# \*\*\*1AC\*\*\*

# 1AC - Plan

**The United States federal government should pursue a defensive space control strategy that emphasizes satellite hardening, replacement, redundancy and situational awareness.**

# 1AC - China Advantage

**An ASAT arms race in space is inevitable – many countries have the capabilities**

**Mackey, 2009 - Air Force Institute of Technology** [Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

Any nation with the space-lift capability to place the necessary payload into LEO could theoretically field a rudimentary ASAT program based upon high explosive warheads or small nuclear warheads. The dual use of civilian and military rockets being developed and placed into operation by several countries (e.g., Israel, Iran, North Korea, and India) opens the door to rapid growth in the number of potential players in the weaponization of space. Primary among the Asian countries is China, a proven player in the ASAT arena. China's growing manned space program- witness its recent success with the Shenzhou spacecraft- reflects its confidence and technological capabilities.40 The pursuit of Chinese unmanned lunar missions, constellations of communications satellites, and plans for a navigational satellite constellation offer further evidence of a developing command and control capability. This series of successes and technological advances fires a sense of national pride and a desire to assert a Chinese presence in space. As China's dependence on satellites grows, so will its vulnerability, forcing senior leaders to pursue a more robust ASAT capability or abandon such efforts entirely. The latter seems unlikely since China considers space one of its five warfare domains.41 Second to China in Asian space capability is Japan. Though not a nuclear armed country, Japan has a demonstrated ability to launch satellites and the technological means to field a viable interceptor. In 2007 that country also launched Kaguya, its first lunar probe, using its self-produced H-2A rocket, which has lifted payloads weighing over four tons and has placed satellites into orbits well beyond LEO.42 In addition, Japan is a primary partner in the development of the SM-3/ Aegis system. It has cooperated recently with the US Missile Defense Agency to design and test the advanced nose cone for the antiballistic missile. The Japanese Defense Force has fielded the SM-3 on its Kongoclass warships and has purchased Patriot Advanced Capablity-3 antiballistic missiles for stationing on the home islands.43 Clearly, Japan has the technical expertise and operational experience to quickly implement an ASAT system. India, another country with a growing organic space-launch capability, so far has launched 10 satellites with its Polar Satellite Launch Vehicle and seeks to produce its Geosynchronous Satellite Launch Vehicle by 2012. This will give India the capacity to place 3.5-ton payloads into geosynchronous orbit.44 India also possesses nuclear-capable ballistic missiles, giving it a de facto ASAT capability. Considering India's rivalry with China and the latter's growing use of satellites, ASAT capabilities may suit Indian strategy. Other Asian countries pursuing space-lift capabilities include, primarily, South Korea, as well as Vietnam, Malaysia, Singapore, and Taiwan.45 The Cold War saw the development, testing, and fielding of rudimentary ASAT capabilities, leading to the cementing of a space policy in treaties and agreements that forbade weapons of mass destruction. With its growing economic power and force modernization (including doctrinal changes), China has sought to leverage asymmetrical means of military power projection, including depriving technology-dependent military forces the use of satellites. China clearly demonstrated this asymmetrical capability when it shot down the Feng Yun-lC satellite. Is it possible that the recent Chinese and American ASAT missions mark the beginning of a second space race, this time with a more sinister and destructive component? As more nations join the ranks of the ASAT-capable countries, survivability must be designed into those satellites critical to national security. Designing and building satellites for the future can be accomplished only through a robust test and development program, with emphasis on reducing vulnerability.

**Chinese tests have sparked a global arms race. Our satellites are vulnerable to other countries ASATs or cyber terrorists, which invites a preemptive strike**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

In an environment where all the stray bullets, mortars and bombs do not simply fall to Earth, but continue to fly around the world for decades, rendering much of the surface of the Earth uninhabitable. Similarly, orbits littered with debris from a kinetic anti-satellite campaign would be useless for the satellites upon which the global economy depends. This fragility represents an Achilles’ heel for the space commons and the U.S. military. The relative dependence of the U.S. on space makes its space systems potentially attractive targets. Many foreign nations and non-state entities are pursuing space-related activities. … An attack on elements of U.S. space systems during a crisis or conflict should not be considered an improbable act. If the U.S. is to avoid a “Space Pearl Harbor” it needs to take seriously the possibility of an attack on U.S. space systems. Burgeoning ASAT Capabilities: A growing number of states have recognized American reliance on space, have access to space, and are developing capabilities to exploit U.S. vulnerabilities. 77 Recent developments demonstrate that access to, and use of, space is becoming increasingly contested. These developments threaten the American way of war, given the U.S. military’s use of space for everything from logistics to Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C3ISR). These developments also threaten the space commons in general: China successfully tested a direct-ascent anti-satelite missile in January 2007, which created over 35,000 pieces of debris larger than 1 centimeter. 78 China also reportedly used lasers to temporarily blind an American satellite in 2006. Russia provided Iraq with GPS jammers in 2003, • which were somewhat successful in countering American precision-strike weapons. 80 Several states and non-state actors have used radio and cyber capabilities to disrupt or degrade an adversary’s space capabilities. Indonesia jammed a Chinese-owned satellite. Iran and Turkey have jammed satellite broadcasts of national dissidents. 81 In 2003, Iran jammed satellite broadcasts of Voice of America, and in March of that year, Iran jammed GPS signals. In 1999, hackers attacked a British satellite via cyberspace. In 2008, Brazilian hackers were arrested for using homemade communications dishes to “hijack” transponders on a U.S. Navy satellite. 82 More recently, the Iranian government reportedly jammed U.S. satellite and radio broadcasts during the protests surrounding its 2009 presidential election. The threshold to access space is lowering, allowing several countries to develop indigenous abilities to access and operate in space. While these efforts are primarily commercial and civilian in focus, many new space programs have military components. In May 2008, Japan’s legislature passed a law ending a ban on the use of its space program for defense. France’s new defense white paper calls for doubling investment in space assets, including spy satellites. In late June, India announced that it would “optimize space applications for military purposes,” and one of its most senior military officers candidly stated: “With time we will get sucked into a military race to protect our space assets, and inevitably there will be a military contest in space. ” 83 Space may, in the coming decades, be more accessible to non-state actors. The high costs associated with developing, putting into orbit, and maintaining assets in space have, to date, kept space a domain for states, but costs are falling. Private companies have been attempting to develop relatively cost-effective space platforms for commercial launch purposes. The companies Scaled Composites and Virgin Galactic have developed a craft, White Knight Two, which they hope will carry a manned space capsule into orbit. In future years, it is possible (if not likely) that advanced high-altitude flight capabilities demonstrated by the White Knight Two will proliferate, making low orbit accessible for actors that do not have the resources to develop a full-fledged space program. The implications of new actors operating within the space commons are potentially significant. Long the domain of the United States and the Soviet Union, space in the coming decades will become more crowded, with inexperienced actors who may not have responsible mentorship of the space commons in mind. Indeed, some may use space to strike at the United States and the international system, a kind of terrorism in zero gravity.

**The US and China are on the brink of an offensive space race – we are responding to their ASAT tests with our own.**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Nonetheless, the specter of a U.S.-China space weapons race cannot be ruled out, and certainly the Chinese ASAT test has raised the profile of those who would take the United States down the same path. “I hope the Chinese test will be a wake up call to people,” said Hank Cooper, former director of President Ronald Reagan’s Strategic Defense Initiative and chairman of the politically-connected missile defense advocacy group High Frontier. “I’d like to see us begin a serious anti-satellite program. We’ve been leaning on this administration. This argument to prevent weaponization of space is really silly.”28 Sen. John Kyl, R-Ariz., addressing the right-wing Heritage Foundation in Washington, D.C., on Jan. 29 similarly called for the U.S. resumption of ASAT weapons testing and the development of a space-based arsenal of defensive and offensive counter-space capabilities.29 Perhaps more worrying, Adm. Timothy Keating, commander of U.S. Northern Command, told the Associated Press that “there are a number of things that are on the list of potential military options”30 if China decides to undertake similar follow up tests.

**Arms control will fail to prevent a space arms race – it assumes impossible distinctions**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

To make their case that we must prevent weap­onization of space, arms controllers insist on mak­ing a number of distinctions that simply fall apart under close scrutiny. First, they distinguish between weapons based in space--so-called satellite weapons--and weap­ons that transit through space, such as ICBMs. ICBMs can take less than two minutes to exit the atmosphere and spend most of their flight time in space. Why doesn't their flight through space result in militarizing space? They distinguish between weapons guided by satellites and those released from satellites. In war, satellites can identify a target through overhead imagery, process communications about that target between military decision makers, and then guide a bomb precisely enough to destroy the target with one shot. Would it really be that big a step if the projectile itself were also launched from space? There is no practical difference, and I'd venture to say that the person on the receiving end wouldn't see a distinction either. They distinguish between offensive and defensive ASAT technology. Programs like Space Situational Awareness and so-called Defensive Counterspace often receive less criticism because they are not "weaponizing" space, but situational awareness of what is in space is crucial both for avoiding attacks and for launching them. Likewise, other than sim­ply "hardening" a satellite, other "defensive" mea­sures can also provide some offensive ASAT capability: for example, giving it an electronic jam­ming capability, or making it more mobile, or giving it a small projectile gun that can destroy an enemy's satellite that gets too close. The distinctions made by the opponents of space security are simply untenable. We live in a world where space is already militarized, and it is impos­sible to prevent weapons from access to space.

**Chinese capabilities and intentions prove they pursue asymmetric warfare -– this is based on readings of Chinese doctrine and law. China exploits international law for their advantage.**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

The lack of transparency in China's military and security affairs poses risks to stability by increasing the potential for misunderstanding and miscalculation. This situation will naturally and understandably lead to hedging against the unknown. 149 Potential adversaries, such as China, may also employ strategic lawfare to limit U.S. command of space. Recognizing its current technological inferiority in space as compared to the United States, China has focused its military efforts on "developing capabilities that target potential vulnerabilities of the United States." 150 This is particularly the case with American dependence on space assets, something China views as America's "soft ribs and strategic weakness." 151 Aware that military options are not a viable choice at this time given the financial, military, and technological gap between it and America, China is beginning to use international law as a means of countering American space power, in part to buy itself time to develop capabilities to take advantage of America's space vulnerabilities. 152 To justify its future military actions in space, China is continually developing doctrine and legal justifications to garner support within the international community. 153 It has, in essence, taken Machiavelli's advice 154 and not only sought to achieve its military objectives through resort to law, but also to legitimize its military actions in case resort to military means become necessary. A. Chinese Lawfare The Chinese view space as an essential arena for future warfare. 155 Rather than attempt to achieve parity and directly compete with U.S. space capabilities, China appears focused on an asymmetric strategy "to deny its opponent use of [space] as much as possible." 156 Thus, China is pursuing means to inhibit American freedom of action in [\*134] space through the development of capabilities to destroy, damage, and interfere with American satellite systems in an effort to blind and deafen the U.S. military in the event of conflict. 157 Complementing its increase in military capabilities, China has embraced asymmetric warfare at a level previously unimagined. 158 Chinese doctrine views warfare as not only "a military struggle, but also a comprehensive contest on fronts of politics, economy, diplomacy, and law." 159 Thus, China appears to eschew the tactical use of lawfare in favor of its strategic use as an "active defense" to be employed in advance of actual conflict and across the spectrum of human activity. 160 The Chinese formulation of full-spectrum warfare is contained in the concept of "Three Warfares" that combines and incorporates psychological, media, and legal components into a coordinated strategy. 161 The legal component describes "the use of international and domestic laws to gain international support and manage possible political repercussions of China's military actions" 162 and advocates seizing "the earliest opportunity to set up regulations." 163 Further, Chinese military doctrine closely intertwines public opinion warfare--media and psychological warfare--and lawfare. Media warfare seeks to manipulate the news media to achieve a propaganda victory and break an enemy's will to fight. 164 Psychological warfare employs the use of "selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups and individuals . . . to induce or reinforce foreign attitudes and behavior favorable to [China]." 165 Thus, China blends lawfare and public opinion warfare in order to achieve international legitimacy for its actions. 166 This strategy [\*135] finds current expression in China's actions regarding the sea--a use of lawfare that has enormous implications for its projected activities in the space domain.

**US / China space conflict inevitable – China is rapidly acquiring capabilities, have demonstrated hostile intent, and China will assert sovereignty claims over space**

**Space and Missile Defense Report 2007** [China Will Attack U.S. Space Assets In Any War; Pentagon Must Field Defenses. (2007, October). Space & Missile Defense, Retrieved June 23, 2011, from ProQuest Technology Journals]  
  
China will drop its adherence to rules barring war in space, in any future conflict with the United States, and attack U.S. space assets, so American forces need to field space defense systems, a noted analyst reported. And Chinese leaders are taking actions signaling they may take on U.S. forces in active combat. "In event of conflict with China, we can expect to see [Chinese] military operations carried out across all the domains of war: land, sea, air, space, and the electromagnetic spectrum" with information warfare and cyber warfare, according to Larry M. Wortzel, a commissioner on the U.S.-China Economic and Security Review Commission (but these views are his own), and a retired Army colonel. Wortzel spoke at a forum of the American Enterprise Institute conservative think tank, a session that focused on his report. The United States must be able to defend itself against such attacks, he continued. "There are ... sound reasons to prepare to defend American interests in space," as well as to attempt to negotiate mutual threat reduction measures, "and to pursue programs that will ensure that the U.S. military will have access to space -- and space-based logistical support -- in any future conflict," Wortzel stated. His comments came after China early this year used a ground- based missile to demolish one of its own aging weather satellites, an impressive demonstration of anti-satellite capability, and also "painted" and temporarily disabled a U.S. military satellite with a ground-based laser. "Any military operations [that the People's Liberation Army (PLA) initiates] in space will be part of a more coordinated attack on an enemy's knowledge and command systems," Wortzel predicted. While the Chinese communist dictatorship is a secretive government that hides its intentions, Wortzel said much can be inferred from actions of the Asian giant. For example, China is laying the legalistic groundwork now for later military aggression in space, he stated. He argued that "the PLA and the Chinese Central Commission will likely justify any of its actions in advance by conducting what it calls 'legal warfare,'" Wortzel asserted. China on the one hand will play along and observe rules saying that space is a commons that should remain peaceful, without warfare. But as soon as China goes to war with another power such as the United States, then suddenly all bets are off, and China will ignore any rules. Wortzel predicted that in any conflict, "altitude limits on space control will be off." Just as China summarily claims jurisdiction over the de facto independent nation of Taiwan, so too China will claim that its sovereign territory extends upward without limit into outer space, rejecting any notion that satellites of other nations have a right to free, peaceful and unfettered passage over Sino territory, according to Worzel. "By observing the military capabilities China is acquiring and reading its literature, we know that China's leaders are preparing as though they might have to fight the United States," he reported. China also will attempt to play off views of some members of Congress and others in the United States that criticize any so- called weaponization of space, he stated.

**Vulnerability of space assets invites a new space war – this would destroy the global economy, US hegemony and increase the risk of accidental nuclear launch**

**Myers, 2008** [lexis Date Accessed: June 23, 2011March 10, 2008 Monday, The International Herald Tribune, Risk of space war: Preparation outruns prevention Steven Lee Myers - The New York Times Media Group]

It does not take much imagination to realize how badly war in space could unfold. An enemy - say, China in a confrontation over Taiwan, or Iran staring down America over the Iranian nuclear program - could knock out the U.S. satellite system in a barrage of antisatellite weapons, instantly paralyzing American troops, planes and ships around the world. Space itself could be polluted for decades to come, rendered unusable. The global economic system would probably collapse, along with air travel and communications. Cellphones would not work. Nor would ATMs and dashboard navigational gizmos. And preventing an accidental nuclear exchange could become much more difficult. ''The fallout, if you will, could be tremendous,'' said Daryl Kimball, executive director of the Arms Control Association in Washington. The consequences of war in space are in fact so cataclysmic that arms control advocates like Kimball would like simply to prohibit the use of weapons beyond the earth's atmosphere. But it may already be too late for that. In the weeks since a U.S. rocket slammed into an out-of-control satellite over the Pacific Ocean, officials and experts have made it clear that the United States, for better or worse, is committed to having the capacity to wage war in space. And that, it seems likely, will prompt others to keep pace. What makes people want to ban war in space is exactly what keeps the Pentagon's war planners busy preparing for it: The United States has become so dependent on space that it has become the country's Achilles' heel. ''Our adversaries understand our dependence upon space-based capabilities,'' General Kevin Chilton, commander of the U.S. Strategic Command, wrote in congressional testimony on Feb. 27, ''and we must be ready to detect, track, characterize, attribute, predict and respond to any threat to our space infrastructure.'' Whatever Pentagon assurances there have been to the contrary, the destruction of a satellite more than 130 miles, or 200 kilometers, above the Pacific Ocean a week earlier, on Feb. 20, was an extraordinary display of what Chilton had in mind - a capacity that the Pentagon under President George W. Bush has tenaciously sought to protect and enlarge. Is war in space inevitable? The idea of such a war has been around since Sputnik, but for most of the Cold War it remained safely within the realm of science fiction and the carefully proscribed U.S.-Soviet arms race. But a dozen countries now can reach space with satellites - and, therefore, with weapons. China strutted its stuff in January 2007 by shooting down one of its own weather satellites 530 miles above the planet. ''The first era of the space age was one of experimentation and discovery,'' a congressional commission reported just before Bush took office in 2001. ''We are now on the threshold of a new era of the space age, devoted to mastering operations in space.'' One of the authors of that report was Bush's first defense secretary, Donald Rumsfeld, and the policy it recommended became a tenet of U.S. policy: The United States should develop ''new military capabilities for operation to, from, in and through space.'' Technology, too, has become an enemy of peace in space. Twenty-five years ago, President Ronald Reagan's Strategic Defense Initiative was considered so fantastical by its critics that it was known as ''Star Wars.'' But the programs Reagan began were the ancestors of the weaponry that brought down the American satellite. The Chinese strike, and now the Pentagon's, have given ammunition to both sides of the debate over war in orbit. Arms control advocates say the bull's-eyes underscore the need to expand the Outer Space Treaty of 1967, which the United States and 90 other countries have ratified. It bans the use of nuclear and other weapons of mass destruction in orbit or on the Moon. Space, in this view, should remain a place for exploration and research, not humanity's destructive side. The grim potential of the latter was hinted at by the vast field of debris that China's test left, posing a threat to any passing satellite or space ship. The Pentagon said its own shot, at a lower altitude, would not have the same effect - the debris would fall to earth and burn up. The risk posed by space junk was the main reason the United States and Soviet Union abandoned antisatellite tests in the 1980s. Michael Krepon, who has written on the militarization of space, said the Chinese test broke an unofficial moratorium that had lasted since then. And he expressed disappointment that the Pentagon's strike had damaged support for a ban, which the Chinese say they want in spite of their 2007 test. ''The truth of the matter is it doesn't take too many satellite hits to create a big mess in low earth orbit,'' he said. The White House, on the other hand, opposes a treaty proscribing space weaponry; Bush's press secretary, Dana Perino, says it would be unenforceable, noting that even a benign object put in orbit could become a weapon if it rammed another satellite. A new American president could reverse that attitude, but he or she would have to go up against the generals and admirals, contractors, lawmakers and others who strongly support the goal of keeping U.S. superiority in space. And so, research continues on how to protect U.S. satellites and deny the wartime use of satellites to potential enemies - including work on lasers and whiz-bang stuff like cylinders of hardened material that could be hurled from space to targets on the ground. ''Rods from God,'' those are called. For now, such weapons remain untested and, by all accounts, impractical because the cost of putting a weapon in orbit is huge. ''It is much easier to hold a target at risk from the land or sea than from space,'' said Elliot Pulham, who heads the Space Foundation, a nonprofit group in Colorado Springs.

**Space race kills crisis stability - Loss of satellites kills hegemony and the economy**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

The implications of these new counterspace developments for peacetime and crisis stability, as well as the conduct of warfare, are profound. The sudden major loss of satellite function would quickly throw U.S. military capabilities back twenty years or more and substantially damage the U.S. and world economies. While backup systems could partially compensate for this loss, U.S. military forces would be significantly weakened. In addition to shoring up its defenses, the United States also needs to better understand China’s evolving and ambiguous space doctrine.

**An accidental launch would lead to retaliatory strikes and extinction within half an hour**

**The American Prospect, 2/26/01**

The bitter disputes over national missile defense (NMD) have obscured a related but dramatically more urgent issue of national security: the 4,800 nuclear warheads -- weapons with a combined destructive power nearly 100,000 times greater than the atomic bomb that leveled Hiroshima -- currently on "hair-trigger" alert. Hair-trigger alert means this: The missiles carrying those warheads are armed and fueled at all times. Two thousand or so of these warheads are on the intercontinental ballistic missiles (ICBMs) targeted by Russia at the United States; 1,800 are on the ICBMs targeted by the United States at Russia; and approximately 1,000 are on the submarine-based missiles targeted by the two nations at each other. These missiles would launch on receipt of three computer-delivered messages. Launch crews -- on duty every second of every day -- are under orders to send the messages on receipt of a single computer-delivered command. In no more than two minutes, if all went according to plan, Russia or the United States could launch missiles at predetermined targets: Washington or New York; Moscow or St. Petersburg. The early-warning systems on which the launch crews rely would detect the other side's missiles within tens of seconds, causing the intended -- or accidental -- enemy to mount retaliatory strikes. "Within a half-hour, there could be a nuclear war that would extinguish all of us," explains Bruce Blair. "It would be, basically, a nuclear war by checklist, by rote."

**Chinese ASAT development will deter the US from protecting Taiwan by exploiting asymmetric vulnerability**

**The Straits Times 2007** [“China takes the arms race into space; It may be testing technology it has acquired but there is a political price”, Jonathan Eyal, Jan 22 Accessed on June 24, 2011 at lexisnexis.com]

LONDON - WESTERN governments have known about Beijing's space efforts for years. The challenge for intelligence services now is to guess what is China's military ultimately seeking to achieve with its reported Jan 11 anti-satellite missile test. China's successful use of what military experts call a 'kinetic kill vehicle' - a missile which destroys a target by hitting it at high speed - may look spectacular, but the technology is well-known; both the United States and the Soviet Union tested it two decades ago. Contrary to received opinion, the Russians and the Americans abandoned their tests not so much because they were worried about the impact on the environment from the large amount of debris, but more because the use of such weapons could have been misinterpreted by an opponent then as the start of a nuclear war. But the world has changed since then. The world's most advanced militaries and much of the global economy rely on satellites. America's predominance in this field is overwhelming: out of about 850 active spacecraft now orbiting the Earth, over half are US-owned. For anyone seriously interested in standing up to the US, the ability to make such satellite vulnerable is not a luxury, but a necessity. And the Chinese military has further incentives to excel in this field. For, unlike the Soviet Union, China never sought to match the Americans weapon-for-weapon but, rather, to develop 'killer' technologies which can wipe out US technological advantages. The Chinese space programme fits perfectly into such strategy. Beijing must have been aware that, by testing its missile capabilities now, it will pay a heavy political price. The chorus of condemnation is extensive, and it includes not only the US, Japan and the European Union, but also Russia, whose military edge is equally threatened. The test also sits awkwardly with repeated Chinese claims of peaceful intentions. And it undermines China's own diplomacy, which has long called for an international treaty to prevent the military use of space. So the most plausible explanation for China's test: it has acquired a technology which it has sought for more than a decade, and was keen to test it. Beijing may have calculated that the political backlash will not matter, since the Americans are already engaged in similar projects. After all, the latest US space policy, outlined in a paper released last October, declared Washington's intention to 'preserve its rights, capabilities and freedom of action in space... and deny, if necessary, adversaries the use of space capabilities hostile to US national interests'. The main Chinese objective may not be a direct confrontation with America, but just to raise the price which the US has to pay in defending Taiwan. The name of the game is what military experts call 'access denial', forcing the US to keep its distance from what Beijing considers as its regional interests. In the short-term, some of America's most important space assets are not threatened, since they fly at much higher altitudes. But the US will have to respond, in a variety of ways. These could include the launch of many smaller satellites, coupled with decoys which can fool Chinese defences. American anti-missile technology will also be improved, in order to deprive Beijing of its advantage. Hardliners in Washington are now gearing up for a new arms race. The Heritage Foundation has already suggested spending 'billions or tens of billions of dollars a year, pretty much year in and year out'. The US Administration may resist such demands for the moment. Yet there is no question that the world has just experienced a historic event. A military race has now moved into space. And America now identifies China as the only country able and willing to challenge its technological supremacy. The future looks rosy for military industries. But not for Asian stability.

**Taiwan is the most plausible scenario for Chinese ASAT attack**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons,date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

War between China and the United States seems unlikely, given their increasing economic interdependence and ongoing efforts in both countries to improve relations. Looming in the background, however, is the possibility of war over Taiwan, a plausible if unlikely scenario that could bring the United States and China into conflict. China might then be tempted to attack U.S. military satellites as a casualty free way to signal resolve, dissuade Washington from further involvement in a Taiwan conflict, and significantly compromise U.S. military capabilities if such dissuasion failed. Such Chinese actions could well escalate any conflict between the United States and China. As a result, both countries have interests in avoiding the actual use of counterspace weapons and shaping a more stable and secure space environment for themselves and other spacefaring nations, which could easily be caught in the undertow of a more militarily competitive space domain.

**Taiwan conflict leads to nuclear Armageddon**

**Strait Times 2000** (June 25, “Regional Fallout: No one gains in war over Taiwan”, Lexis)

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

**China’s capabilities and intentions uniquely represent Genuine threats, A strong response is key to Clarity which avoids misperception, and the Kritik creates Inaction, which worsens the dilemma.**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

QUESTION: I am a student from George Mason University School of Public Policy. We know that, in international relations, a so-called security dilemma often happens. The U.S. suspects the intentions of China, and China also suspects the intention of the U.S. So how can you give a solution to the security dilemma between the U.S. and China, and how can the two nations assure each other that they are not hostile to each other? SENATOR KYL: Probably no country more than China represents this dilemma today with respect to intentions as well as capabilities. It is in the United States' interest to have good relations with a grow­ing, freer, peaceful China, and we look for ways to try to foster that kind of a relationship and influence Chinese development along those lines. But China is a great power, a huge future powerhouse peopled with very smart, well-educated people with a very long history and a long-range view of things as com­pared to our very short-range view sometimes. There are clearly areas in which hostilities between the two countries could quickly become very serious, Taiwan being the most obvious. There are also important areas for both countries that sug­gest that cooperation between the two countries would be the best course of action, and I suspect that both countries are trying to manage this evolv­ing difficult relationship. The area in which I criticize our government is in being sometimes unwilling to speak truth to these issues. Sometimes trying to be too diplomatic cre­ates confusion and uncertainty, and in some areas you need clarity. I understand that in the diplomatic world, some­times you need lack of clarity as well. But when you're talking about two countries with military potential to hurt themselves, you better be pretty clear with each other. Second, I quoted Reagan: We've never had a problem in wars when we were too strong. It's when we've been perceived as being too weak, when we do not respond to potential challenges with strength, that we create the impression that it is pos­sible for a country to gain leverage over us by con­tinuing to push in the direction that they're pushing and that maybe the United States will not respond. Unfortunately, what happens too frequently with the United States is that we don't respond. We want to be left alone. We're all for peace. They clearly can't mean it. Maybe they can be appeased. And then, finally, when the other side has actually com­mitted itself to action adverse to the United States, we wake up to the threat and have to get engaged in a catch-up way, sometimes after a war has been declared against us, and it's too late to save a lot of the lives that could be saved otherwise. So it's better, I think, as you go along, to express our displeasure and to do things which clearly can be seen, by the Chinese in this case, as a serious effort on our part to defend ourselves in the event that the Chinese intentions are not benign and then, finally, to use all of the leverage that we have in dealing with a great country like China.

# 1AC - Hegemony

**US Space Assets are Currently vulnerable – Chinese ASAT tests have proven a threat to our satellites and hegemony**

**Hitchens 2008 - Director of World Security Institute’s Center for Defense Information** [Theresa, leads CDI’s Space Security Project. She serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies:http://kms1.isn.ethz.ch/serviceengine/Files/ISN/31975/ichaptersection\_singledocument/bba43944-559b-431b-8695-aeb531994ec/en/cs5\_chapter2.pdf accessed 6-23-11]

The Chinese ASAT test has raised the question of U.S. space security to a new level of political concern, with a fever pitch of activity gripping Washington policy-making circles and Congress. The vulnerability of U.S. satellites has been starkly highlighted and the need to seriously address those vulnerabilities is now being recognized. “This is a wake-up call,” said Robert Joseph, the undersecretary of state for arms control and international security. “A small number of states are pursuing capabilities to exploit our vulnerabilities,”14 he said. If the ASAT test was a display of PLA sword rattling intended to drive home U.S. vulnerability in space, it has been successful. Indeed, the Chinese action has spurred the already growing consensus around improving space-situational awareness (the ability to “see” and understand what is going on in space), ensuring that satellite systems have passive protections to the extent feasible, and building redundant capabilities – both in space and in other mediums – to guarantee back-up in case of loss.15 While the U.S. Air Force has long been advocating such activities, investment has not been in line with the rhetoric – something that may well change when Bush’s fiscal year 2008 budget begins to be debated in Congress this spring, according to congressional aides from both Republican and Democratic offices. However, if the intent of the Chinese test was to deter the United States from building space-based missile defenses, it may well backfire. Advocates of space-based missile defenses have leaped upon that Chinese ASAT test is proof of the urgent need for a system to counter the Chinese threat. An email press release by the Missile Defense Advocacy Alliance, a pro-missile defense lobby group funded by a number of U.S. defense companies, stated: “China has proven, especially to Iran and North Korea that ballistic missile capability represents power, self defense and an ability to deter. This model of international behavior will only encourage proliferators to develop their ballistic missile capability. … The vulnerability of space assets to Chinese ballistic missile attacks or threats of that capability now exists and has been demonstrated.”16

**Our hegemony depends on Space Assets – the two Iraq wars prove that the military depends on satellites**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

That the process of transformation was well underway became evident in 1991, when the world’s fourth largest military was defeated in just ten days of ground combat. Unfathomably complicated battle equipment, sleek new aircraft, and promising new missile interceptors publicly debuted. Arthur C. Clarke went so far as to dub Operation DESERT STORM (ODS) the world’s first space war, as none of the accomplishments of America’s new look military would have been possible without support from space. Twelve years later, in Operation IRAQI FREEDOM (OIF), assertions as to the central role of space power could no longer be denied. America’s military had transitioned from space supported to a fully space enabled force, with astonishingly positive results. Indeed, most of the nation’s current space power functions were successfully exercised in OIF, including space lift, command and control, intelligence including rapid battle damage assessment, timing and navigation, and meteorological support. The tremendous growth in space reliance from OSD to OIF is evident in the raw numbers. Despite engaging with a 60 percent smaller force (fewer than 200,000 personnel v. over 500,000), satellite communications usage increased four-fold, from 200 to 800 Mbps (Megabits per second) capacity. Newly possible operational concepts such as reach back (intelligence analysts in the United States sending information directly to frontline units) and reach forward (rear-deployed commanders able to direct battlefield operations in real time) reconfigured the tactical concept of war. The value of Predator and Global Hawk Unmanned Aerial Vehicles (UAVs), completely reliant on satellite communications and navigation for their operation, was confirmed. Special Forces units, paradoxically tethered to satellite support and yet practically unfettered in their silent movements because of them, ranged throughout Iraq in independent operations that were extremely disruptive. But the paramount effect of space-enabled warfare was in the area of combat efficiency. Space assets allowed all weather, day-night precision munitions to provide the bulk of America’s striking power. Strikes from standoff platforms, including Vietnam-Era B-52s, allowed maximum target devastation with extraordinarily low death and collateral devastation. In ODS, 90 percent of munitions used were unguided. Of the ten percent that were guided, none was GPS capable. By OIF, 70 percent were precision guided, more than half of those from GPS satellites. In ODS, fewer than five percent of aircraft were GPS-equipped. By OIF, all were. During ODS, GPS proved so valuable to the army that it procured and rushed into theater over 4,500 commercial receivers to augment the meager 800 military-band ones it could deploy from stockpiles, an average of one per company (about 200 personnel). By OIF, each army squad (6-10 soldiers) had at least one military GPS receiver. With such demonstrated utility and reliance, there is no question the US must guarantee space access if it is to be successful in future conflicts. Its military has stepped well over the threshold of a new way of war. It is simply not possible to go back to the violently spasmodic mode of combat typical of pre-space intervention. The United States is now highly discriminating in the projection of violence, parsimonious in the intended breadth of its destruction. For the positive process of transformation to continue, however, space weapons must enter the combat inventory of the United States.

**Space militarization is necessary to prevent hegemony collapse – other nations would capture space control from the US – US control is necessary to prevent global conflict**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

So long as America is the state most likely to acquire a breakthrough technology in this area, my concern is limited to the problem of letting technology take us where it will. But what if an enemy of democratic liberalism should suddenly acquire the means to place quickly and cheaply multiple weapons into orbit? The advantages gained from controlling the high ground of space would accrue to it as surely as to any liberal state, and the concomitant loss of military power from the denial of space to our already-dependent military force could cause the immediate demise of the extant international system. The longer the US dithers on its responsibilities, the more likely a potential opponent could seize low-earth orbit before America could respond. And America would respond … finally. But would another state? If America were to weaponize space today, it is unlikely that any other state or group of states would find it rational to counter in kind. The entry cost to provide the infrastructure necessary is too high; hundreds of billions of dollars, at minimum. The years of investment it would take to achieve a minimal counter-force capability—essentially from scratch—would provide more than ample time for the US to entrench itself in space, and readily counter preliminary efforts to displace it. The tremendous effort in time and resources would be worse than wasted. Most states, if not all, would opt not to counter US deployments in kind. They might oppose US interests with asymmetric balancing, depending on how aggressively America uses its new power, but the likelihood of a hemorrhaging arms race in space should the US deploy weapons there—at least for the next few years—is extremely remote.– This rationality does not dispute the fact that US deployment of weapons in outer space would represent the addition of a potent new military capacity, one that would assist in extending the current period of American hegemony well into the future. This would clearly be threatening, and America must expect severe condemnation and increased competition in peripheral areas. But such an outcome is less threatening than any other state doing so. Placement of weapons in space by the United States would be perceived correctly as an attempt at continuing American hegemony. Although there is obvious opposition to the current international balance of power, the status quo, there is also a sense that it is at least tolerable to the majority of states. A continuation of it is thus minimally acceptable, even to states working towards its demise. So long as the US does not employ its power arbitrarily, the situation would be bearable initially and grudgingly accepted over time. On the other hand, an attempt by any other state to dominate space would be part of an effort to break the land-sea-air dominance of the United States in preparation for a new international order, with the weaponizing state at the top. The action would be a challenge to the status quo, not a perpetuation of it. Such an event would be disconcerting to nations that accept the current international order (including the venerable institutions of trade, finance, and law that operate within it) and intolerable to the US. As leader of the current system, the US could do no less than engage in a perhaps ruinous space arms race, save graciously decide to step aside.

