greater spacepower capabilities via many of the changes proposed so far in Part II. Fundamental changes in national, DoD/joint, and service perspectives, as well as organizations, seem necessary harbingers to more capable spacepower. However, in the final analysis, the nation, DoD and the USAF can collectively change their thinking about spacepower, they can also all institute broad organizational changes to herald its advance, but without definitive changes to fiscal priorities, all of their efforts would be for naught. Money makes the world go round -- it also makes things go around the world. As the old saying goes, "No bucks, no Buck Rogers."1 With this in mind, this chapter proposes possible shifts in national, DoD/joint, as well as USAF fiscal issues. Again, this analysis is by no means all encompassing -- there are many other issues involved -- but issues discussed herein seem fundamental to advancing military spacepower capabilities.

**Space weapons implausible – economic and strategic reasons.**

Everett **Dolman**, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies **06**

SAIS Review, “U.S. Military Transformation and Weapons in Space”, 2006, SAIS Review 26.1 (2006) 163-175[Marcus]

The immediate budget impact of significant funding increases for space weapons would be to decrease funding for combat aircraft, the surface battle fleet, and ground forces. This may well set the proponents of space weaponization at odds with both proponents and opponents of increased defense spending. Space advocates must sell their ideas to fellow pro-weapons groups by making the case that the advantages they provide outweigh the capabilities forgone. This is a mighty task. The tens or even hundreds of billions of dollars needed to develop, test and deploy a minimal space weapons system with the capacity to engage a few targets around the world could displace a half-dozen or more aircraft carrier battle groups, entire aircraft procurement programs such as the F-22, and several heavy armored divisions. This is a tough sell for supporters of a strong military.

# Tradeoff Link

**Missile Defense Diverts resources that leaves us venerable to chemical biological and nuclear attacks**

**Snyder and Snyder** (Timothy Snyder received his doctorate from the University of Oxford in 1997, where he was a British Marshall Scholar.  He has held fellowships in Paris and Vienna, and an Academy Scholarship at Harvard. Philip Snyder Unknown) **01** “Why missile defense is a bad idea” 2001 “ http://www.csmonitor.com/2001/0202/p11s2.html”(Pitman)

The hundreds of billions of dollars spent on missile defense would create a false sense of security regarding the very real threat of international terrorism. Missile defense isn't designed to protect Americans from terrorist attacks by means other than ballistic missiles, and ballistic missiles aren't a likely terrorist weapon. The costly attempt to build missile defense diverts resources and attention from prosaic policies that would reduce our vulnerability to attacks by biological, chemical, or nuclear agents. In addition to a misplaced feeling of security, the hundreds of billions of dollars spent on missile defense will purchase international isolation and vulnerability. Our European and Japanese allies oppose national missile defense, arguing that it will bring insecurity and make war much more likely. Both the Europeans and the Japanese anticipate that missile defense will weaken their alliances with the US. Why are they so upset about missile defense?

\*\*\*CPs

# CP: 2 Tiered

**Text: The United States Federal Government should:**

**-create a two tier missile defense emphasizing boost-phase technology**

**-devote a portion of the NMD budget toward improving security and response capabilities**

**-have the system ready by the end of the decade**

**-only develop the technology enough to protect against rogue states**

**-use the technology to protect our allies**

**The CP costs less money than the aff and avoids an arms race with Russia and China while still solving terrorism.**

Kevin **Norgaard**, LT. Colonel, professor at US Army War College, **02**

US Army War College, “Where Now National Missile Defense?”, 4/9/02, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404491&Location=U2&doc=GetTRDoc.pdf>, [Marcus]

James M. Lindsay and Michael E. O'Hanlon of the Brookings Institute in their book, Defending America: The Case for Limited National Missile Defense, offer an alternative to the Bush plan. The objective of the Lindsay/O'Hanlon option is to provide a "modest-scale", two-tier missile defense emphasizing boost-phase technology, while devoting a portion of the NMD budget toward improving security and response capabilities against related dangers.63 They advocate a system that meets the following three criteria.64 First, it would in their view be achievable by the end of the decade. Second, according to Mr. Lindsay and Mr. 0' Hanlon, their plan would be robust enough against the rogue threat, but not threaten the Russian or Chinese arsenals. And finally, it would protect our Allies so that the United States would not be vulnerable to blackmail threats against them. The system envisioned by these gentlemen is a boost phase and midcourse-phase system of 200 interceptors. Fifty interceptors would be based in North Dakota and the others would be spread amongst several boost-phase platforms in the air, on the sea and on foreign territory. However, none of boost-phase systems would be located in a position, or with capability sufficient, to intercept launches from the heartland of China or Russia. 66 Mr. O'Hanlon and Mr. Lindsay realize the finite level of budget authority available and thus propose the more modest system, allowing funds to be available so that the United States can "diversify its homeland defense investment portfolio".67 Lindsay and O'Hanlon estimate the cost of their system at $35 billion. Advantages This system contains fewer elements than the Bush Administration's system. As such, it will cost less than Bush's plan, making additional scarce dollars available for other Homeland security measures. Lindsay and O'Hanlon estimate their system would cost $35 billion. Using the CBO estimate of the Bush program as a guide, we can see that $35 billion is more than the $25 billion CBO estimate for a single site, but less than the total cost of a single site and a boost-phase capability. Therefore, we can argue that the $35 billion figure is realistic, and acceptable for our relative comparison. The system is designed to provide good protection against threats from rogue nations, but is not as robust as the Bush program, and thus would be less capable of defeating attacks from Russia or China. Because of this, and the fact that Lindsay and O'Hanlon would expect their system to only require modifications instead of a total withdrawal from the ABM Treaty, Russia and China would be less likely to increase their nuclear arsenals in response.