**Effective US Hegemony solves multiple scenarios for nuclear conflict between nationalist regional hegemons – a multipolar or offshore balancing role is a fantasy. Declining hegemony doesn’t prevent any of their turns – the US will be required to re-engage.**

**Robert Kagan, 2007 senior fellow at the Carnegie Endowment for International Peace** [“End of Dreams, Return of History”, 7/19, web)

This is a good thing, and it should continue to be a primary goal of American foreign policy to perpetuate this relatively benign international configuration of power. The unipolar order with the United States as the predominant power is unavoidably riddled with flaws and contradictions. It inspires fears and jealousies. The United States is not immune to error, like all other nations, and because of its size and importance in the international system those errors are magnified and take on greater significance than the errors of less powerful nations. Compared to the ideal Kantian international order, in which all the world ’s powers would be peace-loving equals, conducting themselves wisely, prudently, and in strict obeisance to international law, the unipolar system is both dangerous and unjust. Compared to any plausible alternative in the real world, however, it is relatively stable and less likely to produce a major war between great powers. It is also comparatively benevolent, from a liberal perspective, for it is more conducive to the principles of economic and political liberalism that Americans and many others value. American predominance does not stand in the way of progress toward a better world, therefore. It stands in the way of regression toward a more dangerous world. The choice is not between an American-dominated order and a world that looks like the European Union. The future international order will be shaped by those who have the power to shape it. The leaders of a post-American world will not meet in Brussels but in Beijing, Moscow, and Washington. The return of great powers and great games If the world is marked by the persistence of unipolarity, it is nevertheless also being shaped by the reemergence of competitive national ambitions of the kind that have shaped human affairs from time immemorial. During the Cold War, this historical tendency of great powers to jostle with one another for status and influence as well as for wealth and power was largely suppressed by the two superpowers and their rigid bipolar order. Since the end of the Cold War, the United States has not been powerful enough, and probably could never be powerful enough, to suppress by itself the normal ambitions of nations. This does not mean the world has returned to multipolarity, since none of the large powers is in range of competing with the superpower for global influence. Nevertheless, several large powers are now competing for regional predominance, both with the United States and with each other. National ambition drives China’s foreign policy today, and although it is tempered by prudence and the desire to appear as unthreatening as possible to the rest of the world, the Chinese are powerfully motivated to return their nation to what they regard as its traditional position as the preeminent power in East Asia. They do not share a European, postmodern view that power is pass é; hence their now two-decades-long military buildup and modernization. Like the Americans, they believe power, including military power, is a good thing to have and that it is better to have more of it than less. Perhaps more significant is the Chinese perception, also shared by Americans, that status and honor, and not just wealth and security, are important for a nation. The Chinese do not share the view that power is passé; hence their now twodecades- long military buildup. Japan, meanwhile, which in the past could have been counted as an aspiring postmodern power — with its pacifist constitution and low defense spending — now appears embarked on a more traditional national course. Partly this is in reaction to the rising power of China and concerns about North Korea ’s nuclear weapons. But it is also driven by Japan’s own national ambition to be a leader in East Asia or at least not to play second fiddle or “little brother” to China. China and Japan are now in a competitive quest with each trying to augment its own status and power and to prevent the other ’s rise to predominance, and this competition has a military and strategic as well as an economic and political component. Their competition is such that a nation like South Korea, with a long unhappy history as a pawn between the two powers, is once again worrying both about a “greater China” and about the return of Japanese nationalism. As Aaron Friedberg commented, the East Asian future looks more like Europe ’s past than its present. But it also looks like Asia’s past. Russian foreign policy, too, looks more like something from the nineteenth century. It is being driven by a typical, and typically Russian, blend of national resentment and ambition. A postmodern Russia simply seeking integration into the new European order, the Russia of Andrei Kozyrev, would not be troubled by the eastward enlargement of the eu and nato, would not insist on predominant influence over its “near abroad,” and would not use its natural resources as means of gaining geopolitical leverage and enhancing Russia ’s international status in an attempt to regain the lost glories of the Soviet empire and Peter the Great. But Russia, like China and Japan, is moved by more traditional great-power considerations, including the pursuit of those valuable if intangible national interests: honor and respect. Although Russian leaders complain about threats to their security from nato and the United States, the Russian sense of insecurity has more to do with resentment and national identity than with plausible external military threats. 16 Russia’s complaint today is not with this or that weapons system. It is the entire post-Cold War settlement of the 1990s that Russia resents and wants to revise. But that does not make insecurity less a factor in Russia ’s relations with the world; indeed, it makes finding compromise with the Russians all the more difficult. One could add others to this list of great powers with traditional rather than postmodern aspirations. India ’s regional ambitions are more muted, or are focused most intently on Pakistan, but it is clearly engaged in competition with China for dominance in the Indian Ocean and sees itself, correctly, as an emerging great power on the world scene. In the Middle East there is Iran, which mingles religious fervor with a historical sense of superiority and leadership in its region. 17 Its nuclear program is as much about the desire for regional hegemony as about defending Iranian territory from attack by the United States. Even the European Union, in its way, expresses a pan-European national ambition to play a significant role in the world, and it has become the vehicle for channeling German, French, and British ambitions in what Europeans regard as a safe supranational direction. Europeans seek honor and respect, too, but of a postmodern variety. The honor they seek is to occupy the moral high ground in the world, to exercise moral authority, to wield political and economic influence as an antidote to militarism, to be the keeper of the global conscience, and to be recognized and admired by others for playing this role. Islam is not a nation, but many Muslims express a kind of religious nationalism, and the leaders of radical Islam, including al Qaeda, do seek to establish a theocratic nation or confederation of nations that would encompass a wide swath of the Middle East and beyond. Like national movements elsewhere, Islamists have a yearning for respect, including self-respect, and a desire for honor. Their national identity has been molded in defiance against stronger and often oppressive outside powers, and also by memories of ancient superiority over those same powers. China had its “century of humiliation.” Islamists have more than a century of humiliation to look back on, a humiliation of which Israel has become the living symbol, which is partly why even Muslims who are neither radical nor fundamentalist proffer their sympathy and even their support to violent extremists who can turn the tables on the dominant liberal West, and particularly on a dominant America which implanted and still feeds the Israeli cancer in their midst. Islamists have more than a century of humiliation to look back on. Israel has become its living symbol. Finally, there is the United States itself. As a matter of national policy stretching back across numerous administrations, Democratic and Republican, liberal and conservative, Americans have insisted on preserving regional predominance in East Asia; the Middle East; the Western Hemisphere; until recently, Europe; and now, increasingly, Central Asia. This was its goal after the Second World War, and since the end of the Cold War, beginning with the first Bush administration and continuing through the Clinton years, the United States did not retract but expanded its influence eastward across Europe and into the Middle East, Central Asia, and the Caucasus. Even as it maintains its position as the predominant global power, it is also engaged in hegemonic competitions in these regions with China in East and Central Asia, with Iran in the Middle East and Central Asia, and with Russia in Eastern Europe, Central Asia, and the Caucasus. The United States, too, is more of a traditional than a postmodern power, and though Americans are loath to acknowledge it, they generally prefer their global place as “No. 1” and are equally loath to relinquish it. Once having entered a region, whether for practical or idealistic reasons, they are remarkably slow to withdraw from it until they believe they have substantially transformed it in their own image. They profess indifference to the world and claim they just want to be left alone even as they seek daily to shape the behavior of billions of people around the globe. The jostling for status and influence among these ambitious nations and would-be nations is a second defining feature of the new post-Cold War international system. Nationalism in all its forms is back, if it ever went away, and so is international competition for power, influence, honor, and status. American predominance prevents these rivalries from intensifying — its regional as well as its global predominance. Were the United States to diminish its influence in the regions where it is currently the strongest power, the other nations would settle disputes as great and lesser powers have done in the past: sometimes through diplomacy and accommodation but often through confrontation and wars of varying scope, intensity, and destructiveness. One novel aspect of such a multipolar world is that most of these powers would possess nuclear weapons. That could make wars between them less likely, or it could simply make them more catastrophic. It is easy but also dangerous to underestimate the role the United States plays in providing a measure of stability in the world even as it also disrupts stability. For instance, the United States is the dominant naval power everywhere, such that other nations cannot compete with it even in their home waters. They either happily or grudgingly allow the United States Navy to be the guarantor of international waterways and trade routes, of international access to markets and raw materials such as oil. Even when the United States engages in a war, it is able to play its role as guardian of the waterways. In a more genuinely multipolar world, however, it would not. Nations would compete for naval dominance at least in their own regions and possibly beyond. Conflict between nations would involve struggles on the oceans as well as on land. Armed embargos, of the kind used in World War i and other major conflicts, would disrupt trade flows in a way that is now impossible. Such order as exists in the world rests not only on the goodwill of peoples but also on American power. Such order as exists in the world rests not merely on the goodwill of peoples but on a foundation provided by American power. Even the European Union, that great geopolitical miracle, owes its founding to American power, for without it the European nations after World War ii would never have felt secure enough to reintegrate Germany. Most Europeans recoil at the thought, but even today Europe ’s stability depends on the guarantee, however distant and one hopes unnecessary, that the United States could step in to check any dangerous development on the continent. In a genuinely multipolar world, that would not be possible without renewing the danger of world war. People who believe greater equality among nations would be preferable to the present American predominance often succumb to a basic logical fallacy. They believe the order the world enjoys today exists independently of American power. They imagine that in a world where American power was diminished, the aspects of international order that they like would remain in place. But that ’s not the way it works. International order does not rest on ideas and institutions. It is shaped by configurations of power. The international order we know today reflects the distribution of power in the world since World War ii, and especially since the end of the Cold War. A different configuration of power, a multipolar world in which the poles were Russia, China, the United States, India, and Europe, would produce its own kind of order, with different rules and norms reflecting the interests of the powerful states that would have a hand in shaping it. Would that international order be an improvement? Perhaps for Beijing and Moscow it would. But it is doubtful that it would suit the tastes of enlightenment liberals in the United States and Europe. The current order, of course, is not only far from perfect but also offers no guarantee against major conflict among the world ’s great powers. Even under the umbrella of unipolarity, regional conflicts involving the large powers may erupt. War could erupt between China and Taiwan and draw in both the United States and Japan. War could erupt between Russia and Georgia, forcing the United States and its European allies to decide whether to intervene or suffer the consequences of a Russian victory. Conflict between India and Pakistan remains possible, as does conflict between Iran and Israel or other Middle Eastern states. These, too, could draw in other great powers, including the United States. Such conflicts may be unavoidable no matter what policies the United States pursues. But they are more likely to erupt if the United States weakens or withdraws from its positions of regional dominance. This is especially true in East Asia, where most nations agree that a reliable American power has a stabilizing and pacific effect on the region. That is certainly the view of most of China ’s neighbors. But even China, which seeks gradually to supplant the United States as the dominant power in the region, faces the dilemma that an American withdrawal could unleash an ambitious, independent, nationalist Japan. Conflicts are more likely to erupt if the United States withdraws from its positions of regional dominance. In Europe, too, the departure of the United States from the scene — even if it remained the world’s most powerful nation — could be destabilizing. It could tempt Russia to an even more overbearing and potentially forceful approach to unruly nations on its periphery. Although some realist theorists seem to imagine that the disappearance of the Soviet Union put an end to the possibility of confrontation between Russia and the West, and therefore to the need for a permanent American role in Europe, history suggests that conflicts in Europe involving Russia are possible even without Soviet communism. If the United States withdrew from Europe — if it adopted what some call a strategy of “offshore balancing” — this could in time increase the likelihood of conflict involving Russia and its near neighbors, which could in turn draw the United States back in under unfavorable circumstances. It is also optimistic to imagine that a retrenchment of the American position in the Middle East and the assumption of a more passive, “offshore” role would lead to greater stability there. The vital interest the United States has in access to oil and the role it plays in keeping access open to other nations in Europe and Asia make it unlikely that American leaders could or would stand back and hope for the best while the powers in the region battle it out. Nor would a more “even-handed” policy toward Israel, which some see as the magic key to unlocking peace, stability, and comity in the Middle East, obviate the need to come to Israel ’s aid if its security became threatened. That commitment, paired with the American commitment to protect strategic oil supplies for most of the world, practically ensures a heavy American military presence in the region, both on the seas and on the ground. The subtraction of American power from any region would not end conflict but would simply change the equation. In the Middle East, competition for influence among powers both inside and outside the region has raged for at least two centuries. The rise of Islamic fundamentalism doesn ’t change this. It only adds a new and more threatening dimension to the competition, which neither a sudden end to the conflict between Israel and the Palestinians nor an immediate American withdrawal from Iraq would change. The alternative to American predominance in the region is not balance and peace. It is further competition. The region and the states within it remain relatively weak. A diminution of American influence would not be followed by a diminution of other external influences. One could expect deeper involvement by both China and Russia, if only to secure their interests. 18 And one could also expect the more powerful states of the region, particularly Iran, to expand and fill the vacuum. It is doubtful that any American administration would voluntarily take actions that could shift the balance of power in the Middle East further toward Russia, China, or Iran. The world hasn ’t changed that much. An American withdrawal from Iraq will not return things to “normal” or to a new kind of stability in the region. It will produce a new instability, one likely to draw the United States back in again. The alternative to American regional predominance in the Middle East and elsewhere is not a new regional stability. In an era of burgeoning nationalism, the future is likely to be one of intensified competition among nations and nationalist movements. Difficult as it may be to extend American predominance into the future, no one should imagine that a reduction of American power or a retraction of American influence and global involvement will provide an easier path.

# 1AC - Solvency

**Building defensive weapons under a deterrence based doctrine will prevent a conflict with China. This prevents a destabilizing arms race with China.**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

The United States faces challenging choices in responding to this new space environment and must respond wisely as well as vigorously to protect the security interests of itself and its allies. Imprudent choices could create a self-fulfilling prophecy, spurring China, for reasons of security or national pride—or both—to accelerate its counterspace efforts in such a way that both the United States and China would be worse off. With so many different ways to attack space assets, it is much easier and less costly to attack spacecraft than defend them. Thus, a U.S. or Chinese doctrine of space dominance seems likely to fail. Provocative military postures can result in more adversarial efforts than nonprovocative postures. The United States would never accept Chinese hegemony in space, and as their ASAT test strongly implies, China seems unlikely to accept U.S. hegemony or dominance. Developing defensive and offensive capabilities to defend U.S. space assets from attack is a legitimate act of self-defense, though it will be best accomplished at reasonable cost if integrated into an overall doctrine of space deterrence. Current U.S. space policy contains a potential problem when it states that the United States will “deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests.” This creates a possible conflict with the same policy’s statement that U.S. space capabilities are “vital to its national interests,” given that U.S. attacks on the space capabilities of others run a high risk of sparking counterattacks, and the costs of hardening U.S. systems against similar attacks are so high. This tension has remained largely unaddressed for nearly two years. Washington needs to consider the costs and benefits of such attacks and address them in policy and force doctrines. The implication of current policy is that others, not the United States, must make trade-offs in space, yet it is highly unlikely that China and other spacefaring nations will accept substantially subordinate status, or that the United States would make the substantial investments required to enforce such a dominant position. If the United States can resist the urge to overreach, it may be able to achieve a more stable, less costly military space posture and doctrine that could maintain a measure of U.S. space superiority, based on the strategic nuclear balance precedent. The United States could preserve space superiority relative to China, deriving more benefit from space than China does and retaining more offensive capability, though China would still keep its ability to deter the United States from attacking China’s growing space capability. Such a capability appears well within China’s reach, in spite of Washington’s wishes otherwise. Over the long term, deterrence-based superiority would be grounded in the reality of the difficulty of maintaining dominance in space, and the fundamental vulnerability of space-based weapons both to other space-based weapons as well as to ground-based counterspace weapons, especially directed-energy weapons. Deterrence-based superiority would be less costly to maintain than dominance and could be substantially more stable under the proper conditions, though neither achievement nor maintenance would be simple. At a minimum, it will require the anchoring of offensive counterspace capabilities within deterrence doctrine, healthy U.S.-China relations that avoid provocative rhetoric, continued dialogue, and confidence-building measures (CBM). Such a deterrence posture would also require the weapons systems to support it. Their precise characteristics are beyond the scope of this paper, but they should embody the criteria listed on page twenty. Jammers, lasers, and other forms of reversible electronic and electrooptical offense should be considered. Given the demonstrated counterspace capability of minimally modified missile-defense interceptors, some inherent kinetic energy antisatellite (KE-ASAT) capability is inevitable; however, bans on testing against satellites could limit its effect. A vigorous, defensive counterspace program should accompany these steps.

**Defensive space measures preserve US satellite security – situational awareness, hardening and relaunch deter Chinese attacks and secures satellites in case of accidents**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

China demonstrated their ability to employ an anti-satellite weapon when it destroyed one of its own weather satellites in 2007. While it does not publish a public national military strategy, several Chinese military authors advocate the use of anti-satellite technologies as an asymmetric weapon to counter the superior conventional capabilities of the United States. Towards this aim, China has developed both kinetic and non-kinetic weapons along with associated supporting infrastructure to target United States low Earth orbit satellites. The United States currently has little capability to defend against an attack on its satellites. As an initial step, the Department of Defense established the Operationally Responsive Space program to address emerging threats. The United States should use current, primarily commercial, technologies to increase its Space Situational Awareness, develop flexible and rapid launch platforms, field small satellites, decrease its dependence on space systems, defend against high-altitude nuclear explosions, and execute institutional changes. Done with transparency, these changes should deter China from employing its. anti-satellite weapons. If deterrence fails, these same changes will also enable the United States to rapidly reconstitute its space systems. As a long-term effort to counter the Chinese threat, the United States must work with China to make it an active stakeholder in space activities; collateral damage from anti-satellite weapons would then threaten China and deter them from using anti-satellite weapons. These recommendations will also help protect United States satellites from other adversaries, accidents, and natural phenomena. Conclusion: The United States can use currently available technologies to quickly build deterrence to China's anti-satellite threat to low Earth orbit satellites. These recommendations will also enable the United States to operate its satellites through an attack and rapidly reconstitute its constellations.

**Defending space is the best way to head off an arms race – raising the ante convinces other countries that the race is not worth the cost**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

EDWARD ROUTER, SUNSHINE PRESS: Giv­en the asymmetrical nature of offense versus defense in space, are you concerned about the costs that would be involved in a space arms race, both to defend our satellites and to develop offensive capa­bilities against a Chinese economy that's booming? SENATOR KYL: That's a very interesting ques­tion, because your mind immediately goes back to the Reykjavik Summit and the Reagan decision to move forward with then-called SDI and the subse­quent Soviet belief that it would be very difficult to beat us in that particular arms race. I think that the same thing is true here. Clearly, the United States has such an edge on this technology and such a robust capability financially to engage in this kind of effort that countries like China, for example, would rather not have to engage in the arms race in the sense that we leave the field to them. If they could somehow figure out a way to bind us through some kind of a treaty, I think that would be their dream. Knowing that they might have to actually compete with us in such a race would pose serious problems for them. I don't mean just the Chinese here. I mean anybody else as well. Your question assumed the asymmetric nature of this, and there is an asymmetric quality to it which might favor, just hypothetically speaking, a country like Iran, for example, only having to use a medium-range missile, and certainly with some kind of a crude nuclear warhead, an electromagnetic pulse, to do the job. Otherwise, the Chinese technology of the kinetic impact would be required. I would suggest that, even though there is an asymmetric aspect to this--namely, that it might be easier to take out the satellite than it is to defend against it--that's not as easy as it seems in terms of our capability for both passive and active measures and things that we could do if we really got serious about it. In any event, even if there is an asymmetry to the problem, given the challenge that we have, the importance of maintaining our ability to defend our assets, we have no choice but to ensure that we have the technology to do that.

**Shifting our focus to defensive counterspace capabilities would increase space security – it deters China and avoids accidents and misperceptions**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

The September 2008 Council on Foreign Relations Report China, Space Weapons, and Us. Security argues that US policy does not provide a framework to address counterspace matters. The high cost of maintaining space dominance compared to the relatively low cost to attack that dominance favors a deterrence-based strategy. The Council endorses a comprehensive approach to dealing with the Chinese counter space threat: policies that focus on stability, deterrence, escalation control; an in-depth layer approach; reduce incentives to and capability of adversary to attach space systems; and increased warning time to enable defensive actions. In developing capabilities, the United States should consider their contribution to stability and deterrence while incorporating a wide spectrum of defensive capabilities. Commander John Klein proposes that the United States develop a comprehensive defensive strategy to ensure access to "celestial lines of communication."3 He argues that past space strategies were overly focused on the offensive due to the influence of strategists like Mahan, Douhet, and Mitchell. 32 Recognizing that defensive measures assure access to and use of space, the United States through policy and action must focus on defensive strategies. Properly developed space strategies should provide "a measure of self-defense against a surprise attack, control over the escalation of a conflict, and minimize the most devastating enemy counterattacks.,,33 The aforementioned reasons support a focused defensive strategy that will deter a Chinese attack and recover capability if deterrence fails.

**A defensive space policy enhances deterrence and recovery**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Although exposed to both offensive and defensive counterspace activities throughout my career as an Air Force space operator, I have observed a disproportionate focus on the offensive. Defensive efforts have generally been reactive rather than proactive, potentially leaving the United States vulnerable to an opportunistic adversary or natural event. Recent events have highlighted the need to protect the United States' space capabilities: Iraq's use of GPS jammers, China's destruction of an aging weather satellite, the collision between a Russian military satellite and iridium commercial satellite, and the resumption of the Russian anti-satellite program. The United States must develop a defensive strategy that proactively employs capabilities that will deter adversaries and, if necessary, enable rapid recovery. Developing a strategy to counter China's low Earth orbit anti-satellite weapons is merely a starting point. Threats, man-made and natural, will continue to grow and so must our ability to protect our space assets.

# \*\*\*INHERENCY\*\*\*

# Extend - Inherency

**[ ] Plan won’t pass now – Congress and State Department are oblivious to the threat**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

It is especially troubling that key policymakers seem oblivious to the nature and the urgency of this threat. My colleague Joe Biden, chairman of the For­eign Relations Committee, said of the Chinese test: "I don't think we should be overly worried about this at this point. We have ways to deal with that ability."[4] As an eight-year member of the Senate Intelligence Committee, I can tell you that this is not a responsible or an accurate statement. Moreover, capabilities that might help defend against missile-launched ASATs, such as boost-phase missile defense based in space, are always opposed vigor­ously by Senator Biden and a majority of his Demo­cratic colleagues. Perhaps even more troubling, our own State Department seems to be missing the point. A department spokesperson, Tom Casey, said last Fri­day: "We know the Chinese conducted this test. We certainly want to hear from them in a more detailed way exactly what their intentions are.... We don't want to see a situation where there is any militariza­tion of space."[5] I think it's worth parsing this state­ment in some depth to show the level of confusion in our government.

**[ ] The US doesn’t have a coherent Space militarization plan yet**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

But the country lacks a unified, coherent approach to expanding the use of space to improve combat effectiveness, a problem that is compounded by a politically charged debate over weapons in space.1 Critics contend that weapons in space would destabilize existing security relationships, precipitate an arms race, undermine U.S. foreign policy, and seed anti-American coalitions. Not only are such criticisms based on questionable assumptions,2 but they also have not persuaded the country to forgo the advantages of space weapons. The most one could say at this stage is that the American people are indifferent, noncommittal, and confused.

# \*\*\*ASAT ARMS RACE\*\*\*

# Space Race Inevitable - Capabilities

[ ] Space arms race inevitable, all countries developing weapons

Sands, 2008 [By David R. Sands, The Washington Times June 25;China, India hasten arms race in space, Lexis, Access Date: June 21 China, India hasten arms race in space; U.S. dominance challenged]

On the planet's final frontier, more and more countries are beefing up their border guards. India became the latest country to boost its defense presence in space, announcing last week plans to develop a military space program to counter the fast-growing space defense efforts of neighboring China. India, which has an extensive civilian space satellite program, must "optimize space applications for military purposes," army Chief of Staff Gen. Deepak Kapoor said at a defense conference in New Delhi. "The Chinese space program is expanding at an exponentially rapid pace in both offensive and defensive content." Last month, Japanese lawmakers passed a bill ending a decades-old ban on the use of the country's space programs for defense, although officials in Tokyo insist that the country has no plans to develop a military program in space. French President Nicolas Sarkozy, in the first major review of France's defense and security policy in more than a decade, has proposed nearly doubling spending for space intelligence assets, including spy satellites, to more than $1 billion annually. "I don't think what you are seeing is coincidental," said Wade Boese, a researcher at the Washington-based Arms Control Association. "Countries are increasingly aware of the potential for military development in space, and increasingly aware that other countries are moving ahead." The issue of an arms race in space took on new prominence in January 2007, when China stunned Western military analysts by using a medium-range ballistic missile to shoot down a defunct weather satellite. Pentagon planners said two orbiting U.S. spacecrafts were forced to change course to avoid being hit by the thousands of pieces of space debris caused by the surprise test. China insists the exercise was not conducted for military reasons. "We are against weaponization or an arms race in space," Zhou Wenzhong, China's ambassador to the United States, said in an interview at The Washington Times earlier this month. "This was a scientific experiment." But in what many around the world saw as at least in part a return salvo to the Chinese action, the U.S. Navy in February shot down a wayward U.S. spy satellite over the Pacific, arguing that the action was needed to prevent the craft from crashing to Earth and spreading potentially toxic fuel. India, which competes for influence with China even as trade relations between the two Asian giants have blossomed, made no effort to hide its concerns about Beijing's plans for space. "With time we will get sucked into a military race to protect our space assets and inevitably there will be a military contest in space," Lt. Gen. H.S. Lidder, one of India's most senior officers, said last week in comments reported by the Indian Express newspaper and confirmed by the country's defense ministry. "In a life-and-death scenario, space will provide the advantage," Gen. Lidder said. Although the United States holds a vast technological and spending edge in space defense programs, the military's reliance on satellites and space-based assets exposes the United States more than any other country to military threats in space. Nancy Gallagher and John D. Steinbruner, researchers at the University of Maryland's Center for International Studies, argue in a study that the Pentagon cannot hope to dominate space through technological and material superiority. The United States will not be able to "outspend and out-innovate all potential rivals in space," the two argue in a "white paper" just published by the American Academy of Arts and Sciences. Aides to Sen. Barack Obama, Illinois Democrat, and Sen. John McCain, Arizona Republican, are staking out markedly different stands on the space arms race as the presidential campaign heats up. "We don't need more battlegrounds," Steve Robinson, an Obama campaign adviser, said in a debate at the National Space Society's annual meeting in May in Washington. "The idea of militarization of space is not something that Senator Obama is in favor of, and cooperation is better than confrontation." Floyd DesChamps, a Senate Commerce, Science and Transportation Committee staffer representing Mr. McCain, said the senator from Arizona recognizes the need to defend U.S. space assets from hostile attack. "The reality is that we have to protect those assets," he said.

**[ ] Space arms race now – many nations obtaining military satellites, low costs, and blurring with civilian assets**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011.

During the Cold War, states allied with either the US or the USSR benefited from their capabilities. Today, declining costs for space access and the proliferation of space technology enable more states to develop and deploy military satellites. Until 1988, when Israel launched its first, only the UK, NATO, and China had joined the US and USSR in launching dedicated military satellites. In 1995 France and Chile both launched military satellites (see Figure 6.7).107 Historically, military satellites outside the US and Russia have been almost exclusively intended for communications and imagery intelligence. Recently, however, states such as China, France, Germany, Japan, Italy, and Spain have been developing satellites with a wider range of functions. According to a recent report, security has become a key driver of established government space programs, pushing spending higher, and encouraging dual-use applications.108 Indeed, in the absence of dedicated military satellites, many actors use their civilian satellites for military purposes or purchase data and services from satellite operators.o Such activities contribute to the blurring of the divide between military and civilian and commercial space assets and applications.

**[ ] Space race inevitable - Other countries space capabilities are increasing now**

**UPI 2011** [U.S. wary of China space weapons, 2-8-11 <http://www.upi.com/Business_News/Security-Industry/2011/02/08/US-wary-of-China-space-weapons/UPI-36951297196877/>, Date accessed: June 26, 2011]

Senior Pentagon officials are sounding concern over China's development of weapons designed to shoot down satellites or jam communication signals. U.S. Deputy Secretary of Defense for Space Policy Gregory Schulte said China's project was becoming a "matter of concern" for the United States. Space, he told defense and intelligence officials while unveiling a 10-year strategy for security in space, "is no longer the preserves of the United States and the Soviet Union, at the time in which we could operate with impunity." "There are more competitors, more countries that are launching satellites ... and we increasingly have to worry about countries developing counter-space capabilities that can be used against the peaceful use of space." In 2007, China shot an obsolete weather satellite with a ground missile, creating so much space junk that crew members on the International Space Station had to change orbit to avert a collision last year. Schulte said in his remarks that U.S. concerns had prompted U.S. Defense Secretary Robert Gates to seek to include space in stability talks being pursued with the Chinese. The official said China's capabilities were going beyond shooting at spacecraft. Beijing's counter-space activities include jamming satellite signals. It is also in the process of developing directed energy weapons that emit a disabling burst of energy toward a target rather than firing a projectile at it. Other countries believed to be developing counter-space technology include Iran and Ethiopia.

**[ ] Space Arms race now – Chinese ASAT tests will cause American Reactions**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Nonetheless, the specter of a U.S.-China space weapons race cannot be ruled out, and certainly the Chinese ASAT test has raised the profile of those who would take the United States down the same path. “I hope the Chinese test will be a wake up call to people,” said Hank Cooper, former director of President Ronald Reagan’s Strategic Defense Initiative and chairman of the politically-connected missile defense advocacy group High Frontier. “I’d like to see us begin a serious anti-satellite program. We’ve been leaning on this administration. This argument to prevent weaponization of space is really silly.”28 Sen. John Kyl, R-Ariz., addressing the right-wing Heritage Foundation in Washington, D.C., on Jan. 29 similarly called for the U.S. resumption of ASAT weapons testing and the development of a space-based arsenal of defensive and offensive counter-space capabilities.29 Perhaps more worrying, Adm. Timothy Keating, commander of U.S. Northern Command, told the Associated Press that “there are a number of things that are on the list of potential military options”30 if China decides to undertake similar follow up tests.

[ ] Chinese ASAT tests cause space militarization race - experts prove it opens the floodgates

Harnden, 2007 [Toby Harnden and Alex Massie Jan 19; Chinese Missile Destroys Satellite in Space Lexis, Access Date: June 21, 2011 []](http://www.lexisnexis.com.proxy.lib.umich.edu/hottopics/lnacademic/?%5D)

THE PROSPECT of "star wars'' between China and the West loomed last night after Beijing used a ballistic missile to destroy a satellite in space. The missile, which scored a direct hit on a 4ft wide obsolete Chinese weather satellite 530 miles above the Earth, is thought to have been launched from the Xichang space centre in Sichuan province. It suggests that the Chinese have developed a major new capability that underscores the communist regime's desire to use its military might as well as burgeoning economic power to expand its influence. Gordon Johndroe, a spokesman for the US National Security Council, said yesterday: "The US believes China's development and testing of such weapons is inconsistent with the spirit of co-operation that both countries aspire to in the civil space area. "We and other countries have expressed our concern regarding this action to the Chinese.'' It is understood that Australia and Canada have also protested to China. Robert Hewson, editor of Air-launched Weapons and China analyst at Jane's Defence, said: "This has huge ramifications. The Bush administration has been held back from space militarisation but the Chinese have just kicked the door down. "Everyone has the capability but China has just stuck it in everyone's face. "The policy of non-militarization of space has been paid lip service for years but this is difficult to ignore. The Chinese have just opened the floodgates.''

# Space Race Inevitable – Chinese Perception

**[ ] Weaponization inevitable – Chinese perception**

**Hui 2007 - Research associate at Harvard University** [Zhang http://www.wsichina.org/space/focus.cfm?)focusid=94&charid=1 Space Weaponization And Space Security: A Chinese Perspective Accessed June 24

China has seen much evidence to suggest the movement by the administration of U.S. President George W. Bush toward space weaponization is real. A number of U.S. military planning documents issued in recent years reveal the intention to control space by military means. In practice, the United States is pursuing a number of research programs to enable the development of space weapons, which could be used not only to attack ballistic missiles in flight but also to attack satellites and targets anywhere on Earth. Chinese officials have expressed a growing concern that U.S. plans would stimulate a costly and destabilizing arms race in space and on Earth, with disastrous effects on international security and the peaceful use of outer space. This would not benefit any country’s security interests. Beijing believes the most effective way to secure space assets would be to agree on an international ban on weapons in space.

**[ ] Space militarization inevitable - Chinese officials perceive inevitability**

**Mulvenon,2007 - Received his PhD from the University of California Los Angeles**[<http://www.defence.org.cn/aspnet/vip-usa/uploadFiles/2007-04/20070415093803____kZR0e4.pdf> Date used: 6-22-2011 Date publish: 4-15-2007 Rogue Warriors? A Puzzled Look at the Chinese ASAT Test]

7 On 8 February 2007, the Foreign Ministry added one more lawyerly element to their stock answer, asserting that the test did not “violate any international treaty.” 8 To its credit, the PLA gave the world warning of what was to come, but communicated the message through a sin of omission, not a forthright public statement of Mulvenon, China Leadership Monitor, No. 20 policy change. China’s latest defense white paper, released in December 2006, did not repeat Beijing’s standard mantras opposing the weaponization of space, as had previous volumes. In its 2004 defense white paper, China stated, “Outer space is the common property of mankind. China hopes that the international community would take action as soon as possible to conclude an international legal instrument on preventing the weaponization of an arms race in outer space through negotiations, to ensure the peaceful use of outer space.” In its 2002 defense white paper, China was even more strident in its call for a ban on space weapons, stating: “the international community should negotiate and conclude the necessary legal instrument as soon as possible to prohibit the deployment of weapons in outer space and the use or the threat of use of force against objects in outer space.” The 2000 and 1998 white papers also included similar language. 9 A possible reflection of the PLA’s new attitude about space weaponization was provided at a World Economy Forum dinner on 25 January by the Academy of Military Sciences’ Senior Colonel Yao Yunzhu, a polished English-speaker and well-known “barbarian handler” who often attends foreign security conferences as an official PLA representative. Yao told her dinner companions: “My wish is we really want to keep space as a peaceful place for human beings. . . . But personally, I’m pessimistic about it. . . . My prediction: Outer space is going to be weaponized in our lifetime.”

**[ ] Space Race Inevitable - China perceives that weaponization of space is inevitable – ASAT tests prove**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Finally, recent remarks by senior PLA Col. Yao Yunzhu at the World Economic Forum in Davos, Switzerland, who directs the Asia-Pacific Office at the Academy of Military Sciences in Beijing, lead toward the “mirror image” explanation: the Chinese and American militaries have come to the same pessimistic conclusion about the future of space and have decided to prepare for the worst, including a competition with each other. “My prediction:” said Yao, “Outer space is going to be weaponized in our lifetime.”13 She added, in an indirect allusion to the United States, that if there is going to be a “space superpower, it’s not going to be alone, and China is not going to be the only one.”

**[ ] Space arms race inevitable – China perceives that it is inevitable**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

Furthermore, he added that a US ASAT should be designed to temporarily disable, rather than destroy, an enemy satellite. Of further concern, in the fall, Chinese Air Force commander Xu Qiliang stated that it was imperative for the People’s Liberation Army Air Force to develop offensive and defensive operations in outer space, as a space arms race has become a “historical inevitability and cannot be undone.”87 In response, Gen. Kevin Chilton, head of the Pentagon’s Strategic Command, noted that the US military is keen to investigate “why they might want to go in that direction and what grounds might exist to accommodate a different direction.”88 Just days later, however, Chinese President Hu Jintao aimed to dispel any concerns that his Air Force commander’s comments may have raised by reiterating that China has not abandoned its longstanding opposition to the weaponization of space. Specifically, Hu noted that “China will unswervingly uphold a national defense policy that is defensive in nature and will never seek military expansion and an arms race.”89

# Space Race Inevitable - Motivations

**[ ] Competition in Space inevitable- Nationalism and Conflicting interests**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Despite an emerging consensus that international power dynamics are changing, there is little agreement as to what the future world will look like. The Carnegie Endowment’s Robert Kagan argues that “nationalism in all its forms is back … and so is international competition for space power, influence, honor, and status.” Regardless of the specific form one believes the future world will take, it is clear that the international system of the new millennium is evolving toward, or returning to, a more complex environment. 46 As new powers rise, they may develop interests and perspectives on the global commons that differ from those of the United States.

**[ ] Space arms race inevitable – China and India will lead the way – military advantages are too tempting**

**Pinkerton 2009 - Fellow at the New America** **Foundation** [James Pinkerton. January 14, 2009. Beam Us Up, Barack!. New America Foundation. Fox News.[http://newamerica.net/publications/articles/2009/beam \_us\_barack\_9943](http://newamerica.net/publications/articles/2009/beam%20_us_barack_9943). Accessed June 23, 2011]

For their part, the Chinese seem to have absorbed these geostrategic lessons. They are determined now to be big players in space, as a matter of national grand strategy, independent of economic cycles. In 2003, the People’s Republic of China powered its first man into space, becoming only the third country to do so. And then, more ominously, in 2007, China shot down one of their own weather satellites, just to prove that they had robust satellite-killing capacity. Thus the US and all the other space powers are on notice: In any possible war, the Chinese have the capacity to “blind” our satellites. And now they plan to put a man on the moon in the next decade. “The moon landing is an extremely challenging and sophisticated task,” declared Wang Zhaoyao, a spokesman for China’s space program, in September, “and it is also a strategically important technological field.” India, the other emerging Asian superpower, is paying close attention to its rival across the Himalayas. Back in June, The Washington Times ran this thought-provoking headline: “China, India hasten arms race in space/U.S. dominance challenged.” According to the Times report, India, possessor of an extensive civilian satellite program, means to keep up with emerging space threats from China, by any means necessary. Army Chief of Staff Gen. Deepak Kapoor said that his country must “optimize space applications for military purposes,” adding, “the Chinese space program is expanding at an exponentially rapid pace in both offensive and defensive content.” In other words, India, like every other country, must compete–because the dangerous competition is there, like it or not. India and China have fought wars in the past; they obviously see “milspace” as another potential theater of operations. And of course, Japan, Russia, Brazil, and the European Union all have their own space programs. Space exploration, despite all the bonhomie about scientific and economic benefit for the common good, has always been driven by strategic competition. Beyond mere macho “bragging rights” about being first, countries have understood that controlling the high ground, or the high frontier, is a vital military imperative.

**[ ] Multiple economic and military pressures make conflict in space inevitable**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

The pressures on space are enormous—from both an economic and a military perspective. Looked at in isolation, each of these pressures is severe enough to create conflict. In combination, they create the risk that future space conflicts could result in war—either on earth, in space, or both. On the economic front, conflict has already occurred due to crowding in geostationary (GEO) orbits and through saturation of the available radio spectrum.12 On the military front, conflict has been avoided because the United States, in recent years, has retained an effective monopoly on the use of space during conflict. Conflicts involving the commercial use of space will continue to increase as crowding increases. There are limited unoccupied slots at GEO and limited spectrum remaining to be allocated. On the military side, one cannot imagine the United States allowing an enemy to either threaten U.S. space capabilities or use space systems to their advantage, putting Americans at risk. Conflict involving space systems could be a significant part of any future military conflict involving the United States. Space is such a diverse environment that predicting how conflict will occur is a challenge of infinite possibilities. What is clear, however, is that future conflict will likely be derived from these two interests so heavily dependent on space—the commercial sector and the military.

**[ ] Space militarization is inevitable – land operations make evolution into space operations inevitable**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

[\*122] Given the numerous previous uses of space assets for combat support, the evolution from passive, defensive support systems to active, offensive, weaponized systems seems only a matter of time. Professor Spires provides the following instructive review of space assets used in combat: As early as the Vietnam conflict, weather and communications satellites furnished useful data and imagery to commanders in Southeast Asia and linked them with Washington, D.C. More recently, satellite communications had proven important in the British Falkland Islands campaign and in Urgent Fury, the Grenada invasion of 1983. In 1986, during Operation Eldorado Canyon, space systems provided a vital communications link and supplied important mission planning data to aircrews that bombed targets in Libya. In 1988, Operation Earnest Will witnessed the first use of GPS test satellites to support ships and helicopters during mine sweeping operations in the Persian Gulf. During Operation Just Cause in Panama in 1989, DSCS satellites provided long-haul communications links and DMSP supplied important weather data. These operations, however, involved only portions of the military space community for a relatively brief period of time, and the contribution of space systems was not widely understood or appreciated. Desert Storm, by contrast, involved the full arsenal of military space systems. Nearly sixty military and civilian satellites influenced the course of the war. 528 To these military uses can be added the extensive use of space assets in the 1999 Operation Allied Force campaign in Yugoslavia. 529 What this review [\*123] demonstrates is that the military use of space for combat continues toward more robust, integrated systems. The increasing reliance on space assets strongly suggests that the space environment will eventually become a distinct theater of military operations. 530

**[ ] The US is testing ASATs in response to Chinese Tests**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

US Destruction of USA-193

In January 2008, the United States began public planning for a similar ASAT test that would target a failing National Reconnaissance Office (NRO) satellite (USA-1 93). (See table 2 for a comparison of this satellite and the Feng Yun-lC.) Conducted under the auspices of the Missile Defense Agency, the test used readily available systems, modified in rapid fashion to provide a seaborne satellite-intercept capability. The more open nature of American society, the preannounced intentions of this ASAT test, and the media focus made a good bit of information available; however, many details remain classified.

The Air Force launched NRO satellite USA-1 93 on 14 December 2008 from Vandenberg AFB, California. The 21st in the NRO series and most likely carrying very-high-resolution photo-imaging systems, the satellite failed after one day in a deteriorating polar orbit ranging between 257 and 242 kilometers. Because the satellite retained a significant amount of hydrazine fuel- a highly reactive and toxic chemical, exposure to which can be extremely hazardous- that could possibly survive reentry, the US government announced that it would shoot down the 2,450-kilogram USA-1 93, destroying the hydrazine fuel tank in the process, before it could plummet to Earth and possibly cause fatalities.20

# Space Race Inevitable – Ground Based

**[ ] Other countries are using ground based lasers as ASATs**

**Kahn 2007 - Deputy Foreign Editor of the New York Times** [Joseph, *China Shows Assertiveness in Weapons Test*, New York Times, <http://www.nytimes.com/2007/01/20/world/asia/20china.html?pagewanted=1>, Accessed June 22, 2011]

At the annual military fair in Zhuhai, held in November, the Guangdong-based newspaper Information Times and several other state-run media outlets carried a short interview with an unidentified military official boasting that China had “already completely ensured that it has second-strike capability.” The analyst said China could protect its retaliatory forces because it could destroy satellites in space. American officials have also noted the development. This month, Lt. Gen. Michael Mapes of the Army testified before Congress that China and Russia were working on systems to hit American satellites with lasers or missiles. And over the summer, the director of the National Reconnaissance Office, Donald M. Kerr, told reporters that the Chinese had used a ground-based laser to “paint,” or illuminate, an American satellite, a possible first step to using lasers to destroy satellites. “China is becoming more assertive in just about every military field,” said Mr. Behm, the Australian expert. “It is not going to concede that the U.S. can be the hegemon in space forever.”

# Space Race – Crisis Stability Impacts

[ ] Space militarization undermines crisis stability – it invites preemption during a crisis because it undermines deterrence. An arms race is inherently unstable because it favors asymmetry

MacDonald 2008 – Council on Foreign Relations [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

Attacking others’ satellites would invite retaliation, putting at risk a “vital national interest” where the United States has much more to lose than the attacker. In the nuclear arena, keeping the option open to retaliate with nuclear weapons if U.S. vital interests are attacked is firmly anchored in a doctrine of deterrence, not war fighting. The absence of discussion on deterrence in U.S. space policy beyond a brief mention is disturbing and requires clarification. Threatening to attack the space assets of competitors who also possess offensive counterspace capability could only be in the security interests of the United States if: – the United States can successfully defend its space assets; or – the right to attack others is implied in terms of deterrence rather than war fighting; or – the effects of attacks on satellites are fully reversible; or – attacks are limited and localized (i.e., tactical in nature, not strategic). Even the latter two cases would involve significant risk of escalation. The administration has stated that “the current preferred approach to protect U.S. terrestrial forces from space threats is through the use of temporary and reversible effects,” though this has not been confirmed as official policy.14 China’s ASAT test, however, led to a major U.S. reaction, and a potential action-reaction cycle appears likely. If China deployed direct ascent ASATs (ground-launched missiles that fly directly at their space targets, such as the ones China tested in 2007), these would become high-priority targets for the United States in a crisis or actual conflict due to the threat they would pose. General James E. Cartwright told Congress that the United States is prepared to strike land-based Chinese ASAT launchers if China shoots down U.S. satellites. Such a statement may help dissuade China from attacking U.S. satellites in a crisis, but, if actually carried out, it would inflict many casualties and risk serious escalation. This highlights the disparity between deterrence and war-fighting strategies. At a minimum, such statements would give China an incentive to make their ASAT systems mobile. The administration has not adequately addressed the political and military risks associated with an unconstrained offensive counterspace competition. There is an inherent potential for instability when a relatively modest investment of military resources can produce a disproportionate effect on an adversary’s military capabilities, as with space assets. In the context of an escalating crisis, such potential instability could be magnified to critical proportions. While the United States currently enjoys substantial space superiority, should China—or others— assert comparable rights and buttress these assertions with counterspace weapons programs, the potential for future space- and earthbound instability would be substantial and worrisome. In the near to mid term, threatening to attack Chinese satellites, which China depends on far less than the United States does its military satellites, appears counterproductive and could easily provide a Chinese rationale for a response in kind that could seriously damage U.S. military capability. In response to the security message of the Chinese ASAT test, press reports indicate that the Bush administration has been developing countering strategies in the Departments of Defense and State and drafting a funding plan to procure technologies. The president is reported to have issued a classified memo calling for agencies to improve U.S. space situational awareness (SSA), avoid future foreign ASAT launches, and address defensive and offensive measures.15

**[ ] Increasing Chinese space capabilities increase the threat of preemption – they enable a first strike capability**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

There are many issues this doctrinal approach raises that are well beyond the scope of this report and that urgently require attention. One in particular merits special mention: the countermeasures that the United States would have to take to operate in a conflict where an enemy would have to worry only about temporary and reversible U.S. counterspace capabilities. In several years, China will probably be able to take pictures from space of U.S. ports and bases in the western Pacific and relay those images in minutes to Chinese missile systems and air crews, an advantageous capability heretofore only possessed by the United States since the first Gulf War. While such a Chinese capability would increase China’s space dependence and thus “raise the ante” for it to strike first in space, new U.S. tactics and countermeasures will be required to maintain the current U.S. advantage under a future deterrence regime.

**[ ] Space Conflicts are inevitable – empirically – they have already started**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

The United States is, however, in spite of the warnings of President Kennedy and many others, proceeding "unprotected" into the future. Should any adversary on any level—national, commercial, or even individual—choose to interfere with our space systems, the United States has no coherent policy or means to deal with such a threat. Opponents of an expanded military space program (beyond the current capability to support terrestrial forces) charge that, with the fall of the Soviet Union and the end of the cold war, there no longer exists any threat of the hostile misuse of space. They argue that space has indeed become the "sea of peace" that President Kennedy dreamed of, where space is being mastered and explored without threat of warfare or conflict. In fact, in spite of indications to the contrary, conflict in space is inevitable—and on a limited basis, has already occurred. Nations have already interfered with the space systems of other nations—through jamming and interference—solely for commercial advantage.4 All the nations of the world have learned from the Persian Gulf War how critically dependent the United States is on the use of space assets to successfully operate in a theater of war. No nation would dare to challenge the United States in conventional military operations without attempting to somewhat level the information dominant battlefield that the U.S. currently enjoys; and this dominance, in great part, comes from space.

# Space Race – Rogue States Impacts

**[ ] Space Arms race inevitable – Rogue states are launching satellites**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011.

Coinciding with the celebrations of the 30th anniversary of the Islamic revolution, in February 2009 Iran launched its first domestically produced, two-staged satellite, Omid.70 As reported by the Iranian official news agency IRNA, the Safir-2 rocket was used as a launch vehicle and the satellite successfully achieved LEO. This accomplishment represents a step forward in a national effort to create an Iranian space industry. Omid is part of a data processing satellite project that has been under development since March 2005. Western countries and Israel expressed concerns about such a development since theoretically Iran could use the launch vehicle to develop long-range missiles to carry nuclear warheads. Iran has affirmed, however, that it is not pursuing military goals with its satellite program.71 US officials have declared that the launch vehicle is unsophisticated and relied on 50-year-old technology, and doubt that the satellite will stay in orbit for very long.72 Iran plans a March 2011 launch of a communications satellite, which has been named Mesbah-2.73 Israel claims that Mesbah-2 is a spy satellite designed to provide reconnaissance of Israeli territory and guide future ballistic missiles.74 Given the refusal of Russia and Italy to launch its new satellite, Iran has decided to go ahead with the launch on its own using domestic technology. In December 2009 Iran also launched its Sejil-2 intercontinental missile.75 Sejil-2 has enough range to reach Israel and US military bases in the Middle East. The US said that such missile launches undermine Iran’s claim of peaceful intentions, whereas Iran continues to reiterate the peaceful intentions of its space program.76 North Korea also attempted to put its own satellite in orbit in April 2009 by utilizing a two-staged Taepodong-2 missile. After the launch, Korean officials announced that the satellite had reached orbit and was transmitting data. However, according to US military officials the satellite landed in the Pacific Ocean.77 The United States, the European Union, Japan, and South Korea condemned the launch, arguing that it was a cover for a long-range missile launch test.78 In spite of its failure, the launch represents an advance over the 2006 launch, when the missile disintegrated less than one minute into flight.79 In July 2009 North Korea launched seven missiles that appear to have travelled 400 km before falling on the country’s east coast.80 Once again, the missile launches were immediately condemned by the international community.

# China – Increasing Space Capabilities

**[ ] China space technology rapidly improving- development of ASATs, missile interception, and satellite jamming**

**Chase 2011** -**Associate Research Professor and Director of the Mahan Scholars Program at the U.S. Naval War College** [Michael S, Jamestown Foundation Publication, “Defense and Deterrence in China’s Military Space Strategy” http://www.jamestown.org/programs/chinabrief/single/?tx\_ttnews%5Btt\_news%5D=37699&tx\_ttnews%5BbackPid%5D=25&cHash=e3f0fcd233f563e2364ad7bc49425244, accessed June 21, 2011]

China’s theory of space deterrence may be a work in progress, but Beijing is already developing an impressive array of counter-space systems. Indeed, the capabilities that China is working on go beyond the direct ascent anti-satellite (ASAT) weapon, successfully tested in January 2007. The test demonstrated its capability to destroy satellites in low-earth orbit and was followed by a missile intercept test in January 2010. According to the 2010 Department of Defense (DoD) report on Chinese military developments, "China is developing a multi- dimensional program to improve its capabilities to limit or prevent the use of space-based assets by potential adversaries during times of crisis or conflict" [1]. In addition to the direct ascent ASAT, China’s capabilities include foreign and domestically developed jamming capabilities, and the inherent ASAT capabilities of its nuclear forces. In addition, "China is developing other technologies and concepts for kinetic and directed-energy (e.g. lasers, high-powered microwave, and particle beam) weapons for ASAT missions" [2]. According to Chinese analysts, along with the increasing its importance for military and commercial reasons, space is becoming an important domain for the defense of national security and national interests [3].

**[ ] China is developing ASATs – testing, modernization and changing doctrine prove**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

China's military has undergone tremendous change over the last 15-20 years, accelerating the pace over the last 10 years in a quest to revolutionize its military forces by reducing personnel numbers and focusing on a massive modernization program that emphasizes quality over quantity. Current military theory in China is partially based on capitalizing on its own resources to mitigate the advantages of potential high-technology opponents. This thinking is evident in China's self-described "Assassin's Mace" programs, a war-fighting strategy of the People's Liberation Army designed to give a technologically inferior military advantages over technologically superior adversaries and thus change the direction of a war.7 Although China has not published an official document on space warfare, it is incorporating space-based support systems into all aspects of its military operations. This tactic includes denying adversaries the use of their space-based systems through kinetic-kill capabilities, jamming, and blinding. China continues to build up its organic space-based systems, seeking to develop into a modern military power capable of force projection and high-intensity military operations.8 China pursues research into other nonkinetic weapons for use in satellite targeting, including high-powered lasers, microwaves, particle beams, and electromagneticpulse devices, all intended to render enemy satellites inoperable without the debris field associated with kinetic-killing weapons.9 Investment in such weapons technology fits China's asymmetric approach and desire to provide a credible threat. In Joint Space War Campaigns, Col Yuan ZeIu loudly echoes this approach, declaring that the "goal of a space shock and awe strike is to deter the enemy, not to provoke the enemy into combat."10 On 11 January 2007, China became the third known country with a proven ASAT capability when it conducted an unannounced launch of a Deng Fong-21 / Kai Tuo Zhe-1 (DF-21 /KT-I) against its own defunct Feng Yun-lC meteorology satellite.11 This event confirmed intelligence estimates of Chinese ASAT developments. Given the secretive nature of the Chinese government, most of the details remain hidden from the public, with most of what is known based upon observation and established Chinese capabilities. (This article draws upon publicly available sources for its references to technical data and capabilities.) The Chinese launched the Feng Yun-1C ("Feng Yun" is Chinese for "wind and cloud"), a polar-orbiting meteorological satellite, on 10 May 1999 from the Taiyuan Launch Complex, located in Shanxi prov- ince. Since 1985 that complex has served as a launch point for polar-orbiting satel- lites, primarily of the Earth monitoring, science, and meteorological type.12 Feng Yun-lC was in sun-synchronous orbit ranging between 845 and 865 kilometers above Earth, with an inclination of ap- proximately 99 degrees.13 Comparable American satellites include the defense meteorological satellites and the National Oceanic and Atmospheric Administration's polar-orbiting satellites. A kinetic-kill vehicle launched by a modified DF-21 intermediate-range ballistic missile known as the KT-I spacelaunch vehicle, in essence a modified DF-21, destroyed Feng Yun-lC.14 The exact technical characteristics and specific capabilities of the missile are not publicly known and are probably unique. Expert review of available information and testimony from civilian monitors and modelers indicate that the missile carried a kinetic-kill vehicle of approximately 600 kilograms.

**[ ] Space race inevitable - Chinese ASAT tests increase the risk of weaponization and space debris**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

With China’s demonstration of an ASAT weapon, the United States is concerned that China might soon deploy a substantial ASAT arsenal, consisting of either a fleet of the ASATs it tested in 2007, coorbital small satellites (“space mines”), or, later, a more advanced ASAT capability based on technologies such as lasers, microwaves, or cyberweapons. Such a Chinese deployment could substantially reduce the effectiveness of U.S. fighting forces. While more traditional counterspace capabilities like jammers have a long and well-recognized role in electronic warfare, their effects are localized and temporary and thus can be tailored. Offensive counterspace capabilities could permanently damage or destroy costly satellites and leave substantial harmful debris in space if they physically destroy the satellites. Space debris can collide with and destroy satellites and is an important element in thinking about space weapons. Like radioactive fallout from nuclear war, debris from space war can linger for many years. While the word “debris” sounds harmless based on common usage, most orbital debris moves at a speed of more than seventeen thousand miles per hour. Thus, relatively small debris pieces are highly destructive to a satellite in a collision. One only has to imagine what life would be like if thousands of bullets from World War II were still whizzing around to get some feel for the danger that debris growth poses for the future of space. At present, twelve thousand detectable debris pieces that are ten centimeters or larger orbit the earth, as well as millions of smaller pieces. The National Aeronautics and Space Administration (NASA) estimates China’s 2007 ASAT test alone increased orbital debris by 10 percent, and its fallout will take more than one hundred years to reenter the atmosphere. Despite important international efforts to reduce it, the total quantity of space debris grew by 20 percent in 2007. All nations have a compelling common interest in avoiding the massive increase in space debris that substantial ASAT conflict would create. Many nations, including China, Russia, and the United States, have agreed to nonbinding guidelines to minimize space debris, including by deliberate destruction. Perhaps technology will allow removal of space debris in the future, but nothing is now on the horizon, and space clean-up would likely be very costly in any event.

**[ ] Space arms race inevitable – US and Chinese ASAT testing and military policies**

**Ajey Lele, 2011 - a former Air Force Wing Commander, with a post graduate degree in Physics and Defence and Strategic Studies** [Date used: June 24, 2011 <http://www.indiandefencereview.com/military-&-space/Militarization-of-Space-.html> Militarization of Space]

Actually, this is not the first time that such an act was undertaken. In 1959 and 1968 the US and the erstwhile USSR had tested anti-satellite systems. The late sixties was a period when ‘weaponization of space’ was a much debated issue. The last ASAT test before this recent Chinese adventurism was carried out during the mid-eighties by the US. However, subsequently, the consequences of weaponizing space were understood, and the superpowers realized that such tests would cause huge amounts of space debris which could harm their own satellites. So, an unwritten understanding was reached that states would not attempt to “conquer” this last bastion. But, the latest Chinese ASAT test indicates that this ‘space reality’ may change. Such tests would boost the desire of space powers to engage in one-upmanship. However, the Chinese test cannot alone be held responsible for creating ripples in the global space architecture. Over the years, the US has always taken an entirely divergent stand on matters relating to space security. Now it seems the Bush administration wants to enhance this asymmetry by placing offensive and defensive weapons into outer space. The January 2001, Donald Rumsfeld led Space Commission, had recommended that the military should “ensure that the President will have the option to deploy weapons in space”. It was reported by the media that in September 2006 Beijing had secretly used lasers to “paint” US spy satellites with the aim of “blinding” their sensitive surveillance devices to prevent spy photography as they pass over China. In fact, Rumsfeld expressed the opinion that “space could be the next Pearl Harbour for the US”. In 2002, after examining this report, President Bush withdrew from the 30-year-old Antiballistic Missile Treaty (ABM) with Russia, which had banned the placement of space-based weapons. According to the May 2007 report of the International Security Advisory Board (ISAB) on US Space Policy: “The United States considers its space capabilities vital to its national interest, and, accordingly, will take the actions necessary to protect and preserve its rights, capabilities, and freedom of action in space. This requires effective deterrence, defense, and, if necessary, denial of adversarial uses of space capabilities hostile to U.S. national interests. The Secretary of Defense is specifically directed to develop capabilities, plans and options to ensure U.S. freedom of action in space and to deny such freedom of action to adversaries when necessary. This requires robust capabilities for sustainable U.S. space control.” All recent US policies relating to space issue indicates that the US believes that freedom of action in space is important and reject proposals to ban space weapons. Under the United Nations banner they would support discussions on space and disarmament issues, but they will not enter into any negotiations on space weaponry.

**[ ] China is building a strong Space Cadre**

**Ford, 2007 Staff writer of the Christian Science Monitor** [October 25, 2007 <http://www.csmonitor.com/2007/1025/p06s01-woap.html> Date accessed June 25, 2011 WHAT'S BEHIND ASIA'S MOON RACE?]

That, argues Joan Johnson-Freese, a space expert at the US Naval War College in Newport, R.I., is because the Asian nations' space programs are largely driven by "technonationalism; they generate pride domestically and they demonstrate prowess internationally." The chief scientist for China's moon program, Ouyang Ziyuan, said in an interview earlier this year with the official People's Daily: "Lunar exploration is a reflection of a country's comprehensive national power and is significant for raising our international prestige and increasing our people's cohesion." Space programs also boost high-tech skills. "China needs its lunar and manned flight projects to nurture the aerospace industry and bring along a cadre of young engineers who will develop its space industry, GPS, Earth observation, and communications, along with military applications," says Gregory Kulacki, a China analyst with the Union of Concerned Scientists in Washington.

**[ ] China military becoming more dependent on space technologies – surveillance, intelligence, navigation and communication**

**Chase 2011** -**Associate Research Professor and Director of the Mahan Scholars Program at the U.S. Naval War College** [Michael S, Jamestown Foundation Publication, “Defense and Deterrence in China’s Military Space Strategy” http://www.jamestown.org/programs/chinabrief/single/?tx\_ttnews%5Btt\_news%5D=37699&tx\_ttnews%5BbackPid%5D=25&cHash=e3f0fcd233f563e2364ad7bc49425244, accessed June 21, 2011]

Chinese strategists regard space as a crucial battlefield in future wars. Chinese military publications characterize space as the high ground that both sides will strive to control in informatized local wars because of its influence on information superiority and its importance in seizing the initiative in a conflict [4]. Chinese analysts write that space systems serve as key enablers by providing support in areas such as intelligence, surveillance, and reconnaissance (ISR), early warning, communications, navigation and positioning, targeting for precision weapons, surveying and mapping, and meteorological support. Chinese analysts also portray space systems as force multipliers that support joint operations and enhance the effectiveness of ground, air, and naval forces. In keeping with this emphasis on the importance of space systems in contemporary military operations, China is making major strides in improving its own space capabilities [5]. According to the 2010 DoD report, "China is expanding its space-based intelligence, surveillance, reconnaissance, navigation, and communications satellite constellations" [6]. As China places more satellites into orbit, the PLA’s reliance on space systems is growing. China’s military is becoming more dependent on space capabilities for intelligence, surveillance, reconnaissance, navigation and positioning, as well as communications. Chinese military publications suggest that China still sees itself as far less dependent on space than the United States, but they also recognize that with this increasing reliance on space comes greater vulnerability. Many Chinese analysts believe that China’s space systems face a variety of potential threats. Consequently, they argue that the PLA needs to be able to protect its space assets through defensive measures or deterrence.

**[ ] China is developing ASAT capabilities**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

In support of its counterspace strategy, China is pursuing a variety of kinetic and non-kinetic weapons to either destroy or negate the United States' LEO satellites. The kinetic method to deny satellite services is to destroy a satellite either by launching an interceptor directly at it or maneuvering another satellite to collide or explode near the target satellite. Both the direct-ascent and co-orbital weapons require a launch infrastructure. Alternately, China could use a ground-based non-kinetic weapon, such as a laser or jammer, to either temporarily deny satellite services or permanently damage the satellite. Common to all proceeding anti-satellite weapons, China requires a mechanism to identify and track enemy satellites. Finally, China has the option to use nuclear weapons against low Earth satellites.

**[ ] China has capability to destroy US satellites - experts confirm**

**Devan 2007** [Janadas Devan ,Senior writer, The Straits Times HOW impressive was the Chinese Asat weapon? February 2; Lexis Accessed June 21 ]

The medium-range missile, probably a DF-21, closed in on its target at 'a pretty high closing speed', said MIT's Professor Ted Postol. Its sensor could see the object from a long range, and the Chinese could guide the missile to hit its target from the front. The experts are not sure what kind of homing device the Chinese used. It was either a radar sensor - the Chinese already have radar-guided missiles - or an optical one. The timing of the test - in the early morning, when the target would have been illuminated by the sun - suggests the Chinese used an optical sensor. If they did, it is significant, for optical sensors make possible better guidance and control of missiles than radar sensors. The Chinese were unlikely to have used a heat-seeking infrared sensor. Even the United States, said Prof Postol, has had difficulty utilising such sensors in its anti-missile interceptors. What are the consequences of the Chinese test? The first, and most immediate, consequence is space debris. According to the calculations of Dr David Wright and his associates at the Union of Concerned Scientists in Cambridge, Massachusetts, the destruction of the Chinese satellite has littered space with more than 1,000 pieces of debris larger than 10cm in diameter, 50,000 pieces larger than 1cm and about 2.5 million pieces larger than 1mm. Because satellites generally cannot be shielded from debris larger than 1cm diameter, this huge cloud of litter may cause other satellites problems for decades. Even the smallest 1mm diameter pieces, flying off at high speeds, can pose 'huge problems', said Prof Postol. The debris from the last US test of an Asat weapon, in 1985, took 17 years to clear. The Chinese test took place at a higher altitude than the US test, so the debris may take as long as a quarter of a century to clear. There are many countries, besides China's military competitors, which have cause to be alarmed by the test. Other than space litter, what are the other consequences? For the US, the new Chinese Asat capacity has profound implications. It means that China now has the capacity to destroy US military satellites in low orbit. The weather satellite the Chinese missile hit had orbited Earth at an altitude of about 850km. US reconnaissance satellites - the eyes and ears of its intelligence community - are mostly around that altitude. These satellites enable the US to track the deployments of foreign forces, spot nuclear tests (such as the recent North Korean test) and monitor missile launches (including the Chinese Asat missile), among other things. The Global Positioning Satellites (GPS), which help guide US smart weapons, are at much higher altitudes - roughly 20,000km. And communication satellites are in geo-stationary orbits at roughly 36,000km. If the Chinese developed their Asat capacity, using missiles with bigger boosters, they may be able to hit satellites in orbits beyond 850km. That is not 'a slam- dunk, but all the pieces are there', said Dr Wright.

[ ] Space arms race inevitable – Chinese ASAT tests

San Gabriel Valley Tribune, 2007 [February 5, 2007 Monday, China revs space race Lexis; Accessed June 22]

SINCE China fired a missile into space last month and destroyed its own aging weather satellite, there has been much talk about the remains now clouding the atmosphere. It is feared that pieces of debris could obscure or damage U.S. military satellites used for surveillance, weapons guidance systems and communications. That's worrisome enough. Then there's the "other" concern - that China is undertaking a military buildup with space as the next frontier. The Pentagon has known for some time that China is stocking up on fighter aircrafts, submarines and ballistic missiles. But a 2005 Pentagon report indicated that Chinese military capabilities were limited to nearby Asia. Perhaps, no longer. China did not acknowledge the missile firing until it triggered international alarm. It was a test of an anti-satellite missile, and its purpose wasn't clear. Chinese officials offered only scant information to the United States, Japan and other countries and apparently didn't address the question as to strategy. Nor did they say why it took so long to confirm it. The test was conducted Jan. 11. China didn't confirm it until 10 days later. Chinese officials insist they are not interested in militarizing space nor engaging in an arms war there. Yet Beijing's continuing secrecy regarding the Chinese military is unsettling to its neighbors and other major powers. China's failure to be more forthcoming has led to the kind of speculation that breeds anxiety and overreaction. Analysts are already suggesting that "China's handling of the test could actually help bring about" a military space race, according to The Wall Street Journal. Analysts also speculated that the test was meant to verify China's anti-satellite capability and put the U.S. "on notice that it no longer enjoys unchallenged military domination of space," the newspaper reported.

[ ] China is rapidly militarizing space - ASAT tests prove

Harnden, 2007 [Toby Harnden and Alex Massie Jan 19; Chinese Missile Destroys Satellite in Space URL: <http://able2know.org/topic/90290-1>, Access Date: June 21, 2011 []](http://www.lexisnexis.com.proxy.lib.umich.edu/hottopics/lnacademic/?%5D)

Mr Hewson said: "The indications are that the system the Chinese used was a KT-2 ground-launched rocket. At its first showing in 2002, it was originally billed as a commercial launch system but anyone with knowledge could tell that it was a tailor-made anti-satellite weapon.'' According to Aviation Week, US Air Force radars detected "signs of orbital distress'' after the destruction of the satellite last Thursday, which is likely to result in many pieces of debris showering the earth. The test shows that the Chinese could soon have the capability to destroy the wide array of commercial satellites operated by the US, Europe, Israel, Russia and Japan. Testifying before Congress last week, Lt Gen Michael Maples, head of the US Defence Intelligence Agency, warned that "Russia and China continue to be the primary states of concern regarding military space and counter-space programs.'' Other countries, he said, "continue to develop capabilities that have the potential to threaten US space assets, and some have already deployed systems with inherent anti-satellite capabilities, such as satellite-tracking laser range-finding devices and nuclear-armed ballistic missiles''.

# China – Space Dominance

**[ ] China is pursuing space dominance – they are challenging American space assets and becoming more dependent on their own**

**Cheng 2011 - Research Fellow, Asian Studies Center** [Dean Cheng. Published February 11,2011. Delivered January 26, 2011. Before the U.S.-China Economic and Security Review Commission. China’s Active Defense Strategy and Its Regional Impact. The Heritage Foundation. http://www.heritage.org/Research/Testimony/2011/01/Chinas-Active-Defense-Strategy-and-Its-Regional-Impact. Accessed June 21.]

One of these themes derived from the available Chinese writings that discuss the establishment of space dominance is that it does not necessarily require the destruction of satellites, such as in the 2007 anti-satellite test or last year’s exo-atmospheric test. Rather, it involves a full range of measures, involving both hard- and soft-kill, aimed at the satellites, the terrestrial infrastructure of launch sites; tracking, telemetry, and control (TT&C) facilities; and the data links that bind the system together. Indeed, PLA writings emphasize that the establishment of space dominance requires integrated operations, involving the use of all available strength, all techniques, and all operational methods. By integration of all available strength, this refers to two aspects. One is civil-military integration. The PLA, it is worth recalling, manages China’s terrestrial space infrastructure, and plays a role in satellite design and manufacturing. It also is presumed to have access to information derived from space-based systems, consistent with the larger, long-standing Chinese theme of civil-military integration. The other is integration of space capabilities with those of land, sea, and air forces, with the goal of generating synergies that will lead to space dominance. Ground, naval, air, and missiles forces, for example, can suppress enemy terrestrial space facilities, such as TT&C centers, and interfere with data links. This can prevent an opponent’s space forces from properly operating, as well as help defend one’s own space capabilities. Meanwhile, space forces can enhance the operation of ground, air, and naval forces by providing information support that will make them more effective.[2] By integrated application of techniques, this refers to the combination of destructive and disruptive techniques. In some cases, disrupting an opponent’s systems may be as effective, and more desirable, than destroying them. Destruction of systems in orbit may generate diplomatic problems, especially among third parties whose systems may be affected by debris. Attacking terrestrial targets in third countries may result in horizontal escalation. Thus, in some cases, one may choose to rely on jamming, cyber warfare, and other less physically destructive means to attack enemy space infrastructure.[3] On the other hand, soft-kill systems often cannot permanently destroy physical facilities, and it may be difficult to assess whether it has succeeded in disrupting normal space operations.[4] In order to inflict long-lasting impact on enemy space capabilities, or to be assured of disruption of high-value targets, one may prefer more kinetic, hard-kill options.

**[ ] China will inevitably challenge the U.S. for space dominance – 5 reasons**.

**Maogoto 2006, Senior Lecturer in International Law, University of Newcastle** [Paper 1347. The Military Ascent into Space: From Playground to Battleground: The New Uncertain Game in the Heavens. Jackson N. Maogoto. University of Newcastlle. Bepress legal series <http://law.bepress.com/cgi/viewcontent.cgi?article=6239&context=expresso> Accessed 6/23/2011.]

Having watched the United States harness the effectiveness of an integrated battleground platform underpinned by space technology and weaponry in the first Gulf War, Chinese defense analysts recognized that space control provides the key to military victories in modern warfare. As a consequence, China has in recent years been concentrating on sharpening its military power through incorporation of technology geared toward a leaner and efficient technologically driven military. This is in part due to five factors. 1. the technical and professional reforms of the 1980s which sought to de-politicize the military allowing it to focus more robustly on its core business—effective warfare capability. 2. the learning experience from the use of space technology by the United States in both Gulf Wars and Kosovo. 3. an awareness that the benignly labeled Japanese Self-Defense forces of its chief competitor in Asia have a serious technological edge. 4. the Bush Jr. administration’s push to implement a national ballistic missile shield and significantly the potential provision of this technology to Taiwan in an atmosphere of increased tension between the tiny island state and mainland China. 5. its aspirations to superpower status, helped in no small measure by the vacuum created by the break-up of the Soviet Union, its chaotic and inept transition to free market economy that has hamstrung it economically resulting in a significant decay of its military capabilities. In view of the factors outlined above, it was not surprising that in 2003, a Chinese military official declared: “In the current and future state security strategy, if one wants not to be controlled by others, one must have considerable space, scientific and technological strength. Otherwise one will be bullied by others.”

**[ ] China intends to catch up to US military space capabilities – Defense Department reports prove.**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

China has been developing a significant military and civilian space capability since 1955. This effort was led by Tsien Hsue-shen, a brilliant U.S.-trained rocket scientist who cofounded the U.S. Jet Propulsion Laboratory at Caltech, but whom the United States deported to China during the excesses of the McCarthy era. While Dr. Tsien helped China develop ballistic missiles to improve its nuclear deterrent, Beijing has mainly concentrated on economic development in the past three decades: Of Deng Xiaoping’s “Four Modernizations,” national defense 7 received the least priority. Recently, though still focused on economic growth, China has been building its military strength, including multiple offensive counterspace options, with the U.S. Department of Defense noting China’s “multidimensional program to generate the capability to deny others access to outer space.”3 Well aware of its military inferiority to the United States, China is likely doing what countries in comparable security situations do: developing military capabilities targeted against the vulnerabilities of its stronger potential adversary. The United States’ relative space advantage will probably shrink as China strengthens its space capabilities over the next ten to twenty years.

# Extend – Taiwan Scenario

**[ ] Chinese space developments will undermine US hegemony – ASATs will be used to disable US power projection and protection of Taiwan**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

When China destroyed its own aging weather satellite with a direct-ascent anti-satellite weapon on January 11, 2007, China demonstrated its will and technical competence to challenge' the United States' superiority in space. China has not limited its anti-satellite program to direct ascent capabilities but is pursuing a range of options from ground-based lasers to co-orbital satellites. China's anti-satellite program is designed to hinder the United States' force projection capability in the western Pacific. Without the essential meteorological, intelligence, surveillance, and reconnaissance (lSR), and remote sensing capabilities provided by low Earth orbit (LEO) satellites, the United States' ability to dominate China in a conventional war would be diminished. (See the Appendix for a description of different orbital regimes.) The United States, however, possesses little capability to respond to the growing Chinese threat to LEO satellites. To counter this threat, the United States should adopt a defensive space strategy focused on developing procedures and capabilities to deter Chinese action and, if necessary, recover from an attack. This paper initially presents the overall Chinese military strategy as prelude to discussing Chinese counterspace strategy. It then describes the various anti-satellite weapons China has developed to attack low Earth orbit satellites. Next, it discusses current US military space doctrine. After framing the space strategy, the paper presents several implementation proposals that use currently available technologies and new procedures and policies. While China does not publish an overarching stated grand strategy equivalent to the US National Security Strategy, National Defense Strategy, or National Military Strategy, analysts theorize that China's strategic modernization is focused on three main objectives: regime survival, dominance of the Asia-Pacific Theater while growing its worldwide influence, and prevention of Taiwanese independence.2 Across these objectives, China sees the United States as its principal strategic adversary and follows a military strategy of anti-access/area denial to prevent increasing US involvement in the Asia-Pacific region. China acknowledges that it cannot compete on an equal footing with US military capabilities and so must pursue asymmetric capabilities to counter US force projection in the region. Analysis of US military operations since the Persian Gulf War in 1991 identified the high reliance of US forces on satellite systems. China believes that it can deter US participation in a conflict by preemptively attacking satellites, thus denying services essential to US force projection. If deterrence fails, these attacks would then significantly diminish military capabilities to the point that conventional Chinese forces would then be on an equal footing with US forces. Additionally, China believes that anti-satellite capabilities provide national prestige and demonstrate the attributes of a world power.

**[ ] Losing space dominance to China will cause the US to reject security ties with Taiwan.**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

JOHN ZANG, CCITV OF TAIWAN: On Taiwan, I was wondering whether or not the Chinese develop­ment of the ASAT capability and other space capabilities, and the lack of strong response from the United States so far, eventually caused the United States to give second thought to its security commitment to Taiwan. SENATOR KYL: I think, indirectly, the answer to that question could be yes. It should not be, and I hope it doesn't evolve in that direction; but if, as a result of the lack of response, the Chinese believe that they can continue to push further and that pushing creates more controversy, then at least it puts the question more squarely before us in a way that we may not like to have to face. Second, if we don't respond, and therefore we don't have the capabilities to deter an attack or to defeat an attack should one occur, then clearly our options are limited, and the ways that we might respond are directly affected by that. We can never allow ourselves to get to the point where it isn't crystal clear to the Chinese what would happen if they engaged in such an attack. If they come to believe that, because of their asymmetric doctrine, which is directly related to our capabilities in that region of the world in response to a Chinese attack or threat, we don't have the ability, then obviously we cannot deter it through our strength alone, and that would have an impact on the calculus that the United States has to engage in, in deciding how to respond should such an attack occur. I hope you'll carry from this meeting the necessity to focus on more than one thing and, when some­thing like this has happened, to think it through carefully, be willing to talk to other folks about it, and help us develop and execute the policies that we need to keep America free.

[ ] Chinese ASAT tests cause war with Taiwan - they see it as threatening their satellites and undermining missile defense

Harnden, 2007 [Toby Harnden and Alex Massie Jan 19; Chinese Missile Destroys Satellite in Space, Lexis; Access Date: June 21, 2011 []](http://www.lexisnexis.com.proxy.lib.umich.edu/hottopics/lnacademic/?%5D)

The ability to destroy satellites with such precision could threaten the US National Missile Defence programme, a network of rocket interceptors, computers and satellites intended to protect America and its key allies from nuclear attack. It became known as "Son of Star Wars'' after President Ronald Reagan's so-called "Star Wars'' programme proposed in the 1980s. The test also heightens regional tensions between Washington and Beijing, which increasingly see one another as long-term rivals in the Pacific. The Chinese navy is undergoing huge expansion which could threaten the independence of its neighbor Taiwan, which is staunchly backed by the US. Taiwan was particularly alarmed at yesterday's announcement. It relies on satellites to monitor cruise missiles pointed towards it from the Chinese mainland. China has also developed short- and medium-range ballistic missiles with the potential to take on American aircraft carriers. There has also been investment in new nuclear submarines. The People's Liberation Army navy has launched as many as 60 new ships in the past five years and last March announced it would build an aircraft carrier.