# CP: Strategic Posture

**\*\*\*\*\*INSERT CP TEXT\*\*\*\*\***

**Setting up an international strategic posture eliminates all risks of nuclear wars.**

Jacques **Gansler,** Former Under Secretary of Defense for Acquisition, Technology and Logistics, **10**

CENTER FOR TECHNOLOGY AND NATIONAL SECURITY POLICY NATIONAL DEFENSE UNIVERSITY WASHINGTON, DC, “ Ballistic Missile Defense Past and Future, 4/10, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA527876&Location=U2&doc=GetTRDoc.pdf> [Marcus]

In the post-Cold War era, most people in both Russia and the United States believe that a new national security posture is required. In fact, in 2001, Russian President Putin acknowledged the need for a “new architecture of security,”1 an idea later advocated by both President Bush and, later, President Obama. There is widespread agreement that a new strategic posture needs to be one that is mutually agreed to. This should not simply be because it is in writing, but because it will satisfy each nation’s national security needs and is, therefore, self-sustaining. Additionally, there seems to be widespread agreement that there can not simply be a bilateral strategy between the United States and Russia alone. Eventually it will need to include other countries that are affected, from Europe (both the E.U. and individual countries), to China, India, Japan, and others. Finally, there is growing agreement that this new strategic posture should have a balance of both offensive and defensive considerations. Given the issues outlined above, I propose the following 6-point program: 1. The first and primary emphasis must be on proliferation control—not just in terms of preliminary negotiations, but in terms of effective controls and implementation by all countries. This must be done on a bilateral, multi-lateral and worldwide basis. . Thus, the focus needs to be not just on treaties and agreements, but on implementation and monitoring. 2. We must work, proactively, with our allies, as well as Russia and China, to develop a stable new strategic posture—one that includes both offensive and defensive systems. This cooperation is necessary in order to achieve the stability required for mutual security. In fact, in 2009, Russian Foreign Minister Sergei Lavrov stated his insistence that any new nuclear treaty should include agreements on missile defense.2 On the defensive side, the United States must work with Russia on replacing the 1972 Anti-Ballistic Missile Treaty with an agreement that allows limited defenses against rogue states, but bars the United States and Russia from developing defenses that threaten the other’s nuclear deterrent. The two nations must work together in this area, as “confidence building” steps (and similar steps must be taken also with China). In 2007, Russia and the United States began negotiating the sharing of global missile launch data, in a center to be created outside Moscow. And, that same year, Russian President Putin proposed to President Bush the conversion of the Russian-operated radar in Gabala, Azerbaijan into a joint Russian-American BMD facility.3 Both of these examples represent important moves at cooperation and stability. On the offensive side, it is essential that Russia work on enhancing its systems of warning, and command and control; in particular, it must demonstrate a reliable control over any inadvertent missile launch. A major step in this direction would be the reduction of both U.S. and Russian offensive systems from their current “instant-alert” status. (A condition that, fortunately, China has not pursued—so there is far less likelihood of a catastrophic, inadvertent launch.) Additionally, since both Russia and the United States have an extensive overkill capability, in terms of the numbers of strategic warheads that each country has, they should both rapidly move toward an agreement that would dramatically reduce arsenal numbers; however, these efforts must be consistent with both the ability to have a nuclear second strike deterrent and to recognize the presence of each other’s missile defense systems. At the end of the Cold War, the United States had 5400 strategic warheads on land and sea; 1750 nuclear bombs and cruise missiles for airborne delivery by B52’s and B-2’s; 1670 “tactical nuclear weapons”; and approximately 10,000 nuclear weapons in “storage” (to match a potential Russian buildup, in case of a future “breakout” need).4 In January of 1993, President George H. W. Bush and Russian President Boris Yeltsin each agreed to go down to the range of 2000 to 2,500 by the end of 2007. Since then, both countries have been talking abou going down to levels in the range of 1,000 to 1,500 (including in a summit discussion in 2009, between President Obama and President Medvedev), which is still quite adequate to assure mutual destruction of both societies and their military capabilities (this prediction takes into account that a thermonuclear attack on Washington is estimated to kill between 500,000 and 900,000 people, compared to the World Trade Center loss of approximately 3,000 people). 3. Research, development and testing must be continued on options for a limited, national missile defense system that could be deployed within a reasonable time period, and that could be consistent with the new ABM treaty discussed above. The overall design of this system must place an increased emphasis on the multi-national aspects of the system’s architecture, with particular consideration given to allies’ defense. The system must also stay in accordance with the explicit intent to be limited to its capability against small numbers of unsophisticated launches by rogue states, and possibly an inadvertent launch from Russia. But with growth capability to handle increased decoy sophistication from rogue states (still on a limited-quantity basis—consistent with the above-noted treaties). It must be emphasized that, because test flights are so very expensive (for the interceptor, the target, the range implementation, etc.) it is essential that a great deal of effort be expended on modeling and simulation of the many possibilities (e.g. geometries, countermeasures, etc.); and that the test flights themselves be seen as not only proofs of the designs, but primarily as validations of the farlesscostly models and simulations. 4. We must also make sure that deployment planning for the limited, multi-national system is within treaty constraints that have been mutually agreed to. This will help to ensure that it can’t grow to threaten Russia’s, or even China’s, likely treaty-controlled deterrent force in the future. 5. The system should be deployed as soon as it is shown to work effectively. This does not mean it has to be 100 percent effective, but it does mean that it is sufficiently reliable and will be effective against reasonable threat scenarios from rogue states. We must also continue to evolve the capability of this “limited” system in terms of target discrimination, as intelligence inputs indicate an increasing technological sophistication of potential threats. Clearly, the emphasis of this system must be on saving American lives. While this can’t be done perfectly, the decision criterion is that it can be done effectively, in order to warrant the investments and the potential political risks of deployment. Additionally, a major share of the continuing program effort must be devoted to achieving maximum reliability of the overall system (not just the interceptors, but the command and control system, the sensors, the computers, and the communication system that links it all together). This is a mission for which reliability is crucial, and it must receive continuing attention. 6. Finally, it is crucial to defer space-based kill systems deployment because of the potential, perceived threat to Russia and China. However, we must continue to place urgent emphasis on resolving all of the issues associated with items 1 through 5— including, working closely with Russia and China on them. Since any space-based kill system is at least a decade away, a decision on such deployment must wait until we see how much progress can be made in the next few years without it.