[ ] Chinese ASATs directly threaten Taiwanese Early Warning Satellites

San Gabriel Valley Tribune, 2007 [February 5, 2007 Monday, China revs space race Lexis; Accessed June 22]

Andrew Yang, an expert on the Chinese military who heads the Chinese Council of Advanced Policy Studies, a Taiwanese think tank, believes the test was intended in part to send a message to Taiwan. The United States is Taiwan's strongest backer, and U.S. satellites are an essential element of Taiwan's early-warning system against ballistic missiles that China has aimed at the island. Liu Jianchao, a spokesman for the Chinese foreign ministry, denied that was the intent. Then what? If China is going to be blowing up things in space, it needs to be more forthcoming with the rest of the world.

**[ ] Chinese ASATs will constrain US defense of Taiwan**

**Mulvenon, 2007 - Received his PhD from the University of California Los Angeles**[<http://www.defence.org.cn/aspnet/vip-usa/uploadFiles/2007-04/20070415093803____kZR0e4.pdf> Date used: 6-22-2011 Date publish: 4-15-2007 Rogue Warriors? A Puzzled Look at the Chinese ASAT Test]

The pure military (but subversive) motive for testing an ASAT in this scenario would be to establish the credibility of the capability for both deterrence and offensive operations, with the goal of convincing skeptics both domestic and international. A mixed or impure motive would be to force the hand of the civilian leadership to approve more aggressive operations like ASAT warfare against high-tech adversaries like the United States in a crisis, such as a Taiwan contingency. Having tested it, military proponents might even believe a successful ASAT capability would likely force satellite-dependent powers like the U.S. to respond with the development of offensive and/or defensive ASAT capabilities, and thereupon secure internal support for continued testing and deployment of new Chinese ASAT systems. In this scenario, the 12 days of silence can be easily explained, as the civilian leadership would no doubt require time to conduct a thorough investigation of military actions, interrogate the key players, and then strategize an internal strategy for reassertion of civilian control and an external strategy for international diplomacy. The civil-military implications of this scenario are potentially serious, with the strong possibility of senior military officers at multiple levels of the system being cashiered. The personnel moves could be interpreted as a signal to other serving officers in the military, reminding them of civilian control of the military and deterring them from participating in rogue activities. It could also be interpreted as a message to foreign governments, especially if the punishments are publicized, assuring them that civilian control over the military has been restored. If, however, the civilian leadership found out about the program after the test and yet no punishments are forthcoming, one must come to the difficult conclusion that the civilian leadership cannot or does not want to effectively respond, because of concerns for the potential loss of institutional prestige, the possible nationalist blowback from the military and civilian population, or a strategic decision to accept the new strategic reality and move forward.

# Extend - Space Mines Scenario

**[ ] Small satellites increase the risk of a space arms race - able to avoid detection and quickly proliferating – cheaper and easier to launch**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

What is a small satellite? And why are they of such concern? A small satellite is generally defined as a satellite with a mass of less than 500 kg (1,100 pounds). Small satellites are further subdivided into mini- (100-500 kg), micro- (10-100 kg), nano- (1-10 kg), and pico-satellites (< 1 kg). To put these masses in perspective, the Hubble Space Telescope has a mass of 11,000 kg. Since almost any mission that a small satellite could carry out could be accomplished by a larger satellite, why are small satellites a potential security concern? There appear to be three main issues: (1) Because small satellites are easier and cheaper to build than larger satellites, they could make space accessible to a greater number of countries. In addition, the development of small satellites could be a stepping stone to building larger and more sophisticated satellites. (2) Small satellites require less capable launch vehicles than larger satellites, and thus could be launched from sites other than those operated by the recognized space-faring nations. (3) Because of their small size, such satellites may be hard to detect by United States space surveillance systems. Hence, they might be more effectively used in certain roles, such as co-orbital ASATs or space mines. We briefly consider each of these three issues below and then discuss in more detail two types of small satellites the United States might view as posing a military threat. The first is the matter of small satellites expanding access to space. Small satellites can be designed and built much more quickly and cheaply than larger, more complex satellites, and their launch costs are lower (but not necessarily low). The number of countries that have launched a small satellite in orbit has increased from about 10 in 1990 to about 30 now, with approximately 400 such satellites having been launched over the last 20 years. While the overall rate of small satellite launches has not increased greatly over this time, the capabilities of small satellites appear to be increasing significantly. Small spacecraft technology is also rapidly becoming widespread, in part because of deliberate efforts to spread this technology. For example, Surrey Satellite Technology Ltd. (SSTL, a company affiliated with Surrey University in Great Britain) will build micro- or mini-satellites for any country (subject to British export controls). It also has a technology transfer program designed to help countries develop the capability to build their own satellites. So far, participants in this program include Pakistan, South Africa, South Korea, Portugal, Chile, Thailand, Singapore, Malaysia, and China. Recent collaborators include Algeria, Nigeria, and Turkey. Another example illustrating the increasing availability of access to space is the CubeSat program. Started in 1999 at Stanford University and California Polytechnic State University San Luis Obispo, the project has developed a set of common standards for constructing and deploying a pico-satellite. Each CubeSat is a cube with a 10 cm side and a maximum mass of 1 kg, and typically costs less than $40,000 to build. Several CubeSats have already been launched, and over 50 colleges and universities are currently working on such satellites. The second concern is that small satellites can reduce launch requirements. Small satellites may enable a country that would otherwise be unable to launch a satellite to do so, because a smaller rocket launcher could be used. However, the significance of this possibility should not be exaggerated. Given that a number of countries are already providing commercial launch services, and the competition among these launch providers, most countries should have little difficulty finding a launcher for any "legitimate" satellite (that is, not an ASAT). This route is likely to be significantly cheaper than developing its own launcher. Thus to the extent that small satellites may make launching satellites easier, it could affect the possible development of ASATs. The last concern is that small satellites may be difficult to detect. The small size of microor smaller satellites may pose a serious problem for U.S. space tracking capabilities. The ability to avoid detection or tracking could significantly increase the effectiveness of a co-orbital ASAT or a space mine. Although the United States has a missile launch detection capability that would almost certainly detect the launch of any rocket capable of placing a satellite in orbit, its capability to detect and track a small satellite released from such a rocket is less robust.

**[ ] Small satellites pose a security risk to U.S. space assets- hard to detect and track and large potential to become ASAT and Space Mine technology**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

The United States currently employs a range of optical and radar sensors for tracking objects in space. Although the U.S. space surveillance system currently tracks over 8,000 objects in orbit, the lower limit on the size of objects it can detect is frequently described as being about 10 centimeters and it is "currently limited in its ability to detect and track objects smaller than 30 centimeters." Thus some small satellites may be able to avoid detection and tracking-particularly if they have been intentionally designed to have reduced radar and optical signatures. Moreover, countering potential co-orbital ASATs would require detection and tracking to occur very shortly after launch. A solution to this problem,-to the extent it is a problem,-may require a system that could track a satellite as soon as it is released from its rocket booster. A space-based tracking system, such as the proposed SBIRS-Low missile defense system, might be capable of carrying out this mission. However, even in this case, small satellites could be secretly launched from larger satellites. This capability has already been dem9onstrated by the Orbiting Picosatellite Automatic Launcher (OPAL) program, developed by Stanford University. It consisted of a "mothership" satellite that housed and successfully launched six "daughtership" satellites that each weighed a kilogram or less. The design is similar to the one reported by a Chinese news agency and cited in the Rumsfeld report as a "parasitic satellite" ASAT system. Small satellites may be used as vehicles for developing and testing the technologies needed to build an ASAT. An ASAT might need a number of capabilities, such as sufficient in-orbit propulsion to close rapidly on its target, a sensor capable of detecting and discriminating the target, stealth techniques, guidance and control for homing on the target, and a kill mechanism, that would not commonly be found on a small satellite, much less combined on a single satellite. One type of small satellite that might raise concerns is one that "inspects" other satellites. Such "inspector" satellites would rendezvous with another satellite to carry out a visual or other type of inspection. Such satellites have been proposed to determine if a repair mission for a damaged satellite makes sense (insurance companies are reported to be interested in this),for refueling/resupply/upgrading missions, or for verification purposes. There have already been three experiments. The first two, Inspector (Germany, 72 kg, 1997) and SNAP (Great Britain, 6.5 kg, 2000), attempted to examine either their host satellite or a satellite launched on the same booster, and both failed. In January 2003, the U.S. Air Force's 31 kg XSS-10 micro-satellite successfully observed the second stage of its own rocket, several times approaching within about 100 feet of it. Such small satellites could also be adapted for use as space mines, satellites that maintain their orbital position in the vicinity of their target satellite, ready to launch an attack on essentially zero notice. Such space mines could use explosives or other means to destroy their target satellite or could be used to jam communications or otherwise obstruct the operation of the satellite. As with ASATs, such small space mines would most likely require a combination of technologies that would not normally be associated with a small satellite. Small satellites with meaningful military capabilities (such as ASATs) would not be easy to build for a nation not already possessing advanced space capabilities. Moreover, some of the reported small satellite threats may be greatly overstated. For example, the Chinese "parasite" satellite threat described above appears to be based solely on a single story in a Chinese or Hong Kong newspaper, a story whose credibility is called into question by its assertion that the satellite is "nanometer-sized" and contains "nanometer-sized components: solar panels, batteries, computers.…" (Note that one nanometer is less than 1/10,000 the thickness of a human hair). Perhaps the most significant security issue associated with small satellites is that they might not be easily detectable by U.S. space surveillance systems, a situation that could be at least partially countered by quite feasible improvements in these surveillance capabilities.

# Extend – Debris Scenarios

**[ ] Even small space debris can cause catastrophic damage to satellites**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

The high speeds and the amount of debris in orbit — hardware and spacecraft fragments that have broken up, exploded or otherwise become abandoned — render the space commons themselves inherently fragile. There are more than 19,000 objects in orbit larger than 10 centimeters, and more than 1.5 million objects less than 10 centimeters. 72 Since 1947, more than 6,000 satellites have been put into space, and about 800 are operational now. These objects in orbit make for a crowded, and dangerous, commons (Figure 3). A tiny speck of paint that had broken off of a satellite once dug a pit in a space shuttle window nearly a quarter-inch wide, causing a near catastrophe. It is estimated that a pea-sized ball moving in orbit would cause as much damage to a satellite or manned spacecraft as a 400-pound safe travelling at 60 mph. 73 Without a more robust governance regime, this situation is likely to worsen. The destruction of satellites threatens the space commons, as explosions in orbit create millions of small pieces of debris, some of which can remain for decades. About 50 percent of all trackable objects in orbit are due to in-orbit explosions or collisions. 74 A broad kinetic anti-satellite campaign could be analogous to fighting World War II

# They Say “Stable Deterrence”

**[ ] Chinese space deterrence undermines US military hegemony – it is a form of psychological warfare that denies US access to forward projection**

**Cheng 2011 - Research Fellow, Asian Studies Center** [Dean Cheng. Published February 11,2011. Delivered January 26, 2011. Before the U.S.-China Economic and Security Review Commission. China’s Active Defense Strategy and Its Regional Impact. The Heritage Foundation. http://www.heritage.org/Research/Testimony/2011/01/Chinas-Active-Defense-Strategy-and-Its-Regional-Impact. Accessed June 21.]

Chinese Concepts of the “Three Warfares” and Anti-Access/Area Denial Operations The issue of space deterrence links space to “psychological warfare,” one of the “three warfares” that was highlighted in this year’s DOD report. The “three warfares” were publicly set forth in the “Chinese People’s Liberation Army Political Work Regulations (zhongguo renmin jiefangjun zhengzhi gongzuo tiaoli),” which were promulgated in 2003. Among the tasks of political work, according to Chapter 2, Section 18 of the Regulations, is conduct of the “three warfares” of psychological warfare, public opinion warfare, and legal warfare. The “three warfares” would seem to serve three purposes: To sap U.S. will and raise doubts about the justification of intervention, hopefully retarding U.S. responses; To attenuate U.S. alliances, thereby affecting access to vital ports and resupply facilities, as well as limiting foreign support for U.S. efforts; To reinforce domestic will and sustain the conflict, compelling the U.S. to confront the prospect of a longer war. Psychological warfare (xinli zhan), can occur at the tactical, operational, or strategic level. But, according to some PLA analyses, it is at the strategic level that psychological warfare may have the greatest impact, since it may undermine the enemy’s entire will to resist. Psychological warfare at that level is aimed not only at an opponent’s political and military leaders, but also at their broader population. It is also aimed at one’s own population and leadership cohort, in order to strengthen the will to fight. Finally, it also targets third-party leaders and populations, in order to encourage support for one’s own side, and discourage or dissuade them from supporting an opponent. PLA descriptions of how space deterrence can be effected are consistent with this definition of psychological warfare. For example, Chinese analysts note that space systems are very expensive. It is possible, then, to hold an opponent’s space infrastructure hostage by posing a question of cost-benefit analysis: is the focus of deterrence (e.g., Taiwan) worth the likely cost of repairing or replacing a badly damaged or even destroyed space infrastructure? Moreover, because space systems affect not only military but economic, political, and diplomatic spheres, damage to space systems will have wide-ranging repercussions and second-order effects.[7] Will those impacts also be worth it? Through such psychological pressures as space deterrence, as opposed to actual attacks, it may be possible to persuade an opponent that they cannot attain victory at an acceptable price.

**[ ] Chinese ASATs aren’t a Deterrent – multiple tests prove**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

According to U.S. government officials, China tested the launch vehicle (with or without a kill mechanism seems to be unknown) at least three times in the past, although details in various media reports are sketchy and somewhat contradictory.8 Some analysts have claimed that Chinese ASAT efforts reach back to the late 1980 and 1990s – which would mitigate against the “deterrent” and “bargaining chip” arguments, and bolster the “offensive” rationale. The most worrisome of all is whether China’s other rival nations will seek to react in kind.

**[ ] Protecting satellites is essential – deterrence won’t prevent other countries from developing space weapons**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

American military primacy will not dissuade rising powers from acquiring capabilities designed to contest U.S. power on the sea, in the air, in space and in cyberspace. Thus, while the United States should continue to develop military capabilities to ensure it can counter anti-access threats posed by state and non-state actors in the global commons, it must recognize that it cannot and should not protect the commons alone.

**[ ] Deterrence in space is fragile – it is easier to cross the threshold to using weapons due to misperceptions**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

It is unclear whether China’s offensive counterspace capabilities are intended for deterrence or as usable weapons of war, though deterrence is repeatedly discussed. As a possible precedent, China’s strategic nuclear policy has been one of minimum deterrence and declared “no first use.” The small Chinese nuclear force is not meant to wage war, but is capable of destroying a few cities, a capability that allows China to resist potential foreign coercion. However, space and nuclear deterrence are not the same. Because the effects are not as devastating as the detonation of a nuclear weapon, crossing the space weapons “threshold” is easier, especially if the effects are temporary. Some PLA writings suggest China is considering a “no first use” space weapons policy, though the lower level of destruction in space conflict makes it more likely China would preempt in space if it were advantageous to do so.

# They Say “China has no Incentive to Attack”

**[ ] China wants to attack U.S. space infrastructure to gain dominance and deny U.S. resources.**

**Cheng 2011 - Research Fellow, Asian Studies Center** [Dean Cheng. Published February 11,2011. Delivered January 26, 2011. Before the U.S.-China Economic and Security Review Commission. China’s Active Defense Strategy and Its Regional Impact. The Heritage Foundation. [http://www.heritage.org/Research/Testimony/2011/01/Chinas-Active-Defense-Strategy-and-Its-Regional-Impact. Accessed June 21](http://www.heritage.org/Research/Testimony/2011/01/Chinas-Active-Defense-Strategy-and-Its-Regional-Impact.%20Accessed%20June%2021).]

In the tactical and operational realm, PLA observation of Western conflicts has led them to conclude that, in order to conduct the high-tempo, dispersed operations typical of recent Local Wars, it is essential to have access to space. Chinese analyses of the first Gulf War, the conflicts in the Balkans, and the march to Baghdad are rife with statistics on the number of satellites employed, whether maintaining surveillance over opponents, providing essential weather information, or guiding munitions and forces. Thus, as one PLA analysis notes, in places like Afghanistan, when U.S. military forces have identified the enemy, they have promptly exploited GPS to determine the enemy’s location and satellite communications to transmit the target’s location to weapons operators, in order to attack targets promptly. Similarly, in Iraq, the use of space was essential for the U.S. military’s intelligence gathering and battlefield command and control.[1] From their perspective, the ability to exploit space is essential for the ability to wage non-contact, non-linear, non-symmetric warfare. This reliance is so extensive that another Chinese analysis posits that the U.S. could not conduct the kind of warfare it prefers, but only high-level mechanized warfare, if it could not access space. The implication is that an essential part of any Chinese anti-access/area denial effort will probably entail operations against the U.S. space infrastructure, both in order to secure space dominance, zhitian quan, for the PLA, as well as to deny it to the United States. Space dominance, in this case, is defined as the ability to control the use of space, at times and places of one’s own choosing, while denying an opponent the same ability.

**[ ] China will view U.S monopolization of space as a threat to its national security – must protect its own interests in space**

**Chase 2011** -**Associate Research Professor and Director of the Mahan Scholars Program at the U.S. Naval War College** [Michael S, Jamestown Foundation Publication, “Defense and Deterrence in China’s Military Space Strategy” http://www.jamestown.org/programs/chinabrief/single/?tx\_ttnews%5Btt\_news%5D=37699&tx\_ttnews%5BbackPid%5D=25&cHash=e3f0fcd233f563e2364ad7bc49425244, accessed June 21, 2011]

A review of Chinese writings on military space operations indicates that Chinese strategists are concerned about a wide variety of perceived threats to Chinese space systems. In particular, Chinese analysts characterize U.S. space policy as inherently threatening to China’s interests because of its emphasis on space dominance. As Zhang Hui of Harvard’s Belfer Center for Science and International Affairs writes, "Many Chinese officials and security experts have great interest in U.S. military planning documents issued in recent years that explicitly envision the control of space through the use of weapons in, or from, space to establish global superiority" [7]. Similarly, according to Bao Shixiu, a senior fellow at the PLA’s Academy of Military Science (AMS), "the only conclusion that can be drawn is that the United States unilaterally seeks to monopolize the military use of space in order to gain strategic advantage over others" [8]. Given that China must protect its own interests, Bao argues, "China cannot accept the monopolization of outer space by another country." Consequently, he asserts that U.S. space policy "poses a serious threat to China both in terms of jeopardizing its national defense as well as obstructing its justified right to exploit space for civilian and commercial purposes" [9]. Chinese writers also assert that U.S. space war exercises reflect the growing militarization of space. Yet Beijing’s concerns are not limited to the realm of policy statements and war games. Indeed, some Chinese strategists appear to believe that other countries are actively developing counter-space capabilities that could threaten Chinese satellites.

# They Say “ASAT tests will promote Weapons Ban”

**[ ] Chinese ASAT tests don’t cause negotiations – they harden American support for their Own ASATs**

**Mulvenon, 2007 - Received his PhD from the University of California Los Angeles**[<http://www.defence.org.cn/aspnet/vip-usa/uploadFiles/2007-04/20070415093803____kZR0e4.pdf> Date used: 6-22-2011 Date publish: 4-15-2007 Rogue Warriors? A Puzzled Look at the Chinese ASAT Test]

Yet why would a witting civilian leadership approve the test, given the possible negative implications of success? One theory offered by both Chinese and Western observers alike is that China tested an ASAT in order to force the United States to change its previous opposition to negotiating a treaty banning weapons in space. If true, this is a startling misperception on Beijing’s part, since it assumes that Washington would reverse its published National Space Policy and decades of public opposition to space arms control. Instead, a better-informed and culturally nuanced analysis of possible American responses would come to the opposite conclusion, arguing that a successful ASAT test would likely strengthen the hands of those within the U.S. system lobbying for more aggressive offensive and defensive ASAT programs. Indeed, the Chinese test has been an early Christmas for these advocates, as it has removed the significant barrier of the informal international moratorium in place since the last known test in 1986.

**[ ] ASAT tests won’t spark negotiations – China’s demonstrations hardened opposition**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Further, if the ASAT test was part of an effort to drive the United States into space-related negotiations with China, again it may backfire – at least in the near term. It is true that there has been a chorus of calls for the United States to now undertake efforts to ban ASATs, or at a minimum, ASATs that create debris. For example, Rep. Ed Markey, D-Mass., stated: “American satellites are the soft underbelly of our national security, and it is urgent that President Bush move to guarantee their protection by initiating an international agreement to ban the development, testing, and deployment of space weapons and anti-satellite systems.”22 Industry weekly Space News also urged the Bush administration to change course and consider “whether new and verifiable accords – such as a ban on the testing of anti-satellite weapons in space,” noting that it “only makes sense to ban an activity that increases debris that threatens the satellites of multiple countries.”23 However, there are no signs that the administration intends to heed such advice. Rather, quite the opposite. An unnamed State Department official told Space News in the immediate wake of the Chinese test: “We do not think there is an arms race in space. …. Arms control is not a viable solution for space.”24 Similarly, attitudes among congressional hard-liners are expected to harden even more; while some moderates may be pushed into more hard-line stances. For example, Rep. Terry Everett, R-Ala., former chairman of the House Armed Services strategic forces subcommittee and long a moderate Republican voice on the issue of space weapons, issued a statement condemning the Chinese test and noting: “We cannot afford to stand idly by and not address these threats immediately.”25

# They Say “China has Peaceful Intentions”

**[ ] Chinese ASAT developments threaten US military power – it shows Chinese benevolence is false, and promises asymmetric warfare to invade Taiwan**

**Kahn 2007 - Deputy Foreign Editor of the New York Times** [Joseph, *China Shows Assertiveness in Weapons Test*, New York Times, <http://www.nytimes.com/2007/01/20/world/asia/20china.html?pagewanted=1>, Accessed June 22, 2011]

BEIJING, Jan. 19 — China’s apparent success in destroying one of its own orbiting satellites with a ballistic missile signals that its rising military intends to contest American supremacy in space, a realm many here consider increasingly crucial to national security. The test of an antisatellite weapon last week, which Beijing declined to confirm or deny Friday despite widespread news coverage and diplomatic inquiries, was perceived by East Asia experts as China’s most provocative military action since it testfired missiles off the coast of Taiwan more than a decade ago. Unlike in the Taiwan exercise, the message this time was directed mainly at the United States, the sole superpower in space. With lengthy white papers, energetic diplomacy and generous aid policies, Chinese officials have taken pains in recent years to present their country as a new kind of global power that, unlike the United States, has only good will toward other nations. But some analysts say the test shows that the reality is more complex. China has surging national wealth, legitimate security concerns and an opaque military bureaucracy that may belie the government’s promise of a “peaceful rise.” “This is the other face of China, the hard power side that they usually keep well hidden,” said Chong-Pin Lin, an expert on China’s military in Taiwan. “They talk more about peace and diplomacy, but the push to develop lethal, high-tech capabilities has not slowed down at all.” Japan, South Korea and Australia are among the countries in the region that pressed China to explain the test, which if real would make it the third power, after the United States and the Soviet Union, to shoot down an object in space. China’s Foreign and Defense Ministries declined to comment on reports of the test, which were based on United States intelligence data. Liu Jianchao, the Foreign Ministry spokesman, would say only that China opposed using weapons in space. “China will not participate in any kind of arms race in outer space,” he told Reuters. China’s silence on the test underscores how much its rapidly modernizing military — perhaps especially the Second Artillery forces, in charge of its ballistic missile program — remains isolated and secretive, answering only to President Hu Jintao, who heads the military as well as the ruling Communist Party. Having a weapon that can disable or destroy satellites is considered a component of China’s unofficial doctrine of asymmetrical warfare. China’s army strategists have written that the military intends to use relatively inexpensive but highly disruptive technologies to impede the better-equipped and better-trained American forces in the event of an armed conflict — over Taiwan, for example. The Pentagon makes extensive use of satellites for military communications, intelligence and missile guidance, and some Chinese experts have argued that damaging its space-based satellite infrastructure could hobble American forces.

**[ ] Chinese declarations of peaceful intent are false – ASAT tests prove**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Considering the international outcry that one would hope Chinese officials anticipated, what could have been such a strong motivator that Beijing would be willing to go forward with the provocative test and “face the heat?” Certainly, the testing of a destructive ASAT weapon is, on its face, a complete repudiation of China’s decades-long public diplomacy on space, which has touted China’s space program as aimed primarily at national development and has stressed Beijing’s commitment to promoting the peaceful uses of space, cooperation with other space-faring nations and opposition to space weaponization. China’s 2006 White Paper on space, “China’s Space Activities in 2006,” states: “China is unflinching in taking the road of peaceful development, and always maintains that outer space is the common wealth of mankind.”7 On its face, the test is completely contradictory to China’s declaratory policy and raises questions about Beijing’s sincerity. If nothing else, China’s leadership must have known that what “soft power” in-roads it has gained by espousing such a policy – such as cooperative civil and commercial ventures with a number of nations ranging from the United Kingdom to Nigeria – could be put at risk by such a blunt demonstration of “hard power” in space.

**[ ] Chinese space program is not peaceful – Chinese declarations do not match their capabilities**

**Maogoto 2006, Senior Lecturer in International Law, University of Newcastle** [Paper 1347. The Military Ascent into Space: From Playground to Battleground: The New Uncertain Game in the Heavens. Jackson N. Maogoto. University of Newcastlle. Bepress legal series <http://law.bepress.com/cgi/viewcontent.cgi?article=6239&context=expresso> Accessed 6/23/2011.]

China’s position as a space power was cemented with the successful launch of its first manned spaceflight into the earth’s orbit on February 15, 2003. China became only the third nation to achieve the feat. In tandem with this, it has undertaken an active role in sharpening its war fighting space skills, from creating anti-satellite weaponry, building new classes of heavy-lift and small boosters, as well as improving an array of military space systems. It is no secret that China has long harbored long-term plans to launch its own space station, and possibly a reusable space plane as well. While one of the strongest immediate motivations for this program appears to be political prestige, China’s manned space efforts are almost certainly geared to contribute to improved military space systems. Publicly, China “declares that space should not be militarized and that space technologies should be used for peaceful purposes.” This stance mirrors the sentiments of the other major space-faring states. Similar to the United States and the former Soviet Union, the Chinese rhetoric is clearly at odds with the military considerations driving its space program. The Chinese space program’s mid-term objectives include creating an integrated military earth observation system, building satellite broadcasting and telecommunications system and fielding a constellation of space-based reconnaissance systems with real-time intelligence capabilities. Keen to bolster its electronic “eyes and ears”: In the booster department, China is proceeding with building a new modular family of heavy-lift launchers. Additionally, a new small, solid-propellant space lifter is being developed. A family of these smaller boosters would provide China the ability to hurl small satellites into orbit. This class of booster would give China a rapid launch capability, “and has broad military, civil, and commercial applications.” China has been busy procuring state-of-the-art technology to improve its intercept, direction finding, and jamming capabilities. China is also on a path toward developing directascent A.S.A.T. system. A Pentagon report in 1998 warned that “given China’s current level of interest in laser technology, it is reasonable to assume that Beijing would develop a weapon that could destroy satellites in the future.” This was no idle warning: “in 1999, the Chinese displayed a portable laser weapon, advertised for blinding human vision and electro-optical sensors highlighting a potential acquisition of high-energy laser equipment that could be used in the development of ground-based A.S.A.T. weapons.” Despite the Communist regime’s traditional aversion to transparency, China seems to have also developed satellite tracking radar, as well as anti-G.P.S. jamming technology.

# They Say “Treaties prevent Space Race”

**[ ] Combat in space is inevitable; space law is not developed enough to stop it.**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Despite nearly forty years of research into space weaponry there is no binding international instrument limiting the use of such weapons. With two isolated examples, such weapons have not been fielded, contributing to State reluctance to foreclose further study into effective deterrents. 656 However there will come a day when a treaty governing means and methods of space warfare will be desirable. In addition to the certainty written law brings to the legal structures governing human conduct, formal agreements most clearly evince the consent of the governed. Of course, any treaty developments for space warfare must strike a pragmatic balance between national security, international legal order, and human rights--a balance for which the jus in bello has striven for at least 100 years. To a certain degree, this review of the law of war and its application to space warfare serves as a call for further analysis of the topic. Though armed conflicts apparently have not occurred in space to date, the rudimentary means for engaging in such conflicts now exist. As each armed conflict since Vietnam makes greater use of space assets, it is undoubtedly only a matter of time before a future conflict witnesses the application of force both from and within the space environment. When it does, and in the absence of specific [\*158] international norms restricting the use of means of methods of war in space, State practice will provide the first insights into how the law will be applied.

**[ ] International treaty will not stop the US from weaponizing space.**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World http://www.cnas.org/files/documents/publications/CNAS%20Contested %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Space’s militarization — its use as a medium to support military operations — has existed for more than four decades. Since the height of the Cold War, satellites have monitored nuclear tests and other military activities and facilitated global communications, mapping, and other activities with both military and scientific purposes. Yet space has yet to be weaponized, in that it is not yet a theater for warfare or for the placement of arms, and it remains a global commons open to any actor with the means to access it. 36 To a large degree, this openness can be credited to a robust set of international agreements that effectively codify space as a global commons. When space first became accessible to humanity in the 1950s, the United States proposed an agreement establishing orbits as common spaces beyond traditional conceptions of sovereignty. The Soviet Union initially disagreed, arguing that its sovereign claim over its territorial air space extended to orbit and beyond. Once Moscow saw the benefit of sending satellites into orbit to spy on the West, its conceptions of its sovereign interests changed, and the USSR agreed to establish space as, in effect, a global commons. Although several arms-control agreements helped to solidify space as a commons, the most comprehensive existing international agreement on the use of space is the 1967 Outer Space Treaty. It defines space as an area beyond claims of state sovereignty, but it has a limited focus on military matters — beyond banning weapons of mass destruction in orbit or on any celestial body, and prohibiting the use of celestial bodies for military bases or the testing of weapons. U.S. policy has consistently embraced space as a global commons “by all nations for peaceful purposes and for the benefit of all humanity.” 37 Yet the United States has also defended space as a legitimate medium for defense and intelligence activities. The 2006 National Space Policy reinforced an American commitment to the “exploration and use of outer space by all nations for peaceful purposes, and for the benefit of all humanity,” rejected claims of national sovereignty, and reaffirmed the “rights of passage through and operations in space without interference.” On the issue of military objectives, it was quite clear, asserting: The United States considers space capabilities — including the ground and space segments and supporting links — vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either impeding those rights or developing the capabilities intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests. 38

**[ ] Space law fails now – treaties are not developed enough to prevent militarization**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Despite nearly forty years of research into space weaponry there is no binding international instrument limiting the use of such weapons. With two isolated examples, such weapons have not been fielded, contributing to State reluctance to foreclose further study into effective deterrents. 656 However there will come a day when a treaty governing means and methods of space warfare will be desirable. In addition to the certainty written law brings to the legal structures governing human conduct, formal agreements most clearly evince the consent of the governed. Of course, any treaty developments for space warfare must strike a pragmatic balance between national security, international legal order, and human rights--a balance for which the jus in bello has striven for at least 100 years. To a certain degree, this review of the law of war and its application to space warfare serves as a call for further analysis of the topic. Though armed conflicts apparently have not occurred in space to date, the rudimentary means for engaging in such conflicts now exist. As each armed conflict since Vietnam makes greater use of space assets, it is undoubtedly only a matter of time before a future conflict witnesses the application of force both from and within the space environment. When it does, and in the absence of specific [\*158] international norms restricting the use of means of methods of war in space, State practice will provide the first insights into how the law will be applied.

**[ ] Space conflicts are inevitable – US, Russian and Chinese arms buildups prove that international law won’t prevent a space arms race**

**Maogoto 2007, Senior Lecturer in International Law, University of Newcastle** [ Connecticut Journal of International Law. Winter,: the final frontier: the laws of armed conflict and space warfare. Name: Jackson Maogoto and Steven Freeland. Lexis Accessed June 21, 2011]

The proposed United States ballistic missile defence shield system would involve the deployment of space-based sensors, including a space and missile tracking system and other space-based sensors which could provide cueing to the ground-based interceptors. 15 The decision to locate interceptor missiles in Poland and associated radar systems and infrastructure in the Czech Republic 16 incensed Russia, leading to a stream of caustic and even inflammatory public comments. Seemingly fearful that the system may eventually lead to neutralization of its own strategic missiles, Russia has indicated that it may consider freezing its commitments to several arms reduction treaties, including the 1988 Intermediate Range Nuclear Forces Treaty (INF Treaty) and the 1990 Conventional Forces in Europe Treaty (CFE Treaty), setting the stage for a potential arms race. 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 kilometers 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 [\*170] 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. In addition, the advent of China as a major space power - symbolized not only by that country, in 2003, becoming the third country to successfully send a man into space, 30 but also by its ambitious plans for missions both to the Moon 31 and Mars 32 - has given rise to further concerns about the use of outer space for strategic purposes not necessarily in keeping with the underlying co-operative principles of the international law of outer space. Outer space has in recent times been referred to as the "Fourth Territory" (alongside land, sea and airspace) 33 - a notion that clearly flies in the face of both the "common heritage of mankind" and "non-appropriation" principles that form the bedrock of the international law of outer space. 34

# They Say “Space is only Militarized, Not Weaponized”

**[ ] The Militarization/Weaponization distinction is outmoded**

**Col Shaw, USAF 2009** BS, Astronautical Engineering, USAFA; MS, Astronautics, University of Washington; MA, Organizational Management, George Washington University; MS, National Security Strategy, National Defense University [Towards a New National-Security Space Strategy through an analysis of US Maritime Strategy, Air & Space Power Journal, Spring 2009,]

The age-old debate over “weaponization of space” (which struggles even to define the basic terms *weaponization* and *space*, let alone shape the various positions around varying definitions) finds itself on the brink of obsolescence. Because treating the medium of space separately and distinctly from its terrestrial counterparts has become increasingly difficult, if not impossible, it is correspondingly almost impossible to practically discuss weaponization of space without the subject’s having embedded (and likely intractable) implications for terrestrial weapons and forces.12 This new and ever-increasing inseparability of activities in or through space and the terrestrial environment—whether political, economic, military, or some other form of activity—demands a corresponding, integrated space-security strategy.

# \*\*\*HEGEMONY\*\*\*

# Hegemony – US Satellites Vulnerable

**[ ] Current space assets are unstable- Fragile satellites, the presence of space weapons, and lack of relaunch capability**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

The openness and stability of the space commons are challenged by the inherent fragility of satellites and the space commons itself, as well as the development and proliferation of anti-satellite jamming and strike capabilities. Satellites are highly vulnerable. They are susceptible to kinetic and directed energy attacks, as well as jamming from the surface of the Earth. Even modest damage to satellite subsystems, such as its optics or solar arrays, can prove disastrous. Compounding this fragility is the vulnerability of space infrastructure that develops, launches, maintains and operates spacecraft. The United States possesses only two launch sites that are meant to handle large launch vehicles, and four overall. Each has a small number of launch pads, and the two large facilities are on coastlines, increasing their vulnerability to monitoring and attack. Moreover, the United States does not stockpile launch vehicles or significant numbers of spare satellites, limiting America’s ability to replenish space assets in times of conflict.

**[ ] US space security threat is growing – other nations are developing ASAT capability**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

Second, unfortunately, the threat to our space security is real and growing. The threat can take many forms. A report by the U.S. Space Commission staff identifies at least 11 distinct categories of anti-satellite attack: from ground segment attack or sabotage to kinetic kill to nuclear ASATs, particle beam weapons, and electronic attack.[1] The space threat posed by China is multifaceted. The "painting" in September of a U.S. satellite by a ground-based laser shows that the Chinese program includes a broad range of capabilities, from kinetic kill to directed energy.[2] The January 11 test also shows China's ability to hit targets in Low-Earth Orbit (LEO), where most American reconnaissance assets are deployed. But reports suggest that the Chinese also seek the ability to attack satellites in Medium- and High-Earth Orbit, such as GPS.[3] Other nations also may have ASAT capabilities. We recall that the Soviet Union had an advanced ASAT program during the Cold War, which pre­sumably still exists in some form. News reports sug­gest that Iran may soon launch a satellite, meaning that a crude ASAT capability could be within their reach shortly. Any nation with missile-launched nuclear weapons, including Pakistan, India, and potentially North Korea, could destroy satellites by setting off a High Electromagnetic Pulse (HEMP).

**[ ] US Space assets are vulnerable – we fear Chinese weaponizing space**

**United Press International, 2011** [Date accessed 6-21-11 Date published 2-8-2011 “U.S. wary of China space weapons” proquest]

Senior Pentagon officials are sounding concern over China's development of weapons designed to shoot down satellites or jam communication signals. U.S. Deputy Secretary of Defense for Space Policy Gregory Schulte said China's project was becoming a "matter of concern" for the United States. Space, he told defense and intelligence officials while unveiling a 10-year strategy for security in space, "is no longer the preserves of the United States and the Soviet Union, at the time in which we could operate with impunity." "There are more competitors, more countries that are launching satellites ... and we increasingly have to worry about countries developing counter-space capabilities that can be used against the peaceful use of space." In 2007, China shot an obsolete weather satellite with a ground missile, creating so much space junk that crew members on the International Space Station had to change orbit to avert a collision last year. Schulte said in his remarks that U.S. concerns had prompted U.S. Defense Secretary Robert Gates to seek to include space in stability talks being pursued with the Chinese. The official said China's capabilities were going beyond shooting at spacecraft. Beijing's counter-space activities include jamming satellite signals. It is also in the process of developing directed energy weapons that emit a disabling burst of energy toward a target rather than firing a projectile at it. Other countries believed to be developing counter-space technology include Iran and Ethiopia.

# Hegemony – Satellites key to Military Readiness

**[ ] Space technology key to hegemony - military navigation, intelligence, communications and surveillance.**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Satellite-based positioning information, overhead imagery and communications facilitate global coordination of commercial, scientific and military activities with a degree of speed and precision that would be impossible without the use of outer space. In general, space can be understood as a utility that lies at the heart of other international activities. For example, signals from the Global Positioning Satellite (GPS) system not only help users navigate the surface of the planet, but they also can help to precisely time financial transactions around the world. Militarily, space provides the “strategic high ground” from which global communications and remote sensing can be quickly transmitted to militaries around the world. A military that can effectively use space has a tremendous advantage in terms of speed of communications, breadth of surveillance and intelligence, and accuracy of positioning and timing.

**[ ] Space assets are key to US military – Iraq wars prove**

**Ajey Lele, 2011 - a former Air Force Wing Commander, with a post graduate degree in Physics and Defence and Strategic Studies** [Date used: June 24, 2011 <http://www.indiandefencereview.com/military-&-space/Militarization-of-Space-.html> Militarization of Space]

During the 1991 Gulf War, the US had demonstrated, among other things, what can happen when a nation that does not enjoy the benefits of space exploitation wages a war against one that has it. In that conflict, the US enjoyed a virtual monopoly on space-based surveillance, communications, and navigation support. The US with its network of highly capable electro-optical and radar imaging satellites were able to determine exactly where to attack with which munitions, while avoiding enemy troop concentrations, thereby reducing casualties. Similarly, during the Kosovo conflict, Afghanistan campaign and the 2003 invasion of Iraq the overall concept of the US operations was dependent on the information received from space-based systems. Particularly, since the 1991 Gulf War, the world has seen the usage of space technologies, mainly by the US and allied forces, for various military purposes. In all these conflicts the US had an asymmetric advantage over their enemy in the area of space technologies. In recent conflicts the US forces have used GPS guided weapons like JDAMS (Joint Direct Attack Munitions). So they used their space assets for providing navigational support to their weapon delivery platforms but also to the weapons themselves. All these uses of space technologies for war waging fall into the category of the militarization of space. Militarization of space essentially occurs by using various space assets for purposes of information gathering or helping the military to undertake land, air and sea battles. But, the weaponization of space signifies getting into the act of destroying of space assets of other states.

**[ ] Space Assets are critical to hegemony – communication, commerce and remote sensing**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

Modern-day U.S. defense strategy, of necessity, is global in scope, and it will likely retain this character for decades. Fundamental to maintaining this global awareness and presence are satellite operations. National economic and commercial interrelationships thrive on the flow of invisible ones and zeros through space channels, so that timely, agile intercontinental trade is now taken for granted. U.S. and coalition forces routinely leverage earth-circling platforms to enhance military capabilities: the Global Positioning System for improved navigation and precision timing, reconnaissance and early warning sensors, and high-bandwidth communications. Space, moreover, is an open arena, a global commons increasingly used by many countries for military purposes. The proliferation of space technologies offers foreign governments and nonstate entities unparalleled opportunities to enhance diplomatic and military influence over the U.S. and strike with strategic effect. Potential enemies of the United States today have improved “vision” over the U.S. homeland and battlefield activities, a better sense of direction and geographic position, and an improved ability to mobilize forces and coordinate activities. With battle space now reaching up to at least 22,000 miles above the Earth — the orbital altitudes for early warning and communications satellites — protecting ourselves from future attacks will depend mightily on space power.

**[ ] Losing access to space assets would cripple US hegemony – satellites are key to our military**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

First, security in space is a vital national interest. The loss of access to space would threaten the very stability of our nation. Consider: Satellites enable our ATMs and our financial markets; they help first responders and form the backbone of our next-generation air traffic control system; they allow us to gather intelligence on foreign develop­ments and to influence them through satellite radio and TV transmissions. More important, satellites underpin our military superiority. Our troops rely on satellites for reconnais­sance, communications, navigation, and other func­tions. Almost every new military platform in development today is more satellite-dependent than the system it is replacing. None of our military operations--conventional, strategic, or missile defense-- can function without space components.

**[ ] Space assets are critical to hegemony – the Marine Corps depends on space for flexibility and mobility**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Introduction Marine Corps doctrine embraces the maneuver warfare concept and recognizes Marine forces conduct decentralized, combined arms operations across non-linear battlefields. These decentralized operations demand increased situational awareness, high operations tempo, flexible support, and mobility in austere environments. The Marine Corps relies on space-based capabilities and effects to provide the agility and flexibility critical to success on the modern battlefield. To achieve this success, the Marine Corps assures its ability to exploit space capabilities, define space capabilities needs and interoperability requirements by developing and maintaining a professional cadre of Marines educated in space operations. Marine Corps Order (MCO) 5400.53, Marine Corps Space Policy, establishes Marine Corps guidelines for the organization and training of the Marine Corps space cadre. In order to support the Marine Air Ground Task Force (MAGTF), Marine space personnel are organized and trained to be integrated into National Security Space, DoD, joint, interagency, and Marine Corps organizations. Marine space officers use operational MAGTF experience and space knowledge to support space planning, programming, acquisition, and operations. Marine space personnel possess a Free Military Occupational Specialty (FMOS). An FMOS is a type of additional MOS that can be filled by any Marine but requires unique training and special skills. MCO 1200.7, Military Occupational Specialties Manual, details the specific requirements for award of the FMOS Space Operations Officer (8866) and Space Operations Staff Officer (0540).

# Hegemony – US losing Space Dominance

**[ ] Chinese military space build up undermines US space dominance – it exploits asymmetric vulnerabilities**

**Tellis 2007 – Senior Lecturer at the Carnegie Endowment for Peace** [Ashley J., *China's Space Weapons*, <http://www.globalcollab.org/mailinglists/eassnet/archives/2007/aug/Chinas_Space_Weapons.pdf>, Accessed June 21, 2011]

How the weaker can defeat the stronger, therefore, becomes the central problem facing China's military strategy. Chinese strategists have struggled to find ways of solving this conundrum ever since the dramatic demonstration of American prowess in Operation Desert Storm. And after carefully analyzing U.S. operations in the Persian Gulf, Kosovo and Afghanistan, they believe they have uncovered a significant weakness. The advanced military might of the U.S. is inordinately dependent on a complex network of space-based command, control, communications, and computer-driven intelligence, surveillance and reconnaissance capabilities that enables American forces to detect different kinds of targets and exchange militarily relevant information. This network is key to the success of American combat operations. These assets, however, are soft and defenseless; while they bestow on the American military definite asymmetric advantages, they are also the source of deep vulnerability. Consequently, Chinese strategists concluded that any effort to defeat the U.S. should aim not at its fundamental strength -- its capacity to deliver overwhelming conventional firepower precisely from long distances -- but rather at its Achilles' heel, namely, its satellites and their related ground installations. Consistent with this calculus, China has pursued, for over a decade now, a variety of space warfare programs, which include direct attack and directed-energy weapons, electronic attack, and computer-network and ground-attack systems. These efforts are aimed at giving China the capacity to attack U.S. space systems comprehensively because, in Chinese calculations, this represents the best way of "leveling the playing field" in the event of a future conflict.

**[ ] Chinese space modernization threatens US dominance – targeting US assets and photographic intelligence**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World http://www.cnas.org/files/documents/publications/CNAS%20Contested %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Beijing's space aspirations pose significant security concerns for Washington. Most of China's space programs have commercial or scientific purposes, but improved space technology could significantly improve Chinese military capabilities. China may also seek to offset U.S. military superiority by targeting U.S. space assets. China uses satellites for the collection of photographic and electronic intelligence. China's imagery satellites use film canisters that are dropped back to earth for processing--a first-generation technology that does not provide near-real time intelligence. But the Sino-Brazilian Earth Resources Satellite program incorporates digital sensors that transmit images electronically. Low resolution limits the satellite's intelligence potential, but China is developing systems with high-resolution sensors that will provide near-real time imagery. China almost certainly exploits commercial high-resolution imagery for intelligence purposes. Chinese scientists are also exploring synthetic aperture radar technologies to provide radar imagery. China's capabilities will improve significantly as advanced technologies developed indigenously, and acquired through collaborative scientific programs, are incorporated into reconnaissance satellites.

# Hegemony – Space Dominance Key to Hegemony

**[ ] Space control is key to U.S hegemony – political leadership, dominance in conflict and power projection**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Command of the commons is the military foundation of U.S. political preeminence. It is the key enabler of the hegemonic foreign policy that the United States has pursued since the end of the Cold War. The military capabilities required to secure command of the commons are the U.S. strong suit. They leverage science, technology, and economic resources. They rely on highly trained, highly skilled, and increasingly highly paid military personnel. As a result of this unfettered access to the commons, the U.S. military has dominated all dimensions of conflict. Geography made the United States a natural sea power, and successful exploitation of air, space and U.S. technological prowess made the United States a power in the cyber commons as well. The commons, in turn, serve as a key enabler of the U.S. military and its ability to project power globally. The American military demonstrated its conventional military dominance in the 1991 Persian Gulf War, the 1994 air war over Yugoslavia, the 2001 invasion of Afghanistan, and the 2003 invasion of Iraq. The utilization of satellites and advanced communications technologies empowered the U.S. military to operate with overwhelming speed, coordination, efficiency and destructiveness. For example, as former Secretary of the Air Force Michael Wynne explained, “In World War II, it took 1,500 B-17s dropping 9,000 bombs to destroy a given target. Today, one B-2 can strike and destroy 80 different targets on a single mission using weapons guided by space-based USAF global positioning system signals.”

# \*\*\*SOLVENCY\*\*\*

# Extend Solvency - Deterrence

**[ ] US space militarization deters attacks on American space assets – Chinese ASAT tests demonstrate threats**

**O’Brian 2007 - Washington, DC correspondent for Wired News** [Luke, *Fanning Fears of a Space War*, Wired, <http://www.wired.com/science/space/news/2007/01/72563>, Accessed June 22, 2011]

For advocates of a more aggressive American posture in space, the anti-satellite test -- the first since the United States conducted one in 1985 -- confirms long-held suspicions about China's military ambition in space, and justifies the need for increased spending on space-based weapons programs that recall the star-wars aspirations of the Reagan presidency. "I hope the Chinese test will be a wake up call to people," said Hank Cooper, a former director of the Strategic Defense Initiative (SDI) program and the chairman of High Frontier, a missile defense advocacy group. "I'd like to see us begin a serious anti-satellite program. We've been leaning on the administration. This argument to prevent weaponization of space is really silly." Cooper isn't alone in his views. In 2001, then-defense secretary Donald Rumsfeld unveiled a report that predicted a "space Pearl Harbor" if America didn't develop "the means both to deter and to defend against hostile acts in and from space." And last week, the government-appointed U.S-China Economic and Security Review Commission issued its own dire-sounding report (.pdf). Among its many warnings, the commission described how the Chinese military might use plasma weapons, laser beams and commando units to attack GPS satellites and ground stations in order to disrupt the U.S. economy.

**[ ] Weaponizing space is key to deter conflict In space – they patrol space**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

Verification problems aside, military capabilities in space are likely to prove vital to our security in the future, and I do not believe that we should consider forfeiting our right to build them. Why? Space assets are important, first of all, to help preserve peace in space. Few object when the United States Navy deploys hundreds of heavily armed warships in every one of the world's oceans. No one accuses us of contributing to the "weaponization of the sea" because they know that the presence of our weapons ensures free transit for all who pursue their peaceful interests. U.S. systems based in space could similarly patrol the "commons" for the good of all.

**[ ] Space militarization protects US space assets – the US is committed to space control**

**Wolf 2004** [Jim, staffwriter for Reuters, U.S. Eyes Space as Possible Battleground [http://www.indiadivine.org/audarya/world-review/35659-u-s-eyes-space-possible-battleground.html accessed June 24](http://www.indiadivine.org/audarya/world-review/35659-u-s-eyes-space-possible-battleground.html%20accessed%20June%2024), 2011]

WASHINGTON (Reuters) - President Bush's plan to expand the exploration of space parallels U.S. efforts to control the heavens for military, economic and strategic gain. Defense Secretary Donald Rumsfeld long has pushed for technology that could be used to attack or defend orbiting satellites as well as a costly program, heavily reliant on space-based sensors, to thwart incoming warheads. Under a 1996 space policy adopted by then-President Bill Clinton that remains in effect, the United States is committed to the exploration and use of outer space "by all nations for peaceful purposes for the benefit of all humanity." "Peaceful purposes allow defense and intelligence-related activities in pursuit of national security and other goals," according to this policy. "Consistent with treaty obligations, the United States will develop, operate and maintain space control capabilities to ensure freedom of action in space, and if directed, deny such freedom of action to adversaries." No country depends on space and satellites as its eyes and ears more than the United States, which accounted for as much as 95 percent of global military space spending in 1999, according to the French space agency CNES. "Yet the threat to the U.S. and its allies in and from space does not command the attention it merits from the departments and agencies of the U.S. government charged with national security responsibilities," a congressionally chartered task force headed by Rumsfeld reported 10 days before Bush and he took office in 2001.

# Extend Solvency – Arms Race

**[ ] Developing space military capabilities are key to peace – they give credibility to political solutions, and they give us back up if negotiations fail**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Recommendation #5: The United States should begin an aggressive development and test program for a spectrum of capabilities necessary for space control. As history has demonstrated, a concentration on political means without the proper preparation to use military force will almost certainly result in failure. It should therefore be the goal of the United States to aggressively pursue development and test programs for space weapons that will allow future decision makers options to deny, disrupt, degrade, and, if necessary, destroy space systems that could threaten U.S. interests in the 21st century. Space superiority can, at least for some time, be achieved without the use of space weapons. There is currently no specific threat demanding the deployment of such weapons. Therefore, the United States need not make a decision on the need to deploy such weapons at this time. It is possible that through negotiations, peaceful solutions to future threats may be achieved. It is also possible that through the use of terrestrial and air-breathing forces, space superiority can be achieved well into the future. The future threat in space may be handled in a progressive pattern of response that focuses on denial and disruption without having to degrade or destroy. However, at some time in the future, if peaceful negotiations fail, and military planners cannot develop terrestrial means to ensure space superiority, the only alternative may be the deployment of some type of space weapons. If this scenario occurs, the United States must be ready to respond. A full spectrum of capabilities is needed to allow decision makers options for resolving conflict at the lowest level possible. The only way to be fully prepared is to have developed and tested the critical systems and technologies necessary to field such capabilities. Failure to fully develop and test such capabilities and such weapons could make the United States vulnerable to surprises from other nations in the future. Gen. John L. Piotrowski, former commander of the United States Space Command said, on many occasions, that when it came to space weapons the one thing the United States couldn’t afford to be was second.23

**[ ] U.S. space militarization prevents space arms race- spurs scientific development, and deters potential rivals**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

Seizing the initiative and securing low-Earth orbit now, while the US is unchallenged in space, would do much to stabilize the international system and prevent an arms race is space. From low-Earth orbit (LEO), the enhanced ability to deny any attempt by another nation to place military assets in space, or to readily engage and destroy terrestrial ASAT capacity, makes the possibility of large scale space war and or military space races less likely, not more. Why would a state expend the effort to compete in space with a superpower that has the extraordinary advantage of holding securely the highest ground at the top of the gravity well? So long as the controlling state demonstrates a capacity and a will to use force to defend its position, in effect expending a small amount of violence as needed to prevent a greater conflagration in the future, the likelihood of a future war in space is remote. Moreover, if the US were willing to deploy and use a military space force that maintained effective control of space, and did so in a way that was perceived as tough, non-arbitrary, and efficient, such an action would serve to discourage competing states from fielding opposing systems. Should the US use its advantage to police the heavens (assuming the entire cost on its own), and allow unhindered peaceful use of space by any and all nations for economic and scientific development, over time its control of LEO could be viewed as a global asset and a public good. Much in the manner that the British maintained control of the high seas, enforcing international norms of innocent passage and property rights , the US could prepare outer space for a long-overdue burst of economic expansion.

# Extend Solvency - Hegemony

**[ ] US militarization of space is critical to national security because our satellites are in danger**

**Lewis 2005 - Director and Senior Fellow, Technology and Public Policy Program** [James A. Lewis. November 1, 2005. House Armed Service Committee, Panel on Asymmetric and Unconventional Threats Center for Strategic and International Studies. [http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ\_4YJ:csis.org/files/media/csis/congress /ts051101\_lewis.pdf+hardening+satellites&hl=en&gl=us&pid= bl&srcid=ADGEES jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ](http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ_4YJ:csis.org/files/media/csis/congress%20/ts051101_lewis.pdf+hardening+satellites&hl=en&gl=us&pid=%20bl&srcid=ADGEES%20jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq%20lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ). Accessed June 21]

Space is an area of American military advantage. No nation or group of nations now has the capability to challenge U.S. predominance in space. The basis of this predominance rests on more than one hundred satellites for remote collection of images and signals, for communications and navigation, and a ground infrastructure to process, analyze and disseminate information from space assets. The U.S. military space program is a critical component of U.S. national security. However, the current military space system, while superior to any in the world, faces new demands, new missions and new risks. Potential opponents recognize that U.S. military advantage rests in part on access to space services provided by satellites for intelligence, communications, intelligence collection, weather forecasting and navigation. Disruption of these services would degrade American military capabilities and provide a symbolic victory. We know that potential opponents either have contemplated or have efforts underway to disrupt U.S. military space capabilities.

**[ ] Enhancing space military capability is essential to hegemony – space superiority is key to protect American forces during conflict**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Recommendation #4: The U.S. military must be prepared, across the spectrum of conflict, to take all prudent actions necessary to achieve space superiority. Just as all operational plans today consist of military campaigns to achieve air superiority, each of these plans must also include campaigns to achieve space superiority. Unless space superiority is achieved, the nation’s political and military leaders need to be cognizant of the fact that American forces would operate under greater risk if committed into such a theater of operations. Space superiority plans should consist of the appropriate application of non-lethal and lethal force applied in the appropriate medium to ensure the availability of space for U.S. and allied forces and the denial of the use of space for enemy forces. Space superiority, like that of air superiority or maritime superiority, is not something that exists all the time. Rather, it is something that must be achieved only when dealing with a specific conflict, and then must be maintained for the duration of that conflict only. Space differs from air and maritime superiority because of its unique physical characteristics. In conflict, air and maritime superiority can be achieved over the limited geographic area involved in the conflict (e.g., air superiority over the Persian Gulf, or maritime superiority in the Mediterranean Sea). Space presents a more complicated problem. Orbiting space systems have the potential to impact an enormous portion of the globe, and therefore, space superiority must be evaluated from the perspective of all of space, not just a limited theater of operations.

**[ ] Protecting satellites key to hegemony – they are key to the global commons**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

The United States derives great benefit from open access to these global commons, but so too does the world at large. Indeed, dependable access to the commons is the backbone of the international economy and political order, benefiting the global community in ways that few appreciate or realize. Today, over 90 percent of global trade, worth over 14 trillion dollars in 2008, travels by sea. Civil air transportation carries 2.2 billion passengers annually and 35 percent of all international trade, by value. Governments, militaries and corporations around the world rely on space for communications, imagery, and accurate positioning services, making space a 257 billion dollars industry in 2008. Financial traders in New York City use the Internet to transfer 4 trillion dollars, greater than 25 percent of America’s annual GDP, every day. 4 For the past 60 years, and especially since the end of the Cold War, America’s nearly unchallenged military advantage in the global commons has guaranteed their openness and stability. Yet, this dominance is increasingly challenged. New powers are rising, with some adopting potentially hostile strategies and doctrine. The threshold for states and non-state actors to acquire asymmetric anti-access capabilities, such as advanced anti-ship cruise missiles, anti-satellite weapons, and cyber warfare capabilities. The decentralization of military power and expanded access to technologies once reserved for superpowers will necessarily contest America’s 60-year-old dominance over the global commons and its ability to maintain their openness. While disturbing on their own, these trends are developing concurrently with America’s growing reliance on the commons. Militarily, the United States increasingly relies on the commons to enable many aspects of its operations, from logistics, to command and control, to extended power projection. Economically, the United States depends on the global commons to provide essential services to its citizens, connect its markets to suppliers and customers overseas, and manage billions of dollars of financial transactions.

**[ ] Space weaponization is key to US military dominance – it prevents other nations from leveraging space dominance against US forces**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

We should also expect that space weapons will play a role in future combat operations against modern militaries. Speaking back in 2002, former Undersecretary of the Air Force Peter Teets asked: What will we do five years from now when American lives are put at risk because an adversary uses space-borne imagery collectors, commercial or homegrown, to identify and target American forces? What will we do ten years from now when American lives are put at risk because an adversary chooses to leverage the global positioning system or perhaps the Galileo constellation to attack American forces with precision?"[9] The bottom line is this: We must not jeopardize our warfighters in the name of preserving an inde­fensible distinction between space and non-space weapons. If targeting an adversary's satellites allows our military to achieve victory more quickly, or at lower cost in blood, such attacks must be consid­ered. The Chinese seem to understand this point much better than we do. So my fourth point, instead of talking about illuso­ry arms control arrangements, is that we need to get serious about space security. The recently revised National Space Policy is a step in the right direction.

# Extend Solvency – Preemption

**[ ] Hardening satellites deters attacks on satellites and prevents the need for preemption**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011.

Most space systems remain unprotected from a range of threats, assessed by experts to include (in order of decreasing likelihood): 1) electronic warfare such as jamming communications links, 2) physical attacks on satellite ground stations, 3) dazzling or blinding of satellite sensors, 4) hit-to-kill anti-satellite weapons, 5) pellet cloud attacks on low-orbit satellites, 6) attacks in space by microsatellites, and 7) high-altitude nuclear detonations (HAND).3 Other potential threats include radio frequency weapons, high-powered microwaves, and “heat-to-kill” ground-based lasers. Growing awareness of the vulnerabilities of space systems has led actors to develop space system protection capabilities to better detect, withstand, and/ or recover from an attack. Nonetheless, there are no effective physical protections against the most direct and destructive types of negation such as the use of kinetic or high-powered energy forces against satellites. The development of effective protection capabilities can have a positive impact on space security by increasing the ability of a space system to survive negation efforts, thus helping to assure secure access to and use of space, and potentially to deter negation attempts. Space actors may refrain from interfering with well protected space systems if such attacks would seem both futile and costly. Moreover, the use of protective measures to address system vulnerabilities could offer a viable alternative to offensive means to defend space assets.

**[ ] Developing space military capabilities is key to preventing surprise attacks – failing to prepare leaves us vulnerable**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Failure to fully develop and test such capabilities and such weapons could make the United States vulnerable to surprises from other nations in the future. Gen. John L. Piotrowski, former commander of the United States Space Command said, on many occasions, that when it came to space weapons the one thing the United States couldn’t afford to be was second.23 A robust program developing capabilities for space control should be laid out to explore new technologies, integrate them into new weapons systems, and fully test them both in laboratory and field demonstrations. Since the goal would be not to deploy such weapons until absolutely required (and when that time would come is unknown), an urgent "crash" program is not needed. However, unless aggressive programs (in terms of funding and schedules) are developed, little progress will be made. In this time of strategic pause, programs can be implemented that are aggressive but take the necessary time—time to fully explore different technologies and thoroughly test and check out systems when developed. If the systems actually reach maturity, and there is still no pressing need for deployment, they can be set aside until such a situation arises.

**[ ] Defensive counterspace programs ensure peace – they deter Chinese attacks**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

The fundamental U.S. security interest in the wake of China's 2007 anti-satellite test should be deterring China and others from attacking U.S. assets in space, using both a combination of declaratory policy, military programs, diplomacy, and promoting a more stable and secure space environment.57 The United States government requires a comprehensive plan to counter the threat to its LEO systems posed by Chinese anti-satellite weapons. Failing to protect these key satellites would severely degrade US military capabilities in a conflict with China. The United States should rely on a defensive space strategy to deter Chinese anti-satellite actions. The strategy must include robust space situational awareness, preplanned actions, small satellites, rapid and variable launch capability, decreased dependence on space systems and institutional changes. In total, these actions would complicate the ability for Chinese anti-satellite weapons to easily strike US assets while providing the means to operate through an attack and then reconstitute lost capability. The DoD's ORS effort can be used as springboard, but must be accelerated to meet the rapidly emerging threat. Finally, its growth as a space faring nation may eventually be the best deterrence against a Chinese attack on United States satellites. However, the actions outlined in this paper can also be used to counter threats from other nations or natural phenomena. A rapid comprehensive defensive deterrence approach most effectively counters the Chinese threat and meets Presidential guidance to establish "contingency plans to ensure that U.S. forces can maintain or duplicate access to information from space assets and accelerating programs to harden U.S. satellites against attack.58

# Extend Solvency – Space Mines

**[ ] Plan solves for the threat from Small Satellites – space situational awareness and maneuverability**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

Perhaps the most significant security issue associated with small satellites is that they might not be easily detectable by U.S. space surveillance systems, a situation that could be at least partially countered by quite feasible improvements in these surveillance capabilities. It will be critical to periodically assess U.S. surveillance capabilities and the capabilities adversaries have for fielding stealthy satellites. Within the next five years, however, it appears unlikely that an adversary could field a non-detectable space mine. The Panel concludes that the best way to counter the threat posed by space mines is not, as some have suggested, to field armed sentinel satellites in space, but rather to continue to improve space situational awareness and enhance the maneuverability of critical satellites in the event that evasive action needs to be taken.

**[ ] Hardening and redundancy improve security – they reduce the risk of space mines**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

A broad set of U.S. space vulnerabilities can be addressed by enhancing the robustness of critical space systems. This can be done by ensuring redundancy, utilizing multiple orbits and developing quick launch capabilities to replace lost satellites. To address the threat posed by space mines, an international treaty governing the "rules of the road" for space should be established thus providing more lead time to respond to a hostile action. Improved space surveillance would greatly reduce the possibility of undetectable space mines fielded by a potential adversary. All military satellites, particularly those in LEO, should be hardened against radiation, as suggested by the 2001 Defense Threat Reduction Agency study, "High Altitude Nuclear Detonations (HAND) Against Low Earth Orbit Satellites (HALEOS)."

# They Say “International Backlash”

**[ ] Space militarization won’t cause an international backlash – our allies would back us up**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

Lambakis also finds fault with opponents' wish to "draw a line in space;" he argues that such a line is strictly conceptual. Nothing in the tactics and strategy of war-fighting nor the logic of deterrence says there must be such a line, he adds. The example of Soviet efforts to develop the MIRV was a case in point, he says. Many people argued at the time that the Soviet MIRV nuclear weapon was a direct response to the U.S. action in developing such a weapon. But Lambakis writes that the Soviets had embarked on the MIRV program on their own and would have exploited their innovation irrespective of the U.S. action. Could we stop the historical progression of weaponry at the edge of the earth, he asks. It is a political decision, he contends, adding that the absence of universal political will means there is no practical way to enforce any treaty or law. As for critics' assertion that the United States will lose international support if it deploys space weapons, Lambakis offers the following rebuttal. He says that when the stakes are high, the United States must act in self-defense and that our allies will judge U.S. actions appropriately. For example, despite widespread antiAmericanism, the United States was able to put together a large coalition to fight the Gulf War in 1991.

**[ ] Space militarization is not perceived as Offensive, because it cannot capture territory**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

At a time when many are calling for increased capability to pacify and police foreign lands, in light of the no-end-in-sight occupation of Iraq and Afghanistan, space weapons proponents must advocate reduction of these capabilities in favor of a system that will have no direct potential to do so. Hence, the argument that the unilateral deployment of space weapons will precipitate a disastrous arms race is misplaced. To be sure, space weapons are offensive by their very nature. They deter violence by the omnipresent threat of precise, measured, and unstoppable retaliation. They offer no advantage if the target set considered is not global. But they also offer no advantage in the mission of territorial occupation. As such, they are far less threatening to the international environment than any combination of weapons employed in their stead. A state employing offensive deterrence through space-weapons can punish a transgressor state, but is in a poor position to challenge its sovereignty. The transgressor state is less likely to succumb to the security dilemma if it perceives its national survival is not at risk. Moreover, the tremendous expense of space weapons inhibits their indiscriminate use. Over time, the world of sovereign states will recognize that the US does not threaten self-determination internally, though it challenges any attempts to intervene militarily in the politics of others, and has severely restricted its own capacity to do so. America will maintain the capacity to influence decisions and events beyond its borders, with military force if necessary. The operational deployment of space weapons would increase that capacity by providing for nearly instantaneous force projection worldwide. This force would be precise, unstoppable, and deadly. At the same time, the US must forego some of its ability to intervene directly in other states because its capacity to do so will have been diminished in the budgetary trade-offs required. Transformation of the American military assures that the intentions of current and future leaders will have but a minor role to play in international affairs. The limited requirement for collateral damage, need for precision to allay the low volume of fire, and tremendous cost of space weapons will guarantee they are used only for high value, time sensitive targets. Whether or not the United States desires to be a good neighbor is not necessary to an opposing state’s calculation of survival. Without sovereignty at risk, fear of a spacedominant American military will subside. The US will maintain its position of hegemony as well as its security, and the world will not be threatened by the specter of a future American empire.

# They Say “Alternate Causality - Ground Stations vulnerable”

**[ ] “Satellite hardening” includes increasing development and protection of ground infrastructure too.**

**Lewis 2005 - Director and Senior Fellow, Technology and Public Policy Program** [James A. Lewis. November 1, 2005. House Armed Service Committee, Panel on Asymmetric and Unconventional Threats Center for Strategic and International Studies. [http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ\_4YJ:csis.org/files/media/csis/congress /ts051101\_lewis.pdf+hardening+satellites&hl=en&gl=us&pid= bl&srcid=ADGEES jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ](http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ_4YJ:csis.org/files/media/csis/congress%20/ts051101_lewis.pdf+hardening+satellites&hl=en&gl=us&pid=%20bl&srcid=ADGEES%20jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq%20lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ). Accessed June 21]

Hardening is particularly important for ground facilities. Effective use of satellite services requires a support infrastructure of analysts and operators and the integration of satellite data and services into military plans and operations. Damaging these terrestrial support infrastructure can reduce the U.S. advantage from space and may be cheaper and technically less difficult for an opponent. One aspect of the hardening of ground facilities that is easy to overlook involves information and network security. An opponent who can, using cyberweapons, disrupt the control of satellites, the flow of data from the satellites to the analysts and planners, or damage the integrity of that information can gain a real advantage at relatively low cost. Improved information and network security through the use of security and monitoring software, data encryption and authentication, is a crucial element for hardening the U.S. military space system against asymmetric attack.

# They Say “Alternative Causality – Ground Based ASATs”

**[ ] Redundancy and replacement are key to offset ground based ASATs**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

Since residual atmospheric drag is significant at 300 kilometer altitude, photoreconnaissance satellites would probably operate at altitudes higher than 300 kilometers. North Korea could therefore only reach satellite operational altitudes with a Scud in the event that a photo-reconnaissance satellite was in an orbit lower than 300 km. A Nodong would have to be used if they were to attempt to attack a reconnaissance satellite stationed above 300 km. The locations of both the Scud-C and Nodong are shown at 5-second intervals. It takes the Scud-C about four to five minutes (240 to 300 seconds) to reach apogee while the Nodong takes some six to seven minutes (360 to 420 seconds) to apogee. This time to apogee is long enough that even a very minor maneuver of the reconnaissance satellite (one to two meters per second) after the launch of a Nodong will greatly reduce the chances of the Nodong doing any damage to the satellite in an attack. It would be quite straightforward for the US to detect launches at engine ignition, which would then make it possible to issue maneuver orders to an approaching reconnaissance satellite minutes before the Nodong could reach the satellite's orbital altitude. Capabilities of North Korean missiles are further analyzed in David Wright's article in the Appendix F of this report. The Panel concludes that the threat posed by ground-based ASATs is best countered by ensuring redundancy of critical systems, developing quick launch capabilities to field replacements, using conventional forces to destroy enemy launch sites, and, if proven effective, utilizing land- and sea-based missile defenses.

# They Say “Alternative Causality – Cyber ASATs”

**[ ] The US is increasing its cyber security for space assets – USCYBERCOMM and RAIDRS**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

The creation of USCYBERCOM can help the US achieve not only advanced capabilities to combat cyber threats, but also higher levels of security in space missions. Although the implementation of a single cyber command has the benefit of higher levels of integration among different government and military forces, it is still unclear how such integration is to be achieved. Other issues to be solved include the specification of minimum requirements, roles, and responsibilities of the entities involved in its operation. Although RAIDRS B-10 has been scaled down to five deployable sites, its development has continued and deployment is scheduled for 2010. As a result, the US military will be able, in the near future, to detect and identify attacks against their ground and space assets, which would have a positive impact on space security.

# They Say “Space Weapons Impossible”

**[ ] Effective weapons in space are possible – empirical examples and constantly evolving technology prove**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

Why Not Space Weapons? There are essentially two classes of arguments in opposition to the weaponization of space; 1) that it cannot be done, and 2) that it should not be done. Space Weapons Are Possible Arguments in the first category spill the most ink in opposition, but are relatively easy to dispose of, especially the more radical variants. History is littered with prophesies of technical and scientific inadequacy, such as Lord Kelvin’s famous retort, ‘Heavier-thanair flying machines are impossible.’ Kelvin, a leading physicist and then president of the Royal Society, made this boast in 1895, and no less an inventor than Thomas Edison concurred. The possibility of spaceflight prompted even more gloomy pessimism. A New York Times editorial in 1921 (an opinion it has since retracted), excoriated Robert Goddard for his silly notions of rocket-propelled space exploration. ‘Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools.’ Compounding its error in judgment, in 1936, the Times stated flatly, “A rocket will never be able to leave the Earth’s atmosphere.” We have learned much, it would seem, or else bluntly negative scientific opinion on space weapons has been weeded out over time. Less encompassing arguments are now the rule. As the debate moved completely away from the impossibility of weapons and wars in space to more subtle and scientifically sustainable arguments that a particular space weapon is not feasible, mountains of mathematical formulae are piled high in an effort, one by one, simply to bury the concept. But these limitations on specific systems are less due to theoretical analysis than to assumptions about future funding and available technology. The real objection, too often hidden from view, is that a particular weapons system or capability cannot be developed and deployed within the planned budget, or within narrowly specified means. When one relaxes those assumptions, opposition on technical grounds falls away. The devil may very well be in the details, but if one’s stance opposing an entire class of weapons is premised upon analyses that show particular weapons will not work … what happens when a fresh concept or new technology cannot be disproved? If one bases policy decisions on discrediting the particulars of proposed operations, what happens when technology X, the unexpected (perhaps unforeseeable) scientific breakthrough that changes all notions of current capabilities, inevitably arrives? Have we thought out the details enough we can say categorically that no technology will allow for a viable space weapons capability? If so, then the argument is pat; no counter is possible. But, if there are technologies or conditions that could allow for the successful weaponization of space, then ought we not argue the policy details first, lest we be swept away by a course of action that merely chases the technology wherever it may go? Space Weapons Should be Deployed: The opponents of space weapons on technical or budgetary grounds are not advocating space weapons in the event their current assumptions or analyses are swept aside. Because a thing can be done does not mean it ought to be. Of course, prescience is imperfect. Technologies will be found that were not or could not be foretold, and the foolish policymaker eschews adapting to it until its utility is beyond a doubt. Indeed, it is concern for the unanticipated arrival of technology X that initially motivates my own preference for a policy advocating immediate deployment of space weapons.

# They Say “You only solve China”

**[ ] Solving for Chinese counterspace capabilities deters other countries as well**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Additionally, the proposed defensive measures will do more than support deterrence against China. Numerous nations will seek to emulate Chinese actions with kinetic and nonkinetic options. In response to the recent anti-satellite activity of China and the United States, Russia announced the resumption of its anti-satellite weapons program. Ground-based actions such as jamming are within the realm of many nations and individuals. One only need look at the hijacking of the HBO satellite signal by "Capt Midnight" as an example of a single individual being able to steal a satellite transponder, in effect jamming the intended signal. 54 Further, proliferation of nuclear weapon and ballistic missile technology make the use of a HANE attractive to a rogue nation or terrorist nation that has little reliance on space capabilities. The Defense Threat Reduction Agency suggests this scenario as a possible last act of defiance by North Korean forces facing defeat,55 Lastly, these measures can be used to combat natural phenomena, such as a meteor shower or solar storms that can damage satellite systems. "A strategy that ensures access to and use of space is useful in times of peace just as in times of war, since space systems that provide critical services may fail or become inoperative in the absence of hostile action. 56

# They Say “China only conducted One Test”

**[ ] China has conducted multiple ASAT tests – they will continue**

**Ajey Lele, 2011 - a former Air Force Wing Commander, with a post graduate degree in Physics and Defence and Strategic Studies** [Date used: June 24, 2011 <http://www.indiandefencereview.com/military-&-space/Militarization-of-Space-.html> Militarization of Space]

On the other hand, this Chinese act of destroying a satellite should not be considered as an one-off event. On 11 January 2007, they successfully carried out an anti-satellite (ASAT) test, but this was preceded by three earlier unsuccessful attempts. Their interests in the weaponisation of space has been known for some time. However, China had continuously talked about establishing an international structure for stopping the weaponisation of space over the last few years while assiduously working towards developing space weapons. According to a 2001 report, China had also ground tested an advanced anti-satellite weapon called ‘Parasitic Satellite’. It could be deployed on an experimental basis and enter the phase of space tests in the near future. This ASAT system can be used against many types of satellites in different orbits like communication satellites, navigational satellites, reconnaissance satellites and early warning satellites. According to a ‘Space Daily’ report this nanometer-sized “parasitic satellite” is designed to be deployed and attached to the enemy’s satellite. There are three components to the ASAT “parasitic” satellites system: a carrier (“mother”) satellite and launcher, and a ground control system. During conflict, commands are sent to this satellite to interfere or destroy the host satellite. The cost of building these satellites is 0.1 percent to 1 percent of any typical satellite. The January 2001, Donald Rumsfeld led Space Commission, had recommended that the military should “ensure that the President will have the option to deploy weapons in space”. It was reported by the media that in September 2006 Beijing had secretly used lasers to “paint” US spy satellites with the aim of “blinding” their sensitive surveillance devices to prevent spy photography as they pass over China. The Chinese aim was not to destroy the US satellites but to make them useless over Chinese territory. It has also been reported that the US military was so alarmed by this Chinese activity that it has begun to carry out test attacks against its own satellites to determine the dimensions of this threat.