# 2nc Solvency Extension

**Multinational systems assist in threat protection.**

Jacques **Gansler,** Former Under Secretary of Defense for Acquisition, Technology and Logistics, **10**

CENTER FOR TECHNOLOGY AND NATIONAL SECURITY POLICY NATIONAL DEFENSE UNIVERSITY WASHINGTON, DC, “ Ballistic Missile Defense Past and Future, 4/10, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA527876&Location=U2&doc=GetTRDoc.pdf> [Marcus]

There has also been an increasing focus on the multinational need to address a combination of anti-proliferation actions and modifications to various treaties. The goal is to maintain the overall strategic regime, established by both the offensive and defensive treaties that have been, or were, in effect for years, and bring them up to date for the new, globalized environment. A focus on international considerations also becomes a high priority, in light of three important facts: 1) threats against our allies significantly impact America’s own options; 2) the United States requires its allies’ cooperation for warning and discrimination enhancing radars on their territories; and, 3) the United States needs geopolitical support if it is to go ahead with its own program.

\*\*\*K Links

# Imperialism

**Space based NMD reinforces and extends American sovereignty in space**

**Duvall and Havercroft** Raymond is on the Editorial Board, International Theory and is a former Assistant Professor, Department of Political Science, Yale University and Jonathan professor of political science at the University of Oklahoma **’08** (Review of international studies, “Taking sovereignty out of this world: space weapons and empire of the future”, 2008, Hopkins)

The first weapons in space will probably be deployed for missile defence. The US military is testing several prototypes of components of such a system, one of which, the MDA Space Test Bed, is being funded as 2008, with the aim of integrating already existing space technologies into a system that, from orbital space, can intercept ballistic missiles in their boost phaseSuch a system, when/if highly effective, replaces mutual deterrence with the singular US capability (perhaps extended to allies) to launch unilateral pre-emptive and preventative attacks freed from concerns of retaliation through ballistic missile counter-attacks. The missile defence system now envisioned by the US thus undermines the logic of mutual deterrence. States not included under its umbrella become increasingly vulnerable to (even nuclear) attack by the state that controls it.35 project of space control is designed to protect commercial and military satellites from potential attacks. Its broader purpose, however, is to prevent rivals from having any access to space for activities antithetical to US interests; this is the imperative for ‘denial of the use of space to adversaries’. Thus space control has dual functions – it is both a privatising of the commons of orbital space and a military exclusion – in a form of ‘inclusive exclusion’.40 Space control represents the extension of US sovereignty into orbital space. Its implementation would reinforce the constitutive effect identified in the previous section on missile defence, namely to reinscribe the ‘hard shell’ border of the US, now extended to include the ‘territory’ of orbital space. US sovereignty is projected out of this world and into orbit. Under Article II of the 1967 Outer Space Treaty, ‘Outer Space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means’. The US project of space control would entail a clear violation of this article.41