# \*\*\*SOLVENCY MECHANISMS\*\*\*

# Hardening Solvency

**[ ] Hardening satellites will increase our space security without causing an arms race, because it is defensive**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

In response to the credible and expanding Chinese anti-satellite threat, the United States must adopt a defensive space strategy that can deter Chinese actions and then also recover from an attack. Some within the United States government, notably Senator Jon Kyl, have advocated an offensive deterrence strategy to counter the Chinese anti-satellite threat, creating weapons that would not only attack Chinese satellites but also anti-satellite systems. This policy, however, would in effect start a space arms race, a costly proposition with many high dollar systems competing for the defense budget. Offensive kinetic anti-satellite weapons, whether direct ascent or co-orbital, can create a significant debris field that could indiscriminately damage friendly satellites and ultimately hurt the United States more than China. The United States abandoned its Cold War kinetic anti-satellite program after a test where an F-15-launched missile destroyed a satellite and created a LEO debris field that took over 20 years to decay. However, the United States demonstrated its ability to rapidly reconstitute its direct ascent anti-satellite capability when it launched a modified Standard Missile-3 from the USS Lake Erie and destroyed a malfunctioning satellite before it could reenter and possibly impact a populated area.27 Although the United States engaged the satellite at the lower portion ofthe LEO regime to minimize orbital debris and provided timely notification to the international community, China criticized the operation as threatening to space security.28 This reaction supports the idea that pursuing an offensive anti-satellite program could drive a space arms race. Finally, in an anti-satellite exchange, China currently has much less to lose. China would be much less reliant on space systems to operate in a conflict.

[ ] Hardening can protect US satellites in a conflict with China, despite Chinese ASATs

Devan 2007 [Janadas Devan ,Senior writer, The Straits Times HOW impressive was the Chinese Asat weapon? February 2; Lexis Accessed June 21 ]

If the Chinese were to develop their Asat capacity, would the US military, heavily dependent on space, be severely crippled in the event of a US-China conflict? Not necessarily, say the experts. Firstly, the US can protect its satellites either by hardening them or by improving their manoeuvrability. But these steps would add considerably to their weight. Secondly, the US could surround its crucial satellites with 'bodyguards', as it were, to absorb the impact of an Asat weapon. But the debris from the exploding 'bodyguards' would pose a problem. A more workable solution would be for the US to accept the vulnerability of individual satellites and devise alternatives, say the experts. For example, in the event of a conflict, it could launch satellites in temporary near-space orbit - from 75km to 200km - to aid navigation and communications over specific battlefields (such as the Taiwan Strait). Or it could use high-altitude aircraft or balloons to relay communication s and to conduct surveillance. Given these possibilities, Dr Wright said he did not think the Chinese strategists thought Asat weapons would be militarily decisive. At best, the weapons can make 'nuisance attacks, buy time, cause confusion, but not that much more'. The Chinese missile test signals to the US that 'it is not going to get a free ride in space, but nobody in China thinks Asat weapons can dramatically change a military situation', said Dr Wright.

# Redundancy Solvency

**[ ] Micro satellites increase security by providing redundancy**

**Lewis 2005 - Director and Senior Fellow, Technology and Public Policy Program** [James A. Lewis. November 1, 2005. House Armed Service Committee, Panel on Asymmetric and Unconventional Threats Center for Strategic and International Studies. [http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ\_4YJ:csis.org/files/media/csis/congress /ts051101\_lewis.pdf+hardening+satellites&hl=en&gl=us&pid= bl&srcid=ADGEES jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ](http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ_4YJ:csis.org/files/media/csis/congress%20/ts051101_lewis.pdf+hardening+satellites&hl=en&gl=us&pid=%20bl&srcid=ADGEES%20jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq%20lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ). Accessed June 21]

The U.S. can increase redundancy within its own satellite fleet by making use of a mixture of platforms. The most important development in this regard is the progress made in the capabilities of small satellites as reinforcement for the large, sophisticated (and expensive) satellites that now make up the bulk of the U.S. fleet. Small satellites, in combination with a rapid launch capability, could reinforce damaged elements in a space architecture made up of larger platforms that are more sophisticated, if one of these large, primary platforms was removed from operation by an attack. The use of a constellation of small (or smaller) satellites in place of a single large platform also complicates an attacker’s task. Damaging one satellite in a constellation of three or four will degrade, but not eliminate, the service being provided and will require multiple attacks to gain an advantage. Small satellites and pseudo-satellites cannot yet duplicate the range or sophistication of services provided by the larger satellites used by the US. What they offer is a cheaper and more responsive set of alternatives. Their potential utility, however, should be conditioned on the assumption that the U.S. will continue to accelerate development of space and sensor technology. Advances in technology that improve small satellites will help mitigate the risk of an asymmetric attack by making it easier for the U.S. to respond and replace damaged capabilities. The use of ‘pseudo-satellites’ can also provide redundancy. A pseudo-satellite is an aerial vehicle that provides the same or similar services as a space-based platform. Unmanned aerial vehicles that provide imagery and sigint can take the place of or reinforce space platforms. Pseudo-satellites could also provide communications or navigation services. A UAV or aircraft can orbit a conflict area, collecting information or broadcasting data. Current UAVs can only linger for a relatively short time over a conflict area, but research programs are developing platforms with greater capabilities. The ideal military space architecture would allow the U.S. to take a core of high value military space satellites and combine them with civilian, commercial and foreign space services, and with pseudo-satellites to respond to potential attacks. If, for example, an imagery satellite was blinded by enemy action, the U.S. wants to be in a position where a combination of pseudo-satellites, commercial services and special purpose small satellites can be rapidly assembled to fill the gap.

**[ ] Redundancy, maneuverability and hardening increase satellite survivability**

**Hui 2007 - Research associate at Harvard University** [Zhang http://www.wsichina.org/space/focus.cfm?)focusid=94&charid=1 Space Weaponization And Space Security: A Chinese Perspective Accessed June 24

There are technical approaches, which, if implemented unilaterally, could improve the survivability of space systems. The United States and others could, for example, harden or shield the most vulnerable parts of their satellites (such as the solar cells and the focal planes) against nuclear, laser, or other conventional attacks. In some cases (e.g. nuclear explosion), hardening satellites would be difficult but technically feasible. To avoid paralysis of a whole system, redundant capabilities could be made available for rapid replacement of satellites in orbit. Increased maneuverability, enhanced situational awareness, and improved stealth capability, would also make it easier to evade a hostile attack.21

# Situational Awareness – Inherency

**[ ] Status quo is not focusing on Space Situational Awareness – funding is inadequate**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

A sixth example: cutting Space Situational Awareness. In March 2006, Lt. Gen. Frank Klotz of U.S. Space Command told the House Armed Services Committee that present space situational awareness capabilities "are not adequate to counter future threats."[15] Despite this testimony, the Air Force has recently cancelled one critical SSA program, the Orbital Deep-Space Imager,[16] and cut FY 2008 funding for another, modernization of the "Space Fence," by more than 70 percent.[17] Once again, the Air Force has validated requirements for both sys­tems, but according to a Space Command spokes­man, "the decision was made to move those funds toward higher...Air Force priorities." Meanwhile, systems that have survived, such as the Space-Based Surveillance System (SBSS), are not scheduled for deployment until at least 2012 or 2013.

# Situational Awareness - Solvency

[ ] Space Situational Awareness is key to space security – allows offensive and defensive measures, prevents miscalculation and escalation in a crisis

MacDonald 2008 – Council on Foreign Relations [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

SSA is the ability to track and understand what objects are in orbit and what their capabilities are. By providing real-time or near real-time location and status information on spacecraft, SSA enables better management and operation of these assets and provides warnings of potential hazards—natural or manmade, intentional or unintentional— to allow preventive or mitigating steps to be taken. In addition, accurate SSA is needed to know for certain if a satellite’s operations have been intentionally affected by an adversary. The United States currently maintains a public information data network that provides important orbital and related information on over twelve thousand detectable orbiting objects, data that it makes freely available on the Internet. Yet many experts agree that the United States “needs significant improvements in space situational awareness, such as the development of the ability to attribute in real time all activity in circumterrestrial space … including birth to death tracking and assessment of all threats capable of affecting [U.S.] space systems,” similar to the role civilian authorities play in air travel.16 Whether one wants to pursue a purely defensive space policy or a mixture of offense and defense, improved SSA is imperative. Air Force Space Command has called for much better capabilities to identify what is already in space, understand orbiting objects’ mission, and, ultimately, determine intent. The U.S. Army has placed improved SSA near the top of its list of needs. Improved SSA has broad support among both supporters and opponents of offensive counterspace. The United States would be well served by going beyond SSA and enhancing space intelligence that better understands the purpose and motivation behind the space objects being identified and tracked.17 Otherwise, understandable worst-case planning could lead to just the kind of escalation in a crisis that all parties seek to avoid. In addition, satellites themselves need to be alert to their surroundings and sense when they are threatened or under attack. Furthermore, the United States must be able to attribute an attack to a particular country, a prerequisite to any effective retaliation or deterrence strategy.

**[ ] Situational awareness is critical for satellite security – it is key to movement and adaptation**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

PROPOSED DEFENSIVE ACTIONS The United States can choose from a wide variety of options to develop a defensive strategy to counter the Chinese threat to LEO satellites. The comprehensive approach should address space situational awareness (SSA), preplanned satellite actions, launch capability, small satellites, decreased dependence on space systems, nuclear explosion protection, institutional changes, transparency, and engagement. Space Situational Awareness Improving SSA is essential to the success of this strategy. The United States must have a comprehensive knowledge of all objects in orbit. Although the United States maintains a significant Space Surveillance Network (SSN) network, it lacks coverage in key areas and the capability to comprehensively predict the orbits of all objects in space; the February 10, 2009 collision between an Iridium commercial satellite and a Russian military satellite caught the SSN by surprise.46 The United States could build more fixed ground sites, but this would be limited by host country permissions and fiscal constraints. As a near term improvement to coverage, the United States should leverage the US Navy's AEGIS cruiser and destroyer-based radars into its: SSN. The AEGIS radar highlighted its space surveillance capability when it tracked a decaying US satellite, enabling its destruction by a US anti-satellite weapon in 2008.47 While the Navy assets need to train and execute their primary mission, they could be given alternate tasking to search and track objects in LEO. This would entail development ofprocedures between services. Further, integration of land and space-based missile warning sensors into the SSN would yield benefits in the event of an anti-satellite launch. Finally, the United States should continue to pursue satellite as a sensor technology, where the satellite has the ability to self-identify and report on attacks. Improved SSA also allows the United States to characterize the resultant debris field of an anti-satellite attack and thus support reactive measures that may be required by other satellites.

**[ ] Space situational awareness is key to offensive Space negation – it gives us the ability to target enemy satellites**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

This chapter assesses trends and developments related to the research, development, testing, and deployment of physical capabilities to negate the use of space systems, which includes Earth-to-space and space-to-space interference, as well as electromagnetic and cyber attacks. The focus here is on technical capabilities and *not* the intent of actors to use them. While this chapter touches on the development of space surveillance capabilities, which is a key enabling technology for space systems negation, Space Situational Awareness (SSA) is covered as a separate space security indicator in Chapter 2. Space systems negation efforts can involve taking action from the ground or from space against the ground-based components of space systems, the communications links to and from satellites, space launchers, or satellites themselves. Negation can be achieved through the application of cybernetic or electronic interference, conventional weapons, directed energy (lasers), or nuclear capabilities used to carry out what are often referred to in the US as the five Ds: deception, disruption, denial, degradation, and destruction.1 Many space negation capabilities are derived from widely available military equipment, technology, and practices. These include conventional attacks on ground stations, hacking into computer systems, jamming satellite communications links, using false radio transmissions (spoofing), or simple camouflage techniques to conceal the location of military space assets. Space negation capabilities that involve attacks on satellites themselves are more sophisticated. With the exception of ground-based laser dazzling or blinding, a basic launch capability is required to directly attack a satellite. Space surveillance capabilities are also required to effectively target satellites in orbit. Some space-based negation techniques require highly specialized capabilities, such as precision maneuverability or autonomous tracking. Degradation and destruction can be provided by conventional, directed energy, or nuclear anti-satellite (ASAT) weapons.2 Conventional anti-satellite weapons include precisionguided kinetic-intercept vehicles, conventional explosives, and specialized systems designed to spread lethal clouds of metal pellets in the orbital path of a targeted satellite. A space launch vehicle with a nuclear weapon would be capable of producing a High Altitude Nuclear Detonation (HAND), causing widespread and immediate electronic damage to satellites, combined with the long-term effects of false radiation belts, which would have an adverse impact on many satellites in low Earth orbit (LEO).3

**[ ] Expanding space based surveillance improves satellite security – Air Force programs are key**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

To improve its space surveillance capabilities, the US Air Force has been developing advanced systems to monitor and detect spacecraft and other objects in space, including Air Force assets and those of other countries.52 The larger system is Space Based Space Surveillance (SBSS), while the smaller one is called Autonomous Nanosatellite Guardian for Evaluating Local Space (ANGELS). US space surveillance systems have been based on ground radars – a technology originally conceived during the Cold War. Since the main goal at the time was to detect incoming missiles from the Soviet Union, most stations are able to scan the northern hemisphere only. Even if more stations were to be constructed and added to the system, there would be several blind spots over the oceans. By relying on SBSS and ANGELS, it will become possible for the Air Force to augment and update its catalog of space objects with more accurate information. The SBSS system was built by Ball Aerospace in partnership with Boeing, and is planned to operate in a polar orbit over a five-year period. Instead of radar, SBSS will rely on a gimbaled telescope, which can remain fixed on a steady position to inspect an object of particular interest, or even focus on several targets as they pass by. As a result, it will become possible to confirm whether a given spacecraft has arrived at the correct orbital slot and determine its precise position. Such capabilities could also be utilized to detect space debris and monitor foreign spacecraft. SBSS was scheduled to launch October 30, 2009 on a Minotaur IV launch vehicle at the Vandenberg Air Force Base, California.53 It has been delayed indefinitely due to a failure in a Taurus rocket, which experienced a problem with the hardware that supports the third stage of the launch vehicle and employs some subsystems that are also used by the Minotaur IV.54 The Air Force is expected to proceed with the launch once corrections are implemented. The ANGELS nanosatellites will be capable of performing proximity operations in geostationary orbit and conducting inspections through a 12-km telescope. It will also carry a sensor to indicate when it is being tracked by radar, which could support the execution of evasive maneuvers. Given this wide range of features, the Air Force has provided funds for a second stage of development that will enhance its ability to detect space- and ground-based threats. A launch date has not been officially set for ANGELS.55

**[ ] Improving space awareness protects satellites – it allows them to avoid attacks**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Methods for better characterizing potential attacks and defending current space assets also need to be pursued. Improved space surveillance capabilities are needed to ensure better knowledge of future activities in space. Improvements are needed on future satellites to better indicate when and if they are being jammed or attacked. An anomalous event on a satellite can be caused by many reasons: the impact of the space environment, system anomalies on board the spacecraft, or by the intentional efforts of an enemy. Distinguishing between these events is difficult, but the correct response depends on knowing the specific cause. Satellites today have a poor capability to identify these causes, and this capability needs to be improved to better identify problems and conflict. The deployment of space weapons should be treated as a last resort by this nation—but not as an unthinkable option. American leaders have long believed in the concept of employing force only as a last resort, but have used military force when the situation demanded. The same should be true of space weapons. The United States should make every effort, political and otherwise, to create a future in space where weapons are not required. The deployment of such weapons will create the need on the part of future enemies to attempt to respond in some way to such a step—and how they respond is difficult to predict. It would be better to control the future though peaceful agreements that are in the mutual interests of all parties involved. At the same time, the United States should be prepared to deal with conflict in space if these other means fail. This means developing and testing a broad spectrum of space weapons.

**[ ] Space Surveillance, Redundant Satellites and repair are all critical to hardening satellites**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

Methods for improving satellites' chances of surviving both natural and man-made hazards include the ability to track threats, add redundancy, and develop serviceable systems.36 Enhancing the United States' ability to track satellites and significant debris represents the first step in avoiding dangers. Extended maneuver capacity coupled with sensors capable of detecting approaching hostile bodies will enable critical satellites to evade attacking bodies or debris fields; therefore, designs for such satellites should include robust and sustainable thrust capability. Moreover, building such satellites with separate, redundant systems would increase their ability to function after attack. A similar and potentially more resilient approach involves the use of clustered satellite constellations, which could be widely dispersed or could orbit in close proximity. The Defense Advanced Research Projects Agency recently proposed designing and fielding satellites that are serviceable while in orbit. In March 2007, the agency launched Orbital Express- an advanced technology demonstration system consisting of the Autonomous Space Transport Robotic Operations (ASTRO) prototype servicing satellite and the NextSat, a serviceable next-generation satellite designed to serve as a surrogate to ASTRO. Equipped with a robotic arm, ASTRO is designed to evaluate the feasibility of autonomously refueling satellites and robotically changing their components in orbit.37 Successful testing of Orbital Express will decrease current service-life restrictions on satellites based on fuel availability. In addition, the ability to replace components will enable a return to service for satellites damaged by hostile action.

**[ ] Situational awareness, protection and Relaunch are critical to space security – deterrence and reconstitution**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Joint Publication (JP) 3-14, Space Operations, highlights the increasing dependence by the military on space: "Space capabilities are essential to overall military mission accomplishment, provide the advantages needed for success in all joint operations, and support the principles ofwar.34 The publication also states that reliance on space creates vulnerabilities that can be exploited by adversaries. To prevent exploitation, the United States must ensure current military capabilities "remain protected and must constantly watch for the next space threat to ensure US military dominance in space utility.35 JP 3-14 broadly proposes a framework to address these vulnerabilities. The document divides US space operations into four mission areas: space force enhancement; space' support; space control; and space force application. Within these mission areas, space control ensures freedom of action for friendly space forces. Two components of space control are defensive space control and space situational awareness. Defensive space control "is used to protect space capabilities and is based on protection and defensive prevention measures." Space situational awareness supports defensive actions by "characterizing the space capabilities operating within the terrestrial environment and space domain." 36 The publication fails to adequately address a key piece of a potential defensive strategy: space support. "Space support includes spacelift operations, satellites operations, and reconstitution of space forces. 37 At first glance, these tasks may not be considered as defensive in nature, but they should form a key piece of a comprehensive space deterrence strategy. Even with the best defensive efforts, defending all space assets against direct-ascent and co-orbital weapons would be difficult, making an emphasis on reconstitution a necessity. Although JP 3-14 advocates developing "ability," it seems to shy away from a comprehensive approach involving space support as demonstrated with its statement that "development and deployment of replacement capabilities could take a year or more." 38 However, a defensive strategy that combines existing technologies with updated policies and procedures can be implemented faster than current Department of Defense (DoD) plans and programs.

# Launch Capabilities – Solvency

**[ ] Rapid Relaunch is critical to reducing satellite vulnerability – it increases redundancy by replacing destroyed assets**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

The capability to rapidly rebuild space systems in the wake of a space negation attack could reduce vulnerabilities in space. It is also assumed that space actors have the capability to rebuild satellite ground stations. This trend examines the capabilities to refit space systems by launching new satellites into orbit in a timely manner to replace satellites damaged or destroyed by a potential attack. Although efforts are under way to enable rapid recovery, no actor currently has this capability. During the Cold War the USSR and the US led in the development of economical launch vehicles capable of launching new satellites to repair space systems following an attack. The USSR/Russia has launched less expensive, less sophisticated, and shorter-lived satellites than those of the US, but has also launched them more often. Soviet-era pressure vessel spacecraft designs, still in use today, have an advantage over Western vented satellite designs that require a period of out-gassing before the satellite can enter service.63 In principle Russia has the capacity to deploy redundancy in its space systems at a lower cost and to allow quicker space access to facilitate the reconstitution of its systems. For instance, in 2004 Russia conducted a large military exercise that included plans for the rapid launch of military satellites to replace space assets lost in action.64 A significant number of Russia’s current launches, however, are of other nations’ satellites and Russia continues to struggle to maintain existing military systems in operational condition. Thus little redundancy is actually leveraged through this launch capability.65 The US has undertaken significant efforts to develop responsive space capabilities. In 2007 the Department of Defense Operationally Responsive Space (ORS) Office was opened at the Kirtland Air Force Base in New Mexico to coordinate the development of hardware and doctrine in support of ORS across the various agencies.66 ORS has three main objectives: 1) Rapid Design, Build, Test with a launch-ready spacecraft within 15 months from authority to proceed; 2) Responsive Launch, Checkout, Operations to include launch within one week of a call-up from a stored state; and 3) Militarily Significant Capability to include obtaining images with tactically significant resolution provided directly to the theater. New launch capabilities form the cornerstone of this program. Indeed the USAF Space Command has noted: “An operationally responsive spacelift capability is critical to place timely missions on orbit assuring our access to space.”67 Initial steps included a Small Launch Vehicle subprogram for a rocket capable of placing 100 to 1,000 kg into LEO on 24-hours notice; however, such a program may ultimately be linked to a long-term prompt global strike capability.68 Under this program AirLaunch LLC was asked to develop the QuickReach air-launch rocket and SpaceX to develop the Falcon-1 reusable launch vehicle to fulfill the SLV requirements.69 In September 2008, Falcon 1 reached orbit on its fourth attempt.70 The USAF TacSat microsatellite series is also intended for ORS demonstration, combining existing military and commercial technologies such as imaging and communications with new commercial launch systems to provide “more rapid and less expensive access to space.”71 A full ORS capability could allow the US to replace satellites on short notice,72 enabling rapid recover from space negation attacks and reducing general space system vulnerabilities. The concept for a US Space Maneuver Vehicle or military space plane first emerged in the 1990s as a small, powered, reusable space vehicle operating as an upper stage of a reusable launch vehicle.73 The first technology demonstrators built were the X-40 (USAF) and the X-37A (NASA/DARPA).74 A successor to the X-37A, the X-37B unmanned, reusable spacecraft was launched for the first time in April 2010 under significant secrecy, as discussed below. India is reportedly working on a Reusable Launch Vehicle, which is not anticipated before 2015.75 The commercial space industry is contributing to responsive launch technology development through advancements with small launch vehicles, such as the abovementioned Falcon-1 developed by SpaceX, and its successor, the Falcon-9, which had its maiden test flight in June 2010. Interest is increasing in the development of air-launched microsatellites, which could reduce costs and allow rapid launches as they do not require dedicated launch facilities. The Russian MiG-launched kinetic energy anti-satellite weapon program was suspended in the early 1990s, but commercial applications of similar launch methods continue to be explored. As early as 1997 the Mikoyan-Gurevich Design Bureau was carrying out research, using a MiG-31 to launch small commercial satellites into LEO.76 The Mikron rocket of the Moscow Aviation Institute’s Astra Centre, introduced in 2002, was designed for launch from a MiG-31 and is capable of placing payloads of up to 150 kg into LEO.77 The US has used the Pegasus launcher, first developed by Orbital Sciences Corporation in 1990, to launch military small payloads up to 450 kg from a B-52 aircraft.78 Other efforts include the China Aerospace Science and Technology Corporation plan to launch small payloads released from a modified H-6 bomber.79

[ ] Replacement and Relaunch are key to reducing instability during a crisis – they offset ASAT damage

MacDonald 2008 – Council on Foreign Relations [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

By maintaining a capacity to quickly replace damaged or destroyed satellites with spares or quickly launchable satellites of lesser capability, the United States could partially offset the effects of an attack on its space systems through an operationally responsive space (ORS) capability. Such satellites could even be launched preemptively in a crisis to add capability and demonstrate political intent. France has recently expressed strong interest in ORS capability for the same reasons as the United States, explicitly citing the Chinese ASAT test as motivation. Non-space backup systems include unmanned aerial vehicles (UAVs) and ground-based signal and communication transmitters, which cost less than replacement satellites. However, these systems would probably not offer the same level of functionality or durability as a satellite. Nonetheless, it is essential that the United States more widely distribute these “vital national interest” space capabilities across a larger and more diverse set of space and non-space platforms to both reduce U.S. space vulnerability and make it more difficult for potential adversaries to hold those assets at risk. The development of space technology is essential, no matter how the United States decides to respond to Chinese or other nations’ counterspace capabilities. SSA, defensive and offensive measures, ORS capability, and evaluation of the Chinese program all require more advanced technology in order to be successful, such as advanced sensors, software, micro- and nanoelectronics, and ultra-long endurance UAVs.

**[ ] Rapid Relaunch is critical to solvency – it is necessary to reconstitute our satellites after an attack**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Variable and Rapid Launch Capability The current United States Department of Defense launch complex does not have the capability to rapidly replenish satellites in the event of destruction. Launch preparation and execution can take weeks to months. The United States must adopt rapid and flexible commercial launch technologies. Of at least equal importance to having a rapid launch capability is a launch system that deploys satellites from varying locations. When launched from the traditional space ports of Cape Canaveral and Vandenberg Air Force Base, China can easily monitor the launch and quickly determine the initial orbit and possibly satellite type. Having a capability that can unpredictably launch from unmonitored locations will delay China's ability to track and identify United States satellites, greatly inhibiting their ability to target satellites. This capability could be sea-based, where monitoring by an adversary is more difficult. The capability could also be airborne, like the Pegasus program which has successfully launched satellites using an L-I0ll aircraft from California, Virginia, Florida, the Canary Islands, and the Marshall Islands. 48 Small Satellites. The United States must also make a move towards smaller satellites that use a common bus and architecture. A single launch vehicle could then deploy multiple small satellites, allowing the rapid establishment of a new constellation at the beginning of a conflict or replenishment of an old one. China would then face a dilemma as to which satellites they would attack. If China does decide to attack, the impact would be proportionately smaller because they would take out a lesser percentage of the constellation. The Iridium collision demonstrated the ability of a large constellation to absorb the loss of single satellite with inertial degradation. 49 Having numerous small satellites ready to launch can also lessen the need to perform defensive orbital maneuvers, as they can be quickly replenished. Finally, small satellites are inherently harder to track whether by radar or optical telescopes. While a requirement for large satellites remains; small satellites will help protect and complement the large satellites. Key to developing small satellites is a common command and control (C2) network regardless of function, rather than today's stovepiped C2 that are unique for each satellite type. A common bus and C2 system can also support small satellites by relying on a cross-linked network to control satellites and download mission data from a central location rather than on ground stations distributed around the globe.

**[ ] Funding ASAT tests and military launch capabilities are critical to US Space Security**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

We need to show our commitment to space secu­rity through action. Here are six recommendations. The first is to implement proposals in the report of the U.S. Space Commission, released in 2001 after months of hard work and serious thought. Senator Wayne Allard inserted language in last year's Defense Authorization Act calling for an independent review and assessment of DOD's progress in implementing some of the Space Commission's key recommenda­tions. Upon release, the "Allard Report" should be the subject of extensive hearings before the House and Senate Armed Services Committees.[20] Next year's defense bill should include the changes necessary to ensure that the DOD, and particularly the Air Force, are organized and equipped to meet the threat. A second recommendation: Congress also needs to hold hearings to ensure that the Chinese ASAT program is not based on U.S. technology, either shared or stolen. If further export controls are nec­essary to slow China's ASAT development, they must be considered. Third, the U.S. needs to ensure that our military has access to so-called operationally responsive space, defined as "the ability to launch--and acti­vate quickly--militarily useful satellites."[21] In a world where our space assets are likely to be threat­ened, operationally responsive space capabilities will allow us to quickly and affordably replace assets lost to anti-satellite attacks. Fourth, the Missile Defense Agency needs to begin building a "Space-Based Test Bed," which would include both kinetic and directed energy components. The best way to protect our satellites from missile-borne ASATs is to ensure that the mis­siles never leave the atmosphere, and the best way to destroy missiles in the boost phase is from space. Fifth, the Defense Department and Congress must ensure that the budget for Space Control is adequate to meet the threat. The budget for all three elements added up to less than $500 million for fis­cal year 2007--less than one-half of 1 percent of the total Air Force budget. This is clearly not enough. We are not funding kinetic kill ASATs, and, as I mentioned earlier, important offensive counter­space and situational awareness programs have recently been cancelled due to lack of funds. Even though the budget environment is tight and resources are not unlimited, America can afford to defend our vital interests in space. In fact, we can't afford not to. As part of this effort, the Defense Department needs to send Congress a budget that reflects the requirements for meeting the threat in space. Too often, DOD is deterred from making requests because they expect controversial programs to be cut or zeroed out by Congress. But space security advocates, like myself, find it much harder to fight for space programs when the Defense Department is timid about requesting them in the first place.

**[ ] Chinese ASATs threaten US Space assets – Hardening, maneuverability and relaunch solve**

**Sanger 2007 - Chief Washington Correspondent for the New York Times** [David E. and Joseph Kahn, Deputy Foreign Editor of the New York Times , *U.S. Tries to Interpret China’s Silence Over Test*, New York Times, <http://www.nytimes.com/2007/01/22/world/asia/22missile.html?pagewanted=1&_r=1>, Accessed June 22, 2011]

The threat to United States interests is clear: the test demonstrated that China could destroy American spy satellites in low-earth orbit (the very satellites that picked up the destruction of the Chinese weather satellite). Chinese military officials have extensively studied how the United States has used satellite imagery in the Persian Gulf War, the wars in Iraq and Afghanistan, and in tracking North Korea’s nuclear weapons program — an area in which there has been some limited intelligence-sharing between Chinese and American officials. Several senior administration officials said such studies had included extensive analysis of how satellite surveillance could be used by the United States in case of a crisis over Taiwan. “This is a wake-up call,” said Robert Joseph, the under secretary of state for arms control and international security. “A small number of states are pursuing capabilities to exploit our vulnerabilities.” As a result, officials said, the Chinese test is likely to prompt an urgent new effort inside the Bush administration to find ways to counter China’s antisatellite technology. Among the options are efforts to “harden” vulnerable satellites, improve their maneuverability so that they can evade crude kinetic weapons like the one that destroyed the Chinese satellite and develop a backup system of replacement satellites that could be launched immediately if one in orbit is destroyed.

# TSAT Inherency

**[ ] The US has cancelled upgrades to military satellite communications now due to budget shortfalls**

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Upgrades to US military communications infrastructure remained a significant focus in 2009. In particular, the overall satellite communications roadmap has been streamlined, with over-budget and behind-schedule programs being cut entirely. While the $26-billion Transformational Satellite Communications System (TSAT) had been cancelled in 2008, with a view to launching a restructured, “slimmed-down” version in 2019,55 in April the Defense Department announced that it was cancelling all funding for even a “slimmeddown” TSAT and would instead procure two additional Advanced Extremely High Frequency (AEHF) communications satellites.56 It is estimated that this will save up to $2.5-billion by 2015.57 Nevertheless, AEHF has problems of its own. While it represents a less ambitious satellite communications system than TSAT, it too is over budget (technical problems caused $259-million in cost growth in 2009)58, behind schedule, and suffering from technical problems. The US Government Accountability Office (GAO) announced this past spring that “the Defense Department faces a potential gap in protected military communications caused by delays in the AEHF program.”59 The first AEHF satellite is scheduled to be launched in 2010 (rescheduled from 2008 and then 200960), with the second to be launched in 2011.61 The completed system will consist of three satellites in geosynchronous earth orbit (GEO), providing up to 100 times the capacity of the present Milstar communications satellite system and servicing up to 4,000 networks and 6,000 terminals.62 The Defense Department budgeted $2.3-billion for the AEHF program in 2010, up 318 percent from $552-million in 2009.63

**[ ] Future funding for TSAT is not assured – budgetary pressure and empirical examples**

**Katzman 2006, Product Manager and Editor of Defense Industry Daily** [Joe Katzman. “Special Report: The USA’s Transformational Communications Satellite System (TSAT).” http://www.windsofchange.net/archives/006660.html#why. Accessed June 24, 2011.]

Which leads to our final question: will tsat SS be part of that network? One of the assumptions that's worth thinking about is whether the budget for tsat will continue to be there. Consider current US budgetary realities, the ongoing and unpredictable cost of a global war, the coming "maintenance overhang" for worn out equipment, outside events, and finally a wide array of under-funded Pentagon programs that reaches far beyond just the space field. Trent Telenko is right to point out that under those circumstances, a $15-18 billion satellite network that could cost $20 billion or more in the end and won't be ready for another 10 years is a prime target for program cuts. In terms of long term trends, Trent also notes that that narrowband satellites and marts-type high-altitude blimps for theater communications, wideband aehf satellites for mission-critical high-bandwidth transfers like uav video, encrypted communications via commercial satellite carriers, and laid fiber-optic cables for strategic communications are all beginning to appear on the scene. Every one of these components is already deploying, and both the US military and global economic forces will continue to add to their availability. As such, one can also expect every one of these infrastructure pieces to become more prevalent in the coming years. Throw in the possibility of finding new ways to leverage existing systems, and this constellation definitely represents a potential "incremental competition" threat to tsat. Which is why another key issue for tsat and tca is how well the Transformational Communications Office and its programs are documenting their assumptions about the future, checking them periodically to ensure that those assumptions are still valid, and building upgradeability and flexibility into their platforms and plans so they can cope with changes to those assumptions. In other words, they'll need to be good at all the things Motorola didn't do with its disastrous iridium global cellular network, which ironically now carries narrowband traffic for the u.s. military at bargain prices. Could tsat share iridium's fate at an even earlier stage, shot down by a creeping incremental set of competitors even before it launches? It could. Could tsat continue to improve, and turn out to be an expensive but important program success story? It could. Some of the choice between those fates lies in the hands of its contractors and managers. some of it lies in the upper reaches of the Pentagon. Some of its fate, however, lies entirely outside all of their hands.

**[ ] TSAT’s cancellation crushes US military communications – there is no adequate replacement and we face processing gridlock**

**Kusiolek 2009, Chairman and President of TransGlobalNet, Inc.** [Richard Kusiolek. “Future Military Communications: What Happens after TSAT?” Satellite TODAY. September 1, 2009. http://www.satellitetoday.com/via/supplement/31919.html. Accessed June 24, 2011]

In July, at the Seattle World Affairs Council, U.S. Army Gen. David Petraeus, leader of U.S. Central Command, discussed how broadband IP network technology won the 2008 battle of Sadr City, Iraq, as unmanned aerial vehicles (UAV) and warfighters using broadband communications on the move played key roles. In small or large battlefield operations of the 21st century and beyond, bandwidth will be as important as bullets for the warfighters, and the Transformational Satellite Communications System (TSAT) was believed to be force driven and necessary for air and naval superiority. Now what are the consequences of the U.S. Department of Defense’s cancellation of TSAT and how will the bandwidth gaps be filled? Network-Centric Warfare The next revolutionary military communication satellite system, TSAT, was a development shaped by Sept. 11, global terror and the technology development of UAVs. The vision was to increase the military satellite data rate capacity by thousands of times and enhance the ability to deploy troops around the globe by creating a user-friendly interface available anywhere. With Milstar 2, an image collected by a UAV would take 2 minutes to process, a radar image 12 minutes and a space-based radar image would take 88 minutes. The vision for TSAT was that any of these images could be delivered in less than a second. But the program, TSAT, a constellation of six satellites connected to the Global Information Grid (GIG), was plagued with scheduling and budget problems since its inception in 2004. The satellite system was originally scheduled to launch in 2012 but was delayed to 2013 after a $300 million reduction of program funding was cut by U.S. Congress in 2005. The U.S. Air Force then delayed its decision to select TSAT’s final space segment development contractor. In October, the Pentagon announced that it would defer its decision on choosing a contractor to build the system until 2010, with no guarantees that it would continue to fund further development. A November report by the Defense Science Board and the Intelligence Science Board had warned against further delays, calling TSAT "essential to enhancing military and intelligence operations. Without TSAT, mobile land forces and Navy ships will lack sufficient assured (ISR) [intelligence, surveillance and reconnaissance] communications capacity," the study said. In December, after rumors of the program being on the brink of termination and a series of critical reports from the U.S. Government Accountability Office (GAO), the U.S. Air Force released a new request for proposal to Lockheed Martin and Boeing, changing the program timeline once more by calling for five satellites and ground stations, with the launch of the first satellite projected for 2019. Gates, who retained his position as defense secretary through the January administration change, finally pulled the plug on TSAT four months later. "Gates determined that the risks were not offset by the chances of success with the current TSAT architecture," says Bruce Bennett, program executive for satellite communications teleport and services for the Defense Information Systems Agency (DISA). Filling TSAT’s Gaps TSAT promised outstanding bandwidth and the ability to integrate with all of the Pentagon’s weapons systems — but with greater risk and higher cost. The end of the program leaves a gap in the military’s communications capabilities. One question before the GAO was, could this leading technology be integrated in time versus the Advanced Extremely High Frequency satellites that had 5 percent of the bandwidth of TSAT? "When they cancelled TSAT, they cancelled programs that were heavily reliant on TSAT," says Cristina Chaplain, director of acquisition and sourcing management for the GAO. ... "The question is how fast can AEHF come on line when they need it, as that program has its own problems?"

**[ ] U.S. military lacking communication capacity – key to operations in all branches**

**Katzman 2006, Product Manager and Editor of Defense Industry Daily** [Joe Katzman. “Special Report: The USA’s Transformational Communications Satellite System (TSAT).” http://www.windsofchange.net/archives/006660.html#why. Accessed June 24, 2011.]

During 1991's Desert Storm operations, the U.S. military discovered that not only were they lacking in communications capacity, what they did have didn't connect very well. After September 11, experts learned that tremendous amounts of available information within and beyond the Defense Department required adequate connections among its various providers and users. Operations in Afghanistan, Iraq, and other battlefields of the Global War on Terror have further demonstrated the u.s. military's increasing reliance on high-tech communications and real-time data from uavs, naval assets, and soldiers on the ground. If bandwidth is becoming an important bottleneck in battle, went the question, what is the u.s. military to do? Very shortly after the 9/11 attacks, the u.s. Department of Defense (DoD) initiated a Transformational Communications Study to accelerate the delivery of advanced capabilities with state-of-the art technology to the field. The study was led by the National Security Space Architect (NSSA), and used the nssa's Mission Information Management Communications Architecture as a springboard. It looked at many options, and assessed current plans. The study concluded that the us. Military's existing program plan would not meet forecast communications requirements. It also suggested that there was a window of opportunity to provide an architectural framework for a compatible communications system across the Department of Defense and the intelligence community - one that could increase u.s. capabilities by a factor of ten. Those conclusions, plus ongoing experience in the Global War on Terror and new technology developments like uavs, helped shape the Transformational Communications Architecture (TCA). At present, all of the u.s. services are making future acquisition plans that are dependent on the capabilities the tca umbrella program is expected to provide. The tsat program is envisaged as part of the tca, providing its space-based "anytime, anywhere" bandwidth backbone.

# TSAT Key to Hegemony

**[ ] Upgrading military communications satellites to TSAT is key to our space capability.**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

Satellite communications have been described by one expert as “the single most important military space capability.”8 The Military Satellite Communication System (Milstar) is currently one of the most important of these systems, providing protected communications for the US Army, Navy, and Air Force through five satellites in Geostationary Orbit (GEO). Replacement of Milstar satellites with Advanced Extremely High Frequency (AEHF) satellites is under way in cooperation with Canada, the UK, and the Netherlands. The US DOD budgeted $2.3-billion for the AEHF program in 2010, up more than 300 percent from $552-million in 2009.9 Development of the next-generation Transformational Satellite Communications System (TSAT), which would provide protected, high-speed, internet-like information availability to the military, was cancelled in 2009 (see related development below). The program, whose procurement – if fully developed – had been estimated to cost between $14-billion and $25-billion by 2016,10 was disrupted by repeated delays and the first launch had been postponed several times.11 The Defense Satellite Communications System (DSCS) – the workhorse of the US military’s super-high frequency communications – is a hardened and jam-resistant constellation that transmits high-priority command-and-control messages to battlefield commanders using nine satellites in GEO. A planned follow-on to this system, the Wideband Global Satellite System or Wideband Global SATCOM (WGS), is expected to significantly increase available bandwidth. The 2010 budget requested for WGS, intended to transmit data at gigabit speeds, was $335-million, to be used mainly for on-orbit testing of the second and third satellites of the constellation.13 In addition to dedicated systems, space-based military communications use commercial operators such as Globalstar, Iridium, Intelsat, Inmarsat, and Telstar. Increased use of unmanned aerial vehicles (UAV) is straining both military and commercial capacity in places such as the Middle East; secure, high-speed, high-volume data transmission is critical to meet current and future demand.14 The US DOD will likely remain dependent on these services in the future, even with the deployment of new systems.

**[ ] TSAT key to All future military operations – improved communications capabilities, flexibility and reconnaissance**

**Thompson 2008, CEO of the Lexington Institute** [Loren B. Thompson. “The Thompson Files: Don’t Scrap the TSAT.” http://www.spacewar.com/reports/Thompson\_Files\_Dont\_scrap\_the\_TSAT\_999.html. Accessed June 24, 2011]

Foremost among these visionary initiatives is Transformational Satellite Communications, better known as TSAT -- "Tee-Sat." TSAT is a constellation of five communications satellites linked to tens of thousands of portable receivers that would deliver Internet-like connectivity to every U.S. war fighter in the world -- flexibly and securely, no matter where they are and what their circumstances. Nothing like TSAT exists today in the joint force. It would be the first military communications satellite that fully exploits "Internet Protocol" technology, the software and standards that enable the Internet to turn thousands of otherwise disconnected networks into a single unified Web. Because of this technology, TSAT will offer war fighters greatly improved transmission capacity, access, versatility and protection. In wartime, it would make them more likely to survive -- and more likely to win. In particular, TSAT will make it easier for troops on the move to communicate with the rest of the joint force and to receive intelligence in a timely fashion from remote reconnaissance systems such as unmanned aircraft. But because TSAT is so different from what has gone before, some people do not understand it. They want to turn it into a bill-payer for more prosaic needs, in much the same way that bureaucrats attempted to kill the Global Positioning System a generation ago. That impulse needs to be resisted by the next administration, because TSAT is the most important technology initiative the joint force is pursuing, a breakthrough that enables all the other advances needed to win future wars.

**[ ] Transformational Communications key to hegemony – able to share knowledge in real time**

**Keller 2005, Chief Editor of Military & Aerospace Electronics** [John Keller. “Transformational Communications.” Military & Aerospace Electronics. May 1, 2005. http://www.militaryaerospace.com/index/display/article-display/228230/articles/military-aerospace-electronics/volume-16/issue-5/features/special-report/transformational-communications.html. Accessed June 24, 2011]

U.S. military leaders are moving forward with new space-based, land-based, and forward-deployed wireless tactical networks to bring Internet-like information-retrieval systems to military leaders, logistics experts, and warfighters who all seek the same goal: shared battlefield knowledge. The entire notion of force transformation-the network-centric vision of tomorrow’s U.S. military-rests on one core capability: sharing knowledge in real time. Shared knowledge is far different, however, from simply fire-hosing combatants with information. Shared knowledge has to do with providing just the right information to just the right people at just the right time. No more, no less. Achieving this requires a complex and delicate balance of computers and interconnected data networks that can link all U.S. and allied forces, from the president of the United States down to riflemen in foxholes. That ability of everyone involved to see just the right piece of the whole picture with few, if any, time delays will enable the so-called transformational capabilities of tomorrow’s military force, such as massing firepower without massing forces, using relatively small and light forces that are more deadly than ever before, and predicting the enemy’s moves before the enemy makes them. Transformational communications has to do with efforts to link infantry soldiers, ground vehicles, aircraft, satellites, sensors, military leaders, and national command authorities in a reliable real-time global digital network so that everyone involved can share the same battlefield knowledge. Transformational communications is a whole new way of looking at military operations, capability, and procurement. “Transformation is a change in the market, based on an opportunity to create network systems where traditionally we had proprietary point-to-point stovepipe communications. Now, with net-centric warfare, rich information is a principle of war,” explains Terry Morgan, director of defense network strategies at the Cisco Systems Inc. global defense, space, and security group in Herndon, Va. Cisco is adapting its communications switches and networking technologies for military applications on land, at sea, in the air, and in space. “Transformation is really about thinking differently, and about connecting existing things in different ways to achieve new capabilities,” says U.S. Air Force Col. (and brigadier general-select) Gary S. Connor, head of the Command and Control, Intelligence, Surveillance, and Reconnaissance Systems (C2ISR) Wing of the Air Force Electronic Systems Center at Hanscom Air Force Base, Mass. “Examples of this are taking video from the Predator unmanned aerial vehicles and integrating that video on an AC-130 gunship to give the AC-130 crew a way of precision targeting,” Connor says. “Another example is taking Predator video and providing it to the special operations folks. You could have special- ops people riding horseback through the desert, and using Predator video on their laptop computers or PDAs to see what is over the other side of the next hill. This is what we mean by ‘power to the edge.’ ” This ground-based version of the Joint Tactical Radio System is for U.S. Army and Marine Corps ground vehicles such as tanks, armored personnel carries, and humvees. Click here to enlarge image Sometimes a precise definition of transformational communications is hazy. “What is transformational communications? The real definition is still being defined,” says Rick Sanford, director of space initiatives with Cisco global defense. “In transformation we get the acquisition and requirements-generating offices, the prime contractors, and systems integrators to think beyond the actual requirement of the mission at hand, to look at a future of globally interconnected functionality. We fundamentally change the way people think about deploying these systems, and look at the big open Internet.”

**[ ] TSAT is key to hegemony – it will increase our military communications and interactivity by an order of magnitude**

**Keller 2005, Chief Editor of Military & Aerospace Electronics** [John Keller. “Transformational Communications.” Military & Aerospace Electronics. May 1, 2005. http://www.militaryaerospace.com/index/display/article-display/228230/articles/military-aerospace-electronics/volume-16/issue-5/features/special-report/transformational-communications.html. Accessed June 24, 2011]

Operationally, the foundation of transformational communications rests on four primary supports: the Transformational Satellite Communications system, or TSAT; the Global Information Grid Bandwidth Expansion, or GIG-BE; the Warfighter Information Network-Tactical system, or WIN-T; and the Joint Tactical Radio System, or JTRS. TSAT TSAT, which is to be fully operational in 2006, essentially will be a high-speed Internet data network in the sky, providing crucial wideband connectivity between terrestrial data networks such as the GIG-BE, and battlefield networks such as the WIN-T, JTRS, or relatively old military data networks. TSAT will be an eight-satellite constellation with worldwide coverage. Five TSAT satellites will be in geosynchronous orbit to handle most of the workload, while three lighter, less-capable satellites called the Advanced Polar System will be in polar orbit to help cover potential communications gaps. Free-space laser crosslinks running at 10 gigabits per second will connect the satellites to one another. Other free-space lasers will connect the satellite network to high-altitude manned and unmanned aircraft at two gigabits per second. Extremely high-frequency (EHF) and Ka-band radio-frequency (RF) links running as fast as 311 megabits per second will connect satellites to ground stations, while RF links from 256 kilobits per second to 45 megabits per second will connect the TSAT network to forward-based ground terminals. The speed depends on the capabilities of the terminals, says Dr. Troy E. Meink, the TSAT program manager in the U.S. Department of Defense Military Satellite Communications Joint Program Office at Los Angeles Air Force Base, Calif. Lasers cannot reliably link with sites on the Earth’s surface because of clouds, precipitation, dust, and other obscurants. TSAT’s optical crosslinks will be solid-state lasers with 1- to 10-watt amplifiers, with digitally reprogrammable routers. The TSAT routers will make broad use of the latest digital signal processors and field-programmable gate arrays, and will use the latest high-speed Internet Protocol: Internet Protocol Version 6, or IPv6. Military leaders will choose a contractor to build and deploy the ground-based TSAT mission operations system before the end of this year, Meink says. This TSAT ground segment will handle mission planning, network operations, policy implementation, and key cryptographical management. Three contractor teams are vying for this project, led by Raytheon Co. in Aurora, Colo.; Northrop Grumman Corp. Mission Systems in Reston, Va.; and Lockheed Martin Information Support Services in Gaithersburg, Md. A contract for the TSAT space segment will be let in late 2006. Two industry teams led by Lockheed Martin Space Systems Co. in Sunnyvale, Calif., and Boeing Satellite Systems in El Segundo, Calif., are competing for the job, and are concentrating on developing TSAT digital processors, laser communications, and advanced antennas. TSAT is expected to improve the communications capabilities of deployed military forces by an order of magnitude. Today’s Military Strategic, Tactical & Relay II (MILSTAR II) satellite communications system, for example, takes two minutes to transmit a 24-megabyte 8-by-10-inch image, while the TSAT system should be able to do that in less than a second. First launch of the TSAT spacecraft will be in 2013, initial operating capability is set for 2015, and full TSAT operation is set for 2018.

**[ ] TSAT is critical to hegemony – it ends information bottlenecks by increasing bandwidth to the battlefield**

**Katzman 2006, Product Manager and Editor of Defense Industry Daily** [Joe Katzman. “Special Report: The USA’s Transformational Communications Satellite System (TSAT).” http://www.windsofchange.net/archives/006660.html#why. Accessed June 24, 2011.]

As video communications is integrated into robots, soldiers, and uavs, and network-centric warfare becomes the organizing principle of American warfighting, front-line demands for bandwidth are rising sharply. Bandwidth has become the bottleneck, and the Transformation Communications Satellite (TSAT) System is part of a larger effort by the US military to address this need. The final price tag on the entire tsat program is expected to reach $14-18 billion through 2016, which includes the in-space "backbone" of laser communications satellites, the ground operations system, the satellite operations center and the cost of operations and maintenance. By mid-2007, the u.s. Air Force will either decide to build the tsat system on its current schedule and launch in 2013-2016, or postpone tsat, take stopgap measures, and add Advanced Extremely High Frequency (AEHF) satellites 4 & 5 to the three slated for launch from 2009-2012. tsat has seen a recent resurgence of news coverage, and its central role in next-generation US military infrastructure makes it worthy of in-depth treatment. Yet the program's survival is not assured by any means. Outside events and incremental competitors could spell its end just as they spelled the end of Motorola's infamous Iridium service. This updated Special Report looks at the the potential future(s) of u.s. military communications, and the tsat program's issues and challenges within that framework.

**[ ] U.S. military becoming reliant on real-time communications – TSAT key**

**Katzman 2006, Product Manager and Editor of Defense Industry Daily** [Joe Katzman. “Special Report: The USA’s Transformational Communications Satellite System (TSAT).” http://www.windsofchange.net/archives/006660.html#why. Accessed June 24, 2011.]

During 1991's Desert Storm operations, the U.S. military discovered that not only were they lacking in communications capacity, what they did have didn't connect very well. After September 11, experts learned that tremendous amounts of available information within and beyond the Defense Department required adequate connections among its various providers and users. Operations in Afghanistan, Iraq, and other battlefields of the Global War on Terror have further demonstrated the u.s. military's increasing reliance on high-tech communications and real-time data from uavs, naval assets, and soldiers on the ground. If bandwidth is becoming an important bottleneck in battle, went the question, what is the u.s. military to do? Very shortly after the 9/11 attacks, the u.s. Department of Defense (DoD) initiated a Transformational Communications Study to accelerate the delivery of advanced capabilities with state-of-the art technology to the field. The study was led by the National Security Space Architect (NSSA), and used the nssa's Mission Information Management Communications Architecture as a springboard. It looked at many options, and assessed current plans. The study concluded that the us. Military's existing program plan would not meet forecast communications requirements. It also suggested that there was a window of opportunity to provide an architectural framework for a compatible communications system across the Department of Defense and the intelligence community - one that could increase u.s. capabilities by a factor of ten. Those conclusions, plus ongoing experience in the Global War on Terror and new technology developments like uavs, helped shape the Transformational Communications Architecture (TCA). At present, all of the u.s. services are making future acquisition plans that are dependent on the capabilities the tca umbrella program is expected to provide. The tsat program is envisaged as part of the tca, providing its space-based "anytime, anywhere" bandwidth backbone.

# TSAT - Solvency

**[ ] TSAT improves military communication – it cuts processing time dramatically**

**Katzman 2006, Product Manager and Editor of Defense Industry Daily** [Joe Katzman. “Special Report: The USA’s Transformational Communications Satellite System (TSAT).” http://www.windsofchange.net/archives/006660.html#why. Accessed June 24, 2011.]

tsat SS Concept tsat is intended to provide internet-like capability that extends high-bandwidth satellite capabilities to deployed troops worldwide, and delivers an order of magnitude increase in available military bandwidth. Using laser communications intersatellite links to create a high data-rate backbone in space, tsat will be one of the key enablers for the American vision of Network Centric Warfare. A visual image from a uav that would take 2 minutes to process with the Milstar II satellite system would take less than a second with tsat. A radar image from a Global Hawk uav (12 minutes), or a multi-gigabyte radar image from space-based radar (88 minutes), would also take less than a second with the tsat network. Best of all, the recipient can be on the move with a relatively small receiver, anywhere in the world. As Military Information Technology explains, tsat users fall into two broad categories: high-data rate access users and low-data rate access users. The high-data rate access provides a data rate of 2.5 gigabits to 10 gigabits per second through laser communications. However, only 20 to 50 or so of these links would be available, and they will most likely be dedicated to major intelligence, surveillance and reconnaissance assets in space and in the air. Others on the low data-rate end can still use about 8,000 simultaneous radio frequency (RF) data links, which will provide connectivity to strategic assets and tactical users as well as the aerial intelligence, surveillance and reconnaissance (ISR) platforms. The high data rate platforms have drawn the most attention, but the ability to covert high data throughput into thousands of RF channels is likely to prove equally important.

# Missile Defense – Solves Preemption

**[ ] Space based Missile Defense is key to US survival – missile proliferation will collapse deterrence**

**Space and Missile Defense Report 2009** [New Report: Mutual Assured Destruction Won't Work Because Too Many Rogue Actors Gain Nuclear Capabilities, While Developing Intercontinental Ballistic Missiles. (2009, May). Space & Missile Defense Report, 32(18), Accessed June 23, 2011, from ProQuest Technology Journals.]  
  
United States Must Maintain Leadership In Space, Or Cede Primacy To Other Nations With Rival Ambitions, Report Says; Missile Defense Should Rise $2 Billion Yearly, To $12 Billion The concept of mutual assured destruction that successfully protected the United States from nuclear destruction by the old Soviet Union won't work to shield America from rapidly rising threats posed by rogue nations and terrorist groups, a major new report states. "An unprecedented number of international actors have now acquired -- or are seeking to acquire -- ballistic missiles and weapons of mass destruction," according to the 237-page report described in a Capitol Hill forum by Baker Spring, research fellow with the Heritage Foundation, a Washington think tank. The report was published for the Independent Working Group, in which Spring is a member, by the Institute for Foreign Policy Analysis, of Cambridge, Mass., and Washington, D.C. In the report, steadily increasing missile capabilities of Iran, North Korea, China, Russia, Pakistan and Syria, and their nuclear weapons capabilities, are described in detail. The report asserts that the United States, if it is to retain its leadership in military and other spheres, must maintain its preeminence in space, including a space-based missile defense. Retaining that premier position in space is "not an option, but rather a necessity, for if not the United States, some other nation, or nations, will aspire to this role, as several others already do," the report states. "For the United States, space is a crucially important twenty-first century geopolitical setting that includes a global missile defense." Spring told an American Foreign Policy Council forum that the United States requires a robust sea-based missile defense system to protect both East and West Coast areas, which would include an upgrade of the Standard Missile-3 interceptor mounted in vertical launch system tubes aboard Navy ships, able to hit longer-range enemy missiles, even in their boost phase just after launch. Currently, Secretary of Defense Robert Gates has cast U.S. boost phase programs into doubt, refusing to fund any further planes for the Airborne Laser missile defense program, with questions abounding as to the fate of the Kinetic Energy Interceptor, the other boost-phase program. Responding to a question from Space & Missile Defense Report, Spring made clear that he doesn't agree with curbing or killing those boost phase programs. Rather, his suggestion for a sea-based boost phase program, and for a space-based system, would be an addition. Under proposals of the report, missile defense spending might rise from about $10 billion annually to $12 billion, he said. The United States requires "a truly global missile defense capability that addresses the current and emerging threats" of ever-more nations wielding long-range missiles and weapons of catastrophic destructive powers, according to the report, which is published in updated form annually. It first was written in 2006. The report recommends completing the Ground-based Midcourse Defense system now in Alaska and California, guarding against missiles from North Korea, and its variant, the proposed European Missile Defense system to protect against missiles from Iran (or Pakistan). Beyond that, however, the report calls for expanding the sea-based Aegis weapon control system and Standard Missile interceptors on ships, and also creating a space-based missile defense system.

**[ ] Expanding space control is critical to missile defense – space sensors are key to a multilayered defense. Missile defense is key to preventing devastating nuclear attacks from rapidly proliferating rogues**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

There are several space combat mission areas of interest to the future defense of the United States, including space control,3 offensive strike,4 and ballistic missile defense. Each combat mission offers very different operational and strategic possibilities, and each should be evaluated separately and judged independently. Recognizing that weapons that leverage Earth orbits can make different contributions to national defense strategy, lumping them together in order to draw a general conclusion about the prudence of deploying “weapons in space” makes little sense. Our progress in this area will depend greatly on our ability to mature our rhetoric so that we can make meaningful distinctions. So I will focus here on the possible advantages of adding a space-based layer leveraging hit-to-kill interceptors to the newly deployed U.S. missile defense system. Highly effective missile defenses would appear to offer a very significant payoff over the long term when one takes threat and national vulnerability to catastrophic attack into consideration.5 The ballistic missile threat to the United States, its deployed forces, and allies and friends has been well defined.6 This is a threat we downplay at our peril. Nations such as North Korea and Iran — which also have significant programs to develop nuclear, biological, and chemical weapons — as well as nonstate groups can pose significant, even catastrophic, dangers to the U.S. homeland, our troops, and our allies. Russia and China, two militarily powerful nations in transition, have advanced ballistic missile modernization and countermeasure programs. Indeed, despite the reality that trade relations with China continue to expand, its rapid military modernization represents a potentially serious threat. Whether these nations become deadly adversaries hinges on nothing more than a political change of heart in their respective capitals. The intelligence community’s ability to provide timely and accurate estimates of ballistic missile threats is, by many measures, poor. Our leaders have been consistently surprised by foreign ballistic missile developments. Shortened development timelines and the ability to move or import operational missiles, buy components, and hire missile experts from abroad mean the United States may have little or no warning before it is threatened or attacked. There is no escaping the uncertainty we face. And the stakes couldn’t be higher. A ballistic missile delivering a nuclear payload to an American city would be truly devastating. For comparison, the Insurance Information Institute estimates total economic loss so far from Hurricane Katrina at more than $100 billion. By some calculations, it is going to take New Orleans 25 years to recover fully, and the cost of rebuilding the city is predicted to be as high as $200 billion. The direct cost to the New York City economy following the September 11, 2001, terrorist attacks was between $80 billion and $100 billion. These figures do not include indirect costs or the incalculable human losses. Now just imagine the costs imposed by a ballistic missile nuclear strike against a U.S. city. The economic toll from a single nuclear attack against a major city, which would involve extensive decontamination activities and impact the national economy, could rise above $4 trillion.7 The economy could also be devastated by the electromagnetic pulse generated by a high-altitude nuclear explosion. The resulting electromagnetic shock would fry transformers within regional electrical power grids.8 The interdependent telecommunications (including computers), transportation, and banking and financial infrastructures that people and businesses rely on would be significantly damaged. Such an event would leave us, in some cases, with nineteenth-century technologies. This situation could jeopardize the very viability of society and the survival of the nation. Moreover, the paralysis leaders would experience would leave the country and its allies exposed to highly lethal twenty-first century threats. The blackmail possibilities of these weapons are as mind-numbing as they are terrifying. After more than 60 years of advances in ballistic missile technologies, we have only just begun to address our vulnerability to them. Missile defense is a policy and budgetary reality today, and it enjoys strong bipartisan support. Current U.S. efforts to dissuade other countries from investing in ballistic missiles, to assure U.S. allies, and to deter aggression put missile defense in a place of prominence. Bush Administration policy is to evolve the fielded system incrementally to defend against these threats. The system is intended to adapt to new threats as they emerge and integrate advanced missile defense technologies as they are introduced. The fielded system today consists of space-based detection sensors, ground-based and seaborne early warning and tracking sensors, ground-based interceptors in Alaska and California for long-range defense, transportable ground-based Patriot Advanced Capability–3 units, and sea-based interceptors to engage short- and medium-range ballistic missiles. There are also several development programs to field new ground- and sea-based and airborne weapons to give the layered defense system new capabilities for engaging all ranges of ballistic missiles. Multiple defensive layers, with system elements working together synergistically to enhance the capability of the whole, are central to the approach adopted by U.S. defense leaders. No one layer or interceptor design can fulfill this global mission on its own. Several capabilities for intercepting a ballistic missile or its payload just after launch, or as it flies through its midcourse phase in space, or as it reenters Earth’s atmosphere on a terminal trajectory will enhance overall system effectiveness by providing a defense in depth. Such a defense not only can enable several shot opportunities against an in-flight missile, but also can address the problem of missile defense countermeasures, which generally work in only one phase of flight. The current U.S. approach, in other words, is the right one.

**[ ] Space based missile defense is key to global security – deterrence, international cooperation, reducing proliferation and crisis stability**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

The policy benefits of a space-based missile defense layer are straightforward. A more effective missile defense system that fully leverages space would provide a true on-call global defensive capability, and this could lead to increased stability in the world. Defenses deter attacks by reducing confidence in the success of any attack. The more effective the missile defense system is, the greater will be its deterrence value, and the less likely will we be to have to use it at all. At some point, when the system is seen by other governments as highly effective, they could recognize a diminishing marginal rate of return in their own ballistic missile investments. As more allies invest in missile defense, U.S. space-basing activities could build on current missile defense cooperative activities and open up new avenues for international collaboration, both to develop elements of the space-based layer and to participate in operations. Moreover, because no state can have sovereignty over the space above its territory, we could operate up there free of political constraints. The need for negotiating basing rights to locate sensors or interceptor fields would become less pressing. Improved system performance would give the U.S. leadership a better array of options. In the face of attempted blackmail, for example, the president and his advisors would have confidence in the nation’s capabilities to defeat a missile, which would make it possible to avoid more destabilizing moves, such as offensive preventive attacks on enemy territory. It is equally true that strong defenses would support necessary offensive action. Effective defenses can buy time to understand the strategic consequences and overall impact of military action. Our choices are fundamental to making moral judgments. The moral issues surrounding a national security crisis are tied to considerations of operational effectiveness. Are we doing our best to provide protection against some of the worst weapons imaginable? What would the consequences of not acting be, or of not being able to act because of a blackmail threat? What would be the result if Washington were unable to respond to increased terrorist activity worldwide or an upswing in the global weapons of mass destruction trade? A space-based layer would reinforce American strength, which in turn would allow the U.S. to better defend its interests and pursue its foreign policy goals. A powerful and influential United States is good for world peace, stability, and enforcing the rule of law internationally.

**[ ] Space-based interceptors key to successful missile defense- efficiency, effectiveness, and alertness**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

Today we base missile-defense weapons on Earth, yet most engagements actually take place high above the Earth’s surface, in space — unless, of course, those engagements occur very early in boost or late in terminal. Putting interceptors in space to engage ballistic missiles could offer efficiencies that go a long way towards improving national defense, protecting more areas around the world, and reacting more effectively to threat surprises. The Exoatmospheric Kill Vehicle (ekv), deployed on top of a long-range ground-based interceptor in Alaska and California, is really a euphemism for “space weapon.” Space is the only environment in which the ekv will operate. In order to perform the missile defense mission, it must be boosted into space where it is “based” for a short time and operates semi-autonomously to put itself onto a collision path with a hostile warhead. In other words, the ekv is a “space weapon” that just happens to spend most of its time on the ground. The Standard Missile–3 interceptor, while it is carried on Aegis ballistic missile defense ships, also executes the intercept endgame in space against short- to medium-range ballistic missiles using a sensor-propulsion package designed to collide with the target. Thus, despite the fact that space is the recognized battleground in many missile defense engagements, we are deploying “space weapons” that are restricted to terrestrial launching just prior to operation. They must fight a space war from Earth. So, in a sense, these terrestrial-based interceptors are out of position before the battle even begins. At the very least, they are not in the most advantageous position to accomplish the mission for which they were designed. Before we can even begin the launch sequence, battle managers must wait for the attacker to make his move. The attacker has a head start and the ability to pre-position before the defender can get to the point where he must engage, especially if we are talking about engagement in the midcourse phase of flight. These engagements take place over a matter of minutes, of course, so any time wasted getting into position could lead to a failed intercept and possibly devastation for a city. By not basing interceptors in space, by not pre-positioning assets in the environment where we know intercepts will take place, the defense is surrendering a fundamental positional advantage. On this point, there is relevance in Carl von Clausewitz’s observation that a “benefit [of defensive action], one that arises solely from the nature of war, derives from the advantage of position, which tends to favor the defense.”9 To give up this advantage is detrimental to the cause.

**[ ] Space-based missile defense key to entire defense system- thins out number of attacking missiles**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

Because the missile defense system is “layered” and will have multiple elements working together synergistically, sharing information, sharing existing sensors, communicating as a single system worldwide, even a small constellation of space-based interceptor platforms would allow the entire system to work more efficiently. The massive constellations projected back in the heady days of the Strategic Defense Initiative, in other words, do not seem to be necessary, especially when the targeted adversaries have very limited ballistic missile inventories. By attacking even just a portion of the threat missiles in boost and midcourse, the space layer has the effect of thinning out the number of attacking missiles so that the other elements of the system, which are based on the ground or at sea (midcourse and terminal systems), can be more effective.

# Missile Defense – They Say “Land Based NMD solves”

**[ ] Land based missile defense fail – small radius and fixed geographical point**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

The system being deployed today is fixed firmly to Earth. Whether they are sea-based or land-based weapons, or even the boost-engagement Airborne Laser, we are essentially talking about terrestrial platforms for basing weapons. As we move into the future, there are plans to make those platforms, the sensors and interceptors, more mobile. Why? Because greater mobility can provide greater flexibility for dealing with unpredicted threats. Mobility also allows a commander to concentrate his forces or disperse them as the requirements of the battlefield demand. It matters where we locate sensors and interceptors. It is important to put sensors close to the threat, because they will be in position to provide critical cueing and tracking data early in a ballistic missile’s flight. These data can help enlarge the engagement battle space. To perform boost-phase intercept from the ground or sea, the weapons platforms must be very near the target launch site. These terrestrial boost-phase weapons can defend many targets around the globe by covering a single launch site. The disadvantage of such basing, a disadvantage that is mitigated somewhat with a mobile platform like the Airborne Laser, is that the threat launch site or region must be predicted. Terrestrial-based weapons that engage in space, in the middle or midcourse of a missile’s or warhead’s flight, offer perhaps the greatest flexibility in terms of addressing possible flight azimuths, trajectories, and launch points. While ground-based midcourse interceptors may have to be oriented to large threat regions, they can defend against multiple launch points. Conversely, ground interceptors that are near the target can defend only a small area, but they can potentially protect that point from launches anywhere in the world. Yet it is simply unaffordable to do a point defense for every place you want to defend in the United States, every place that U.S. forces go, or everywhere that our allies are. The ability to do area defense — to defend against multiple launch points as opposed to doing point defense of a very limited area — is fundamental to successful missile defense. Political, strategic, and technological uncertainties could change the missile defense scenario by causing a shift in the threat from one region to another. Given that it takes years to field, test, and make operational new fixed interceptor and sensor sites, a shift in the threat could leave the nation vulnerable. Because many of the interceptors and sensors in the current system are fixed to geographic points, we are limited in our ability to defend the homeland, for example, against missiles launched from surprise locations such as a ship off our shoreline. We also might face an adversary tomorrow that deploys tens or even hundreds of ballistic missiles or one that has more sophisticated countermeasure and reentry technologies. Those, too, would be expected to stress the current system, which is designed at the moment to deal with more limited threats.

**[ ] Global missile defense is impossible without space-based interceptors- longer range and timely response**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

While space assets generally follow predictable orbital paths, they do provide a unique form of mobility — they can be present and persistent over many places on the globe. Indeed, in 2007, the Missile Defense Agency will begin demonstrations with two satellites hosting sensors designed to provide very fine surveillance and tracking data on in-flight ballistic missiles and payloads. A constellation of these satellites would become the sensor backbone of a global missile defense capability and would make possible the global mission endorsed by the Bush administration: the protection of the United States, its deployed forces, and allies and friends. Similarly, a space-based interceptor layer would enable a global on-call missile defense capability and a timely response to rapidly evolving threats, even threats emanating from unpredicted locations with very different azimuths from those we plan to be able to defeat today.10 A space-defense capability also would allow the country to engage longer-range threats originating from deep within the interior of a threat country.

**[ ] Only space-based interceptors can mitigate EMP explosions- redirects radiation back to attacker**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

It is also known that enemies of the United States can put a nuclear weapon over U.S. territory using a ballistic missile. The detonation of this weapon at a high altitude could unleash an electromagnetic pulse that would wipe out satellite and airborne navigation, intelligence, and communications systems and impede any U.S. military response to the aggression. Such a pulse of energy would disable or destroy the unprotected technological infrastructure of a region or the nation. According to the emp Commission, “a regional or national recovery would be long and difficult and would seriously degrade the safety and overall viability of our nation. . . . [A]t some point the degradation of infrastructure could have irreversible effects on the country’s ability to support its population.” Space-based interceptors may be the only effective way to counter this threat and mitigate the effects of an electromagnetic pulse resulting from the intercept. Engaging the missile close to its launch point would release the resulting explosion of gamma rays closer to the attacker’s territory. Relying on an intercept in space, in the midcourse of a missile’s flight, risks damaging unprotected satellites (i.e., just about all commercial and civilian satellites), regardless of who owns them.

# Doctrine - Inherency

**[ ] The US is not developing a space military doctrine now – we are ignoring the recommendations of the space commissions**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

An eighth example: U.S. Space Commission rec­ommendations overlooked. In addition to high­lighting the importance of U.S. space assets and their vulnerability, the 2001 report of the U.S. Space Commission made a number of important recom­mendations. Unfortunately, most of these recom­mendations have not been implemented.[18] For example, the commission argued that space must be recognized as a "top national security pri­ority" by the President and recommended establish­ing a presidential advisory group and an inter­agency group for national security in space. None of these steps has been taken. The Defense Depart­ment has not created a separate funding category, or "Major Force Program," for space, meaning that space security funds can be (and frequently are) diverted to pay for shortfalls in non-space areas. The report also noted the inevitability of conflict in space and urged decision makers to "develop the means both to deter and to defend against hostile acts in and from space."[19] As I noted, we still lack proper defensive and offensive programs. This demonstrates the paradox of the U.S.-China competition in space. The Chinese profess peaceful intent and uncategorical opposition to space weap­ons. At the same time, they are developing and test­ing a multi-layered space warfare capability. The U.S. on the other hand, repudiates arms control, publicly asserts its rights to deny space access to our enemies, and yet seems ambivalent toward the means of exerting that control.

# Doctrine - Solvency

**[ ] Military doctrine must plan for space security – covering all aspects of counterspace operations is critical to space dominance**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

Consistent with previous iterations, the current policy reaffirms space as a vital national interest and opposes "development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space."[10] It also restates U.S. commit­ment to "[d]evelop capabilities, plans, and options to ensure freedom of action in space, and, if direct­ed, deny such freedom of action to adversaries." This statement means we reserve the right to devel­op offensive and defensive ASAT capabilities, as well as robust missile defenses. We also have an Air Force Counterspace Operations Doctrine, which properly recognizes the imperative to control the "ultimate high ground" by building three capability areas: Space Situational Awareness (SSA) forms the foundation for all space activities by "characterizing, as completely as possible, the space capabilities operating within the terrestrial and space environments."[11] Using sensors and telescopes based both on the ground and in space, SSA allows warfighters to know where the adversary's space assets are and what they are doing. Defensive Counterspace is defined as "protecting, preserving, recovering, and reconstituting friendly space-related capabilities before, during, and after an adversary attack." This could include everything from hardening satellites against laser attacks to launching an air strike against an enemy's GPS jamming facility to quickly launching replacements that are destroyed initially. Offensive Counterspace denies the adversary the use of space assets through reversible or permanent means. It encompasses everything from jamming or blinding to destroying enemy satellites.

**[ ] The military needs to develop space military doctrines – this is key to coordination and success**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

At the same time, the military needs to more fully develop the doctrine necessary to operate and use space control capabilities. The concept of space superiority is still relatively new for military planners. Significant work still needs to be done on how to effectively and efficiently achieve space superiority for today’s military. Otherwise, when and if the day arrives where space weapons are needed, the transition will be confused at best. Understanding concepts and doctrine will allow military leaders to give political leaders sound advice on how to achieve space control as well as when space weapons need to be deployed and used. This same approach should be applied for the development and use of space weapons for missions other than space control—specifically missile defense and force application. Again, when a threat emerges in the world that cannot be handled through either peaceful means or with traditional military methods, and a space weapon can respond to such a threat, the time will have arrived to deploy such weapons.

**[ ] Space strategy is necessary to protect US leadership of the space commons – other countries are catching up.**

**Denmark 2010 - Fellow with the Center for a New American Security** [By Abraham M. and Dr. James Mulvenon CNAS, Jan, Contested Commons: The Future of American Power in a Multipolar World <http://www.cnas.org/files/documents/publications/CNAS%20Contested> %20Commons%20Capstone\_0.pdf Accessed Jun 21]

Despite the emergence of an increasingly complex set of military threats, it is important to remember that it is not America’s absolute level of power and influence that is falling, but its relative power compared to other emerging states. 16 While its dominance may be contested in the coming decades, America’s ability to lead remains. The key for the United States will be to recognize both its capabilities and its limitations, and to act now to shape the future security environment in ways that will protect key U.S. interests, as well as interests shared with the international community. Protecting the Contested Global Commons Going forward, the United States should develop political and military strategies that take these new realities into account and preserve the openness and stability of the global commons in an age of multipolarity. This report advocates a broad and multi-pronged strategy to preserve the openness of the four global commons: maritime, air, space and cyberspace. This strategy should employ all elements of national power, including diplomacy, strategic public engagement, and economic incentives and disincentives. Military power will continue to play an essential role because militaries worldwide can sustain the commons by promoting access, or they can destroy them by enforcing exclusivity or rendering a commons unusable. The U.S. military, for its part, should be prepared to sustain and defend the global commons. This strategy should be firmly founded in the best traditions of American institution-building and with the recognition that the United States can no longer protect the commons alone. Specifically, the United States should develop and enable an international order which, in turn, nurtures a loose set of international agreements and regimes among responsible and like-minded states that effectively preserves the openness and stability of the global commons. Although America’s “unipolar moment” may be fading and its military dominance becoming increasingly contested, the need for American leadership is as strong as ever. To support this strategy, the United States should re-commit to three traditional pillars of American foreign policy: preserving American leadership, projecting American power as necessary, and promoting alliances and partnerships. American leadership in the coming decades will depend on Washington’s ability to adapt to an era in which American military primacy throughout the global commons will be contested. Rising and revanchist powers are investing heavily in naval, air, space and cyber power; non-state actors are also gaining access to advanced anti-access military capabilities. The United States must be prepared to lead in a world in which its dominance is also contested politically in a world where other powers demand influence on and within the world’s common spaces. The status quo, in which the United States is the sole guarantor of the openness of the global commons and other states free ride, is unsustainable.

# Cadre Key to Hegemony

**[ ] The Air Force Space Cadre is Vital in sustaining space control – launches, intelligence and communication**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Air Force space professionals have a direct role in fielding, launching, and executing space power. The 12,000+ member Air Force space cadre is comprised of officer and enlisted operators, scientists, engineers, program managers, communications, weather, and intelligence personnel. The Air Force cadre also includes Air Force Reserve and Air National Guard members. The effort to identify applicable civilian specialties for the space cadre began in earnest in 2008 and is ongoing. The Air Force space cadre is managed by the Space/Cyber Professional Management Office (SPMO), assigned to Headquarters, Air Force Space Command, Colorado Springs. The Air Force Space Professional Development Program (SPDP) ensures deliberate development of space personnel to guarantee a sufficient inventory of space-knowledgeable officer and enlisted personnel to meet mission requirements. The SPMO tracks cadre members and billets via the Space Professional Development Database (SPDD), tracking experience via Space Professional Experience Codes (SPEC) in ten space mission categories. The SPDD is also a source of personnel and manpower information for assignments, leadership boards, metrics, and statistics relating to the space cadre. Air Force initiatives to integrate SPDD and SPEC capabilities into an enterprise-we system are underway. The data provided in this report were derived from the SPDD. The Air Force Guard and Reserve numbers are best estimates based on a subset of personnel data provided to the Space Professional Management Office by the Guard and Reserve. Current Status The Air Force space cadre consists of 7,978 officers from the operations, acquisition, intelligence, weather, and communications fields. Since the majority of weather, intelligence, acquisition, and communications officers do not serve their entire careers in space, several individuals whose space experience is catalogued in the SPDD are in non-space positions at any given time. The enlisted space cadre consists of 2,255 personnel from operations, intelligence, weather, and communications. Similar to the officers, not all enlisted intelligence, weather, and communications personnel are employed solely in space-related duties. The effort to identify civilian space-related positions and individuals continues, as well as development of a civilian SPDP. The SPMO is identifying space-related civilian positions and will then use the positions as a baseline to identify individuals with space experience. There are approximately 2,200 space civilian positions. The civilian SPDP will be tailored to the unique structure of the civilian personnel system, since the requirements, milestones, and timing of the existing military SPDP are not readily converted to civilian career development. 16 Projected Status The dynamic nature of space systems development makes personnel projections and identification of education, training, and experience requirements difficult. Nevertheless, projections over the next five years indicate that the space cadre is appropriately configured to meet mission needs.

**[ ] Space cadre is critical to hegemony – it supports Army War on Terror efforts**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

The United States Army Space Cadre, composed of Space Professionals and Space Enablers, supports the Army’s worldwide deployed forces. Currently, the Army has more than 100 space cadre members in the U.S. Central Command area of operations ensuring space capabilities are fully integrated and utilized across the full spectrum of the war effort. From the onset of the war against the Taliban, al-Qaida, and its affiliates into the current Overseas Contingency Operations, the Army has continuously placed space cadre members in theater to ensure space power is employed with maximum effect and benefit to the war fighter. The Army Space Personnel Development Office (ASPDO), which consists of the Army Space Cadre Office and the FA40 Personnel Development Office, is located in Colorado Springs, CO. The ASPDO’s mission is to develop policies, procedures, and metrics for the Army Space Cadre and execute the life cycle management functions of Functional Area 40 (FA40) Space Operations Officers, ensuring the Army has trained personnel to meet national security space needs. The Army’s definition of space positions and personnel includes those involved with missile defense.

**[ ] A Space Cadre is key to hegemony – Operational flexibility and engaging Rising Hegemons**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Efforts to Ensure a Healthy DoD Space Cadre DoD has nearly 14,000 military and civilian personnel with space experience. They are essential to executing our full spectrum of operations from peacekeeping, conducting counter-insurgency campaigns, to engaging a peer competitor. Institutions like NPS, AFIT, DAU, ASOpS, and the NSSI are at the forefront of the Department’s efforts to educate and train these warriors throughout their careers. In addition to these excellent in-residence programs, the Department’s space professionals are taking advantage of an increasing number of distance learning programs that enable completion of advanced education without affecting duty availability.

# Cadre Solvency Mechanisms

**[ ] Incorporating civilian space professionals is key to improve the Space Cadres**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Way Ahead/Challenges There are numerous challenges in maintaining a healthy cohort of space professionals to meet Service and national needs. Among them: Tracking Civilian Space Professionals The Services are seeking a common approach to cataloging and tracking their civilian space professionals. They recognize a civilian professional development plan must be tailored to unique civilian personnel requirements, since the military programs are not directly transferable to civilian personnel. Civilian space professionals are not coded, and as such, potential space billets are not identified as space billets. Furthermore, there are no space professional development education, training, or experience requirements linked with these positions. 21The Services are currently identifying positions and people. Methods for coding, tracking, and measuring progress for DoD civilians must be developed. The Air Force has made an initial effort using the Space and Missile Systems Center as a test case, and is currently conducting an Air Forcewide effort. These results will be shared with the other Services. The Services are meeting regularly to address this issue.

**[ ] Incorporating Space Cadre training into Promotion tracks will increase interest in the Marine Corps Space Cadre**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Way Ahead/Challenges The primary challenge in continuing to maintain a qualified Marine Corps space cadre is training and education. Though afforded ample school seats at NPS, NSSI, and ASOpS, it is sometimes difficult for commanders to support a Marine’s extended absence from a unit to attend space training, especially considering today’s operational tempo. Also, deeply ingrained in Service culture is a perceived promotion risk associated with attending graduate-level education in-residence followed by a 3-year payback tour outside fleet operating forces. Despite these challenges, Marines with a serious interest in space continue to apply for and complete the education and training required to become space professionals. In order to shift some of these cultural paradigms and strengthen the Marine space cadre, the Service is working with the Marine Corps Training and Education Command (TECOM) to make NSSI’s Space 200 a MOS-producing course. If Space 200 is accepted as a MOS-producer, Marines can attend Space 200 en route to a space billet and all costs will be funded by TECOM (rather than unit-funded). Furthermore, the Service works closely with curriculum branches at NPS, NSSI and ASOpS to ensure the curriculum accurately addresses the challenging environments in which Marines operate. Finally, the Marine Corps continuously reviews billets coded for space professionals to ensure Marines are being placed in jobs with the requisite skill sets in order to support Marine Corps operations.

**[ ] Ensuring Space Cadre funding is critical to future program stability**

**Handelman, 2010 Assistant Defense Secretary** [Kenneth B, Active Defense Secretary of The Department of Defense, United States, Biennial Report on Management of Space Cadre within the Department of Defense, 12/2/10, accessed 6/21/11 http://www.acq.osd.mil/nsso/SpaceCadre/literature/PKG-USP011361-10-DEPSECDEF-SIGNED.pdf,

Funding Funding for new systems and modifications is important, but so is funding that develops a qualified cadre in sufficient numbers with the appropriate education and training. Although current manpower, education, and training are sufficient for mission needs, sustained funding is required to ensure future requirements are adequately addressed through timely manpower actions and viable education and training programs, provided by robustly resourced institutions. Emerging Requirements On a similar note, accurate identification of emerging manpower needs is critical to force planning. The Services must closely monitor new systems development and force structure changes to ensure a sufficient inventory of space professionals to meet requirements.

# Stealth - Inherency

**[ ] Stealth Satellite legislation failed to get appropriations**

**Walsh 2007 – Primary Editor at the US Naval War College** [Kathleen, *Chinese Defense, Security and Space Policy*, <http://gallery.ida.org/chinaforum/forum/china_satellite_test.html>, Accessed June 21, 2011]

Another expected response will be on Capitol Hill. One issue currently under review is a reportedly new stealth satellite program that Director of National Intelligence (DNI) Mike McConnell and leading Senate leaders have determined is not needed but that appropriators might include in upcoming legislation using the Chinese ASAT test as justification. Other legislative efforts are likely to invoke China’s ASAT activities, particularly when paired with Beijing’s spring announcement of a nearly 18% increase in annual military spending. As one Congressional observer notes, “Whether or not Beijing’s decisions to go forward with the ASAT test and to increase its military budget were intentional, they have sharply redirected skeptical attention on China within Congress.”

# Stealth - Solvency

**[ ] Satellite hardening is critical to survivability – Stealth and Armor Geometry are crucial**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

Other means of protecting satellites include enhanced situational awareness, employment of stealth/radar-absorbing technologies, and better design techniques.38 Differentiating between manmade and natural threats, such as purposeful directed-energy attacks and secondary effects from solar storms, is crucial in ascertaining whether an actual attack is in progress. Additionally, if a hostile force attacks a satellite, determining the source of the attack and taking evasive action or counterattacking are time critical. Multiple satellites working in concert to determine the source and nature of any satellite attack will provide operators the level of enhanced awareness to enable decision makers to act quickly and appropriately in response to threats.39 Given the costs of launching satellites into orbit, present satellite design has focused on squeezing the most utility out of each kilogram, and very little thought has gone into applying stealth technologies to satellites. Exploiting current radarabsorbing technology by incorporating such materials onto sensitive satellites could produce a successful passive defense. Research into active "cloaking" technologies shows promise in hiding satellites- enabling them to better blend into their background. Integration of these technologies into smaller satellites would decrease their vulnerability by making them harder to detect and strike. Yet another means of increasing the survivability of satellites involves using appropriate geometry in design effortsapplying the proper shaping to diminish exposed satellite surfaces. Reducing the effective head-on surface area would lessen the probability of penetration; moreover, it would serve as a deflecting mechanism, similar to techniques used in the design of main battle tanks.

**[ ] Stealth is key to Satellite hardening**

**Lewis 2005 - Director and Senior Fellow, Technology and Public Policy Program** [James A. Lewis. November 1, 2005. House Armed Service Committee, Panel on Asymmetric and Unconventional Threats Center for Strategic and International Studies. [http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ\_4YJ:csis.org/files/media/csis/congress /ts051101\_lewis.pdf+hardening+satellites&hl=en&gl=us&pid= bl&srcid=ADGEES jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ](http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ_4YJ:csis.org/files/media/csis/congress%20/ts051101_lewis.pdf+hardening+satellites&hl=en&gl=us&pid=%20bl&srcid=ADGEES%20jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq%20lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ). Accessed June 21]

One controversial aspect of hardening involves stealth. Stealth makes sense if opponents will try to find and attack U.S. satellites. Some argue that with the end of the Soviet Union, we no longer face an anti-satellite threat. This is true now, but we cannot be sanguine about the next decade. Our potential opponents know they can gain an advantage by attacking our space assets. Any nation that can achieve space flight can attack satellites, and this includes Iran and North Korea. China reportedly has experimental anti-satellite programs to disable or destroy U.S. spacecraft. Further research on how to increase the stealthiness of future satellites would be beneficial.

# Bodyguards Solvency

**[ ] Bodyguard satellites solve the threat to US satellites – they intercept ASATs**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

During a speech at the 2007 Air Warfare Symposium, Secretary of the Air Force Michael Wynne stated that "space is no longer a sanctuary."33 These remarks underscored the fact that China had demonstrated its ability to strike US satellites and that several other countries possessed or were seeking similar capabilities. In light of the potential threat posed by ASAT systems, how can the United States mitigate or reduce it? In his paper Does the United States Need Space-Based Weapons? Maj William L. Spacy gives some indication of how such counter- ASAT systems might work, highlighting three potential methods: bodyguard satellites, ground-based directed energy weapons, and space-based anti-ASAT missiles.34 Assigned to high-value satellites, bodyguard satellites would place themselves between the protected satellite and the attacking weapon system, thus performing much the same service for other satellites as fighter escorts did for bombers in World War II (i.e., providing both active and passive defense).35 Bodyguard satellites would need some autonomy in order to discern when an attack is imminent and take protective measures to maneuver into the correct position. Ground based directed-energy weapons could intercept attacking direct-ascent, kinetic energy weapons/missiles, rendering them ineffective prior to their reaching friendly satellites. Due to their fixed position on the planet, these counter-ASAT weapons would have an inherently limited line-of-sight striking range. However, by possessing nearly instantaneous striking capability, they would prove very timely if called upon. Lastly, space-based anti-ASAT platforms or kinetic-kill systems, more technologically feasible than surface-based directed-energy weapons, would intercept an attacking ASAT system and destroy it prior to its reaching the targeted satellite.

# Early Warning Inherency

**[ ] Funding for enhanced Early Warning Satellites has been cut**

**Jakhu 2010 - Institute of Air and Space Law, McGill University** (Dr. Ram , with Cesar JaramilloManaging Editor, Project Ploughshares, Phillip Baines (Department of Foreign Affairs and International Trade, Canada),), John Seibert (Project Ploughshares), Dr. Jennifer Simmons (The Simmons Foundation), Dr. Ray Williamson (Secure World Foundation). “Space Security 2010.” Spacesecurity.org. August 2010. <http://www.spacesecurity.org/space.security.2010.reduced.pdf>. pp. 119-167. Accessed June 21, 2011

With the DSP racing towards degradation,67 news that the next-generation SBIRS for missile warning and missile defense faces a further delay of twelve to eighteen months comes at a bad time for the US military’s space-based early warning systems.68 The latest plan is for Lockheed Martin to deliver the first geosynchronous satellite by the fourth quarter of 2010, one year later than the previous planned delivery date.69 While two of the hosted SBIRS payloads are now in orbit on classified satellites,70 the dedicated geosynchronous satellites are more than eight years behind schedule and the SBIRS program has exceeded its original $3.5 billion budget by nearly $8 billion.71 Additional funding, $143 million of it, for a 2010 follow-on program called the Third Generation Infrared Surveillance system, was recently approved by the US Senate.72 The experimental STSS, comprised of two long delayed satellites designed to track missiles through all stages of flight,73 was launched in September.74 The satellites fly in tandem 730 nautical miles above the Earth and provide a “stereo” view of missiles that are being tracked, allowing the system to differentiate actual warheads from decoys.75 If the system performs as expected, the satellites will be able to detect missile launches and track them through the boost, midcourse, and terminal phases of flight – something that no other sensor system can presently do.76

# Pop-Up Solvency

**[ ] Pop up military space platforms can assure superiority without prompting a backlash because they don’t deny the Commons**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Space superiority, like that of air superiority or maritime superiority, is not something that exists all the time. Rather, it is something that must be achieved only when dealing with a specific conflict, and then must be maintained for the duration of that conflict only. Space differs from air and maritime superiority because of its unique physical characteristics. In conflict, air and maritime superiority can be achieved over the limited geographic area involved in the conflict (e.g., air superiority over the Persian Gulf, or maritime superiority in the Mediterranean Sea). Space presents a more complicated problem. Orbiting space systems have the potential to impact an enormous portion of the globe, and therefore, space superiority must be evaluated from the perspective of all of space, not just a limited theater of operations. In its efforts to achieve space superiority, even for the limited duration of some future conflict, the United States must, therefore, consider the overall impact of its actions on the overall commons of space. If the U.S. impedes on the commons, establishing superiority for the duration of a conflict, part of the exit strategy for that conflict must be the return of space to a commons allowing all nations full access. This requires two approaches: (1) the development of a complete spectrum of military options (non-lethal to lethal), and (2) the development of doctrine and concepts of operation that will employ the military option least threatening to the commons—thus allowing a better peace following the conflict.

# Decentralization – Solvency

**[ ] Decentralizing military access to satellite data is key to reducing vulnerability**

**Lewis 2005 - Director and Senior Fellow, Technology and Public Policy Program** [James A. Lewis. November 1, 2005. House Armed Service Committee, Panel on Asymmetric and Unconventional Threats Center for Strategic and International Studies. [http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ\_4YJ:csis.org/files/media/csis/congress /ts051101\_lewis.pdf+hardening+satellites&hl=en&gl=us&pid= bl&srcid=ADGEES jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ](http://docs.google.com/viewer?a=v&q=cache:Cr-YrlZ_4YJ:csis.org/files/media/csis/congress%20/ts051101_lewis.pdf+hardening+satellites&hl=en&gl=us&pid=%20bl&srcid=ADGEES%20jqa8YKzjyP3GZoZvlk1KzXGHAwK2bzuk03clno4BciLnY3pLmf12TN75rlMuAJFzw3E5JmOGq%20lWin0d1Ldf9UWz9NEeduREpcsvzljHCJIJUjNEHfpnuem7nvvZ7gEdyHm4&sig=AHIEtbT9LZ1I2M32TCFG4GFWgdeaoiEjEQ). Accessed June 21]

Changes in the architecture for the distribution of space data could also reduce the vulnerability of ground infrastructure. A distributed model would reduce vulnerabilities. Current models for data distribution are, in many instances, centralized and stovepiped. Satellite data flows to a central collector. This collector distributes the data to several intermediaries who process, refine and inevitably delay distribution. While the situation has improved markedly from the time of the first Gulf War, when at first there were long lags between the time satellite data was collected and the time it came to Central Command, this centralized approach reduces the U.S. military information advantage and, by creating a small set of targets for attack, increases vulnerability. GPS provides an alternative model for data distribution. In contrast to space intelligence, GPS data flows directly and immediately to the user. GPS uses machines and software rather than humans to process data. One goal for future space activities is to extend automatic processing to other kinds of satellite data. We would benefit from pushing data to the edges, tot eh combatants, and getting this data to them in as close to ‘real-time’ as possible. This will take considerable work in software development, to automate analytical processes that now require human intervention, but it is essential for improving the delivery of space services to military and intelligence operators. The primary advantage of this approach is that it extends information superiority. However, it would also help reduce the risk of asymmetric attack. If data flows directly from space to dozens, hundreds or thousands of operators, planners and analysts distributed among the military commands, it reduces the attractiveness to opponents of trying to attack ground facilities to disrupt the U.S. advantage from space.

# \*\*\*OFF CASE\*\*\*

# Treaty Disad Responses

**[ ] No Link – only WMDs in space violate space law**

**Maogoto 2007, Senior Lecturer in International Law, University of Newcastle** [ Connecticut Journal of International Law. Winter,: the final frontier: the laws of armed conflict and space warfare. Name: Jackson Maogoto and Steven Freeland. Lexis Accessed June 21, 2011]

Consideration of technologies useful for space combat will proceed under the principle that State action is permitted in the absence of clear legal prohibition. 209 Though regularly denounced by a large segment of the international community as destabilizing for the use and exploration of outer space, 210 in principle none of the [\*194] potential means and methods of space warfare, with the exception of nuclear weapons and weapons of mass destruction, violate international law. 211 Of course, the use to which these weapons are put might render them unlawful for a specific objective if, for example, their use rendered them disproportionate (or indiscriminate or inhumane) under the laws of war as judged against the military objective in view. But this is an inherent possibility for any weapon, which, by itself, does not render the weapon unlawful. In the words of Colleen D. Sullivan:

**[ ] Space weaponization doesn’t violate international treaties**

**Broad 2007 - Senior Writer at The New York Times** [William J. and David E. Sanger, Chief Washington Correspondent for the New York Times, *China Tests Anti-Satellite Weapon, Unnerving U.S.*, New York Times, <http://www.nytimes.com/2007/01/18/world/asia/18cnd-china.html?ex=1184212800&en=7faa759d46da0a05&ei=5070>, Accessed June 22, 2011]

The Bush administration has conducted laser research that critics say could produce a powerful ground-based laser weapon that would use beams of concentrated light to destroy enemy satellites in orbit. The largely secret project, parts of which were made public through Air Force budget documents submitted to Congress last year, appears to be part of a wide-ranging effort by the Bush administration to develop space weapons, both defensive and offensive. No treaty or law forbids such work. The administration’s laser research is far more ambitious than a previous effort by the Clinton administration nearly a decade ago to develop an anti-satellite laser. It would take advantage of an optical technique that uses sensors, computers and flexible mirrors to counteract the atmospheric turbulence that seems to make stars twinkle. The weapon would essentially reverse that process, shooting focused beams of light upward with great clarity and force.

**[ ] Plan doesn’t violate space law – militarization is legally justified in the name of self defense**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

Despite its firm commitment to freedom of access to space as recognized by the Outer Space Treaty, the United States understands the potential vulnerability of space systems from both natural and man-made sources. 113 Irrespective of the freedom of access principle, prudence mandates the understanding that some may attempt to interfere with the right of access to space. If not previously concluded from decades of competition among the several nations with space capabilities, certainly the Chinese test of a direct-ascent anti-satellite weapons system in January of 2007 starkly demonstrates that space is now a contested domain. 114 Recognizing the truth stated by Thomas Hobbes, that "covenants, without the sword, are words and of no strength to secure man," 115 there is a need to "cooperate with our allies and the private sector to identify and protect against intentional and unintentional threats to U.S. and allied space capabilities." 116 The ability to protect this right of access is embraced within the concept of negative command of space. b. Negative Command The capability to exercise negative command of space does not violate any international law. Although command of space embraces the ability to deny another state's access to space, analysis of the legality of any such action depends on the actor's intent not with the capability itself. In that respect, the declared and apparent U.S. intent is incontrovertibly one of self defense, in support of the legitimate objective of maintaining its legal right to continued and assured access. 117 [\*127] Over 200 years ago, Chief Justice Marshall opined that "the authority of a nation within its own territory is absolute and exclusive. . . . But its power to secure itself from injury may certainly be exercised beyond the limits of its territory." 118 This principle was later reiterated by former Secretary of State Elihu Root when he discussed the "right of self protection" as "a right recognized by international law" in stating: "[t]he right is a necessary corollary of independent sovereignty. It is well understood that the exercise of the right of self-protection may and frequently does extend its effect beyond the limits of the territorial jurisdiction of the State exercising it." 119 Articles III and IV of the Outer Space Treaty, when read in conjunction, authorize self-defense in space. 120

**[ ] Space law fails now – treaties are not developed enough to prevent militarization**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Despite nearly forty years of research into space weaponry there is no binding international instrument limiting the use of such weapons. With two isolated examples, such weapons have not been fielded, contributing to State reluctance to foreclose further study into effective deterrents. 656 However there will come a day when a treaty governing means and methods of space warfare will be desirable. In addition to the certainty written law brings to the legal structures governing human conduct, formal agreements most clearly evince the consent of the governed. Of course, any treaty developments for space warfare must strike a pragmatic balance between national security, international legal order, and human rights--a balance for which the jus in bello has striven for at least 100 years. To a certain degree, this review of the law of war and its application to space warfare serves as a call for further analysis of the topic. Though armed conflicts apparently have not occurred in space to date, the rudimentary means for engaging in such conflicts now exist. As each armed conflict since Vietnam makes greater use of space assets, it is undoubtedly only a matter of time before a future conflict witnesses the application of force both from and within the space environment. When it does, and in the absence of specific [\*158] international norms restricting the use of means of methods of war in space, State practice will provide the first insights into how the law will be applied.

**[ ] Non-unique – Chinese ASAT tests undermine the Outer Space Treaty - they undermine Chinese peaceful credibility**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Even if China broke no laws, the destructive ASAT test violated at least the spirit, if not the letter, of the 1967 Outer Space Treaty, in which signatory nations (including China) pledge not to interfere with the space operations of others and to consult when national action might lead to such interference. China neither notified others nor has it conceded fully to calls for consultations; behavior that is simply unacceptable, particularly in peacetime. While China has now admitted to conducting the test after an inexplicable two weeks of official silence,5 official dismissals of any “threat” emanating from the test are not credible, and all space-stakeholders have not only the right but also the responsibility to press China for more details and transparency regarding their future intentions. Indeed, the cavalier attitude toward endangering other’s satellites raises serious questions about Beijing's credibility as a responsible space-faring nation – undercutting the good reputation that the Chinese leadership has been steadily building among the international space community. For example, concerns are already emerging about the potential negative impact of the test, and its implications for the future of the commercial space market.6 How that affects, or should effect, other nation's willingness to continue civil and commercial space cooperation with China will be discussed below, but suffice to say it is more than likely there will be repercussions at some level.

**[ ] No Impact - Space law is currently inadequate and overlooked.**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

A review of current scholarship analyzing the application of the law of war to outer space warfare yields little information. While many authors have written on space militarization and weaponization, and some on space warfare, almost none have undertaken an analysis of space warfare in the context of the law of war. 524 Indeed, it would seem that popular culture in the form of science fiction movies has taken a greater interest in the subject than have legal scholars and practitioners. 525 For at least two reasons, this must change. First, [\*121] use of the space environment in warfare is not just a matter of speculative planning for future conflicts, it has already occurred. As the conflicts in the Persian Gulf and Kosovo made clear, space assets were decisive in battle planning and execution. Second, failure to analyze one's legal obligations raises the very real specter of violating obligations that do in fact exist. Given that the U.S. contemplates armed conflict within the space environment, it must not proceed oblivious to norms establishing permissible and impermissible means and methods of warfare. For example, the increasing use of high-technology wargames using space combat scenarios is uncovering knotty legal issues. 526 It is also giving added urgency to questions that become increasingly "real world" such as the following: "does intentional interference with a U.S.-owned satellite orbiting 600 mi. above the Earth constitute an act of war?" 527

**[ ] International space law doesn’t preclude US command of space – that is a definitional myth**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

The intrinsic value of space, as envisioned by the Outer Space Treaty, is the utility it provides. 55 The ubiquitous nature of space technology as the signature feature of globalization continues to [\*118] magnify global dependence on space-based systems 56 as nations move to fully exploit space utility. However, there is no utility of space without access. Given the increasing importance of space systems to America's own national security, 57 continued access is best secured through the concept of command of space. 58 Although some may argue that command of space "collides head-on with relevant international law," 59 such an assertion is unsupportable when one applies the correct definitional construct. Applying a proper definitional construct to command of space better serves global as well as U.S. interests because it recognizes an increasing dependence on space technology and seeks to ensure universal freedom of access to space.

**[ ] No Link – plan doesn’t violate the Outer Space Treaty – It allows militarization for self defense**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Article III of the Outer Space Treaty provides perhaps the clearest indication that the international law of war will apply to space warfare: States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the moon and other celestial bodies, in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding. 541 Two significant observations arise from this provision. First, Article III applies the restrictions of all international law to outer space activities ("in accordance with"). As products of "international law," this surely includes both the jus ad bellum, made obvious by Article III's specific reference to the U.N. Charter, and the jus in bello. This observation provides the strongest evidence that as far as its principles will apply to future technologies, the law of war has been incorporated into military space operations by virtue of the Outer Space Treaty. A second observation relates to the requirement that a State's exploration and use of outer space be "in the interest of maintaining international peace and security." This well-worn phrase in international law comes directly from, among others, the U.N. Charter. 542 As historically used, the phrase assumes that military force will be available to the international community to ensure international order. 543 As international law has limited the means and methods States may use in employing military force in combat, those limits form a part of the context in which the maintenance of international peace and security, including the use of force in space, must occur.

**[ ] International law fails to prevent militarization – there is not set definition of space weapon**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Further complicating any legal analysis of the permissible scope of the weaponization of space one confronts a further definitional vacuum. Despite the heavy militarization of space, the basic term "space weapon" lacks definition in international law. As a result, the concept it represents, which broadly speaking includes any implements of warfare in space, is difficult to isolate for purposes of analysis. And, without this foundational definition, one cannot define phrases on which it logically relies, such as nuclear weapon and weapon of mass destruction. The difficulty arises in that any comprehensive definition of space weapon will include space systems equally used for non-military, non-destructive, and non-aggressive purposes. Though space weapons may seem to include only a discrete class of armaments with easily definable characteristics, a closer examination "reveals a less obvious and more inclusive set of systems." 562 One proposed definition illustrates this challenge: A space weapon is a device stationed in outer space (including the moon and other celestial bodies) or in the earth environment designed to destroy, damage, or otherwise interfere with the normal functioning of an object or being in outer space, or a device stationed in outer space designed to destroy, damage, or otherwise interfere with the normal functioning of an object or [\*132] being in the earth environment. Any other device with the inherent capability to be used as defined above will be considered as a space weapon. 563 Of particular interest is the second sentence. While it acknowledges that space objects not designed as weapons may become weapons if they can "be used" as such, it arguably leaves the definition so broad as to include just about any object at all. Objects in orbit travel at roughly 17,000 miles per hour. This fact alone gives them the "inherent capability" to destroy or interfere with an object or being in space or in the earth environment. This is equally true of functioning satellites, dead satellites, and space debris. Similarly, under this definition commercial telecommunications satellites are space weapons as they have the inherent capability to interfere with the normal functioning of other telecommunications satellites. Indeed a rifle, a hunting knife, or even any sharp object on earth possesses the capability to destroy and/or interfere with a ground station, making impossible the normal functioning of the satellite it supports. These observations are not intended to suggest "space weaponry" should not be defined. They are simply intended to illustrate the difficulty of creating a definition that will distinguish space weapons from the larger categories weapons, space objects, or even objects. Put another way, should the developing law of war ever proceed to restrict the use of existing or potential space weapons, the definition of space weapons will have to confront the difficult problem of what to do about "non-dedicated systems"--that is, those space systems not designed as weapons. 564 It [\*133] will also have to elucidate whether the restriction applies to the weapon's subcomponents as well. 565 A consensus among States on such a definition will facilitate application of the law of war to armed conflict in space.

**[ ] International law is not set in stone; U. S. can shift it to allow space combat.**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey.Lexis Accessed June 21, 2011 ]

Given the evolution of its national military doctrine, the U.S. may soon be positioned to begin a preliminary incorporation of combat space operations into its law of war manuals. The obvious starting point would be its manual on air warfare. 597 Not only would this course of action reflect the military's institutional acceptance of the law of war for space warfare, but it would allow the U.S. to encourage the progressive development of that law. Military manuals serve not only as evidence of State opinio juris, but can also serve a limited lawmaking role as well. Because international law notoriously lacks its own enforcement system, national implementation is often a critical factor in successful international lawmaking. . . . Certainly, both the absence of a manual or the use of manuals whose content does not include the relevant norms would strongly suggest that those norms have not been adopted. 598 In addition, given sufficient uniformity, principles of law articulated in law of war manuals could be viewed as "general principles of law recognized [\*141] by civilized nations," and thus a formal source of international law as articulated by the Statute of the International Court of Justice. 599 The role of law of war manuals in making international law could be especially helpful for space warfare at its advent. A consensus among the leading States regarding acceptable limits on space warfare, as reflected in their law of war manuals, could prove as authoritative as a treaty. Meanwhile, incorporating existing norms for space warfare into a law of war manual, as well as defining the U.S. understanding of means and methods of space combat that are compliant with the law, would likely influence other States to adopt and act on them as well

**[ ] Space Arms Control Treaties won’t prevent weaponization – empirically, treaties fail**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

But even if arms control advocates are correct that the Chinese earnestly want to negotiate an arms control treaty for space, we should be highly skep­tical of an arms control-first approach. As I already noted, space has long been militarized. Nations will neither un-invent capabilities nor be able to stop future technology. Attempts to "rebottle the genie" through treaties have a dismal history. The 1899 Hague Convention, for example, tried to keep the air free from weapons by banning the "launching of projectiles and explo­sives from balloons."[7] That effort failed because the strategic advantages of operating in the air over­whelmed the moral arguments against doing so. In 1928, the world even tried to ban war alto­gether under the Kellogg-Briand Pact, as you might recall. The pact's signatories included every major belligerent of the Second World War, which began 11 years later. Even the Nuclear Non-Proliferation Treaty, or NPT, has proven incapable of preventing nations such as Iraq, Iran, and North Korea of walking up to, and over, the nuclear brink. If anything, the trea­ty has encouraged responsible nations to sit by com­placently while their more ambitious or ruthless neighbors go nuclear. A space weapons ban would likely have the same effect. Another important argument here is that arms control would itself be dangerous. During negotia­tions, advocates would argue that we can't take any steps to defend ourselves. All the while, China will continue to develop its programs. This is a paradox that I will discuss in more detail later. Once signed, the treaty could lull us into a false sense of security. Like so many other similar treaties, you don't need it for the countries who would comply, and it will be of no use for those who will cheat. Perhaps most important, a ban on anti-satellite weapons would be unverifiable. There has been quite a bit of work done on this. The recent Chinese test illustrates the point. Are we going to propose a ban on medium-range ballistic missiles like the one that carried China's interceptor? Will we require comprehensive inspection of every payload prior to launch? These are clearly nonstarters. Even intrusive, comprehensive inspections of payloads would fail to address concerns over ground-based lasers, signal jammers, and other anti-satellite capabilities that never have to be launched at all.

**[ ] Non-Unique – the US already undermines space treaties**

**Walsh 2007 – Primary Editor at the US Naval War College** [Kathleen, Chinese Defense, Security and Space Policy, http://gallery.ida.org/chinaforum/forum/china\_satellite\_test.html, Accessed June 21, 2011]

Yet, China’s arms control policy has long supported the multinational effort at the United Nations Conference on Disarmament (CD) to agree on an international arms control framework for the Prevention of an Arms Race in Outer Space (PAROS). This initiative, however, has been stalled for over a decade by the lack of consensus on whether to move forward. China, along with Russia, continues to advocate banning the use of weapons in outer space and the establishment of an Ad Hoc Committee at the CD to pursue the issue, while the United States (joined by Israel and a few other states led by Micronesia) is opposed to negotiating a new arms control regime that would govern space. At the 2005 CD meeting at which the now-annual draft PAROS was under review, the United States voted a declarative “no” rather than abstain for the first time, a position repeated in 2006. The US position was made even more declarative in the August 2006 release of a new US National Space Policy, which states that “The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests.”

**[ ] The Outer Space treaty fails – there is no registration enforcement, and half of the states have not ratified it**

**Hertzfeld 2009, Research Professor of Space Policy and International Affairs, George Washington University** [15 ILSA J. Int'l & Comp. L. 325 2008-2009 Content downloaded from HeinOnline (http://heinonline.org) Wed Jun 22 16:00:32 2011 CURRENT AND FUTURE ISSUES IN INTERNATIONAL SPACE LAW Professor Henry Hertzfeld]

The current regime for the registration of space objects is based on each nation that has ratified the Registration Convention is required keep a registry of all of its launches and equipment in space. Although "space objects" are defined to include all identifiable objects (those with a number and national identifier) no matter how small, in reality the registered objects are mainly launch vehicle stages that are in orbit and payloads in orbit. It is up to each nation to decide what to register, and there are differences in interpretation. It is up to the nation to send the information to the U.N., and there is no designated time frame for compliance in the Convention. Registration is permanent, and there is no provision to remove an object from the U.N. registry nor is there a formal way to transfer it to another nation. Registration, therefore, has no commercial significance. It is not a statement of ownership. A satellite can be sold, and at least officially, the new owner may bear no ultimate responsibility for any harm it may cause. Yet, it would be helpful to the growing commercial satellite industry to have an internationally recognized system of secured rights in space systems. There is a proposed Convention on such rights that the International Institute for the Unification of Private Law (UNIDROIT) has drafted. It has not been ratified. And, since eight years have elapsed since it was drafted, the prospects for its adoption are not good. Although 125 states have ratified or signed the OST, less than sixty have ratified the Registration Convention.'8 One problem facing the future of the use of space is the possibility that regulating commercial space payloads might change from today's relatively predictable registration and liability system governed by the few major space-faring nations to one that is closer to today's maritime system characterized by "flags of convenience." This situation should be avoided because it will lead to a much less organized and much more dangerous environment for all legitimate space endeavors. Today the nations using space, with minor exceptions, abide by a set of rules that are not perfect but work reasonably well to identify and regulate space activity. Registration is one of several systems to coordinate these efforts. If an orderly system is replaced by a free-for-all with companies looking for the cheapest and easiest regulatory authority, the already fragile space environment will become even more so, adding needless risk and cost to expensive systems.

**[ ] The Outer Space Treaty fails – just a show treaty to boost U.S. and Russian credibility.**

**Sreejith 2008**, **Associate Fellow, The Northern Institute for Environmental and Minority Law** [38 Cal. W. Int'l L.J. 331 2007-2008 Content downloaded from HeinOnline (http://heinonline.org) Wed Jun 22 16:40:20 2011 WHITHER INTERNATIONAL LAW, THITHER SPACE LAW: A DISCIPLINE IN TRANSITION S.G. SREEJITH]

The Outer Space Treaty was warmly received by the international community of states. It laid down principles such as freedom of exploration, international responsibility of states for national activities in outer space, the duty to assist astronauts in peril, exclusive peaceful use of celestial bodies, and not stationing nuclear weapons and weapons of mass destruction in outer space.57 Yet, little did the states that took part in the negotiations know that the Outer Space Treaty was an opportune diplomatic code negotiated to ensure cooperation between the superpowers. Most of the principles of which states felt proud and which scholars glorified 58 have virtually no normative content or import. For example, in order to make sense of "peaceful use" of outer space, scholars desperately run between "nonaggressive" and "non-military." 59 Freedom of exploration means hardly anything for the majority of states, for whom space is a remote reality, partial demilitarization of outer space is puzzling, 60 and the meaning of "international responsibility" for states is far from the real normative sense of the term.61 Nevertheless, in the superpowers' perspective, the hollowness of the same principles becomes phenomenally transformed into evocative standards of mutual conduct. For instance, freedom means "survival of the fittest"; ambiguity in the meaning of peaceful use makes it subjectively and expediently determined. Partial demilitarization is favorable for both superpowers, as they themselves are the armers and disarmers, i.e., to paraphrase Fawcett, the right hand has to devise military capabilities and the left defend against them.62 Finally, control by international law and the Charter of the United Nations validates the inherent right of self-defense by the superpowers, which presupposes the possibility of an armed attack in outer space as well.63 In essence, the Outer Space Treaty is a risk-free contractual instrument of bilateral scope meant for the superpowers. A trick of international diplomacy, however, furnished it with the image of an inchoate instrument requiring development, which was vigorously pursued by the scholars in the field. They indoctrinated the novices on the elementariness and generality of the Treaty; no one had even an iota of suspicion regarding the Treaty's two-fold image. Virtually every scholarly work on the Treaty ends with an emphasis on its generality, 64 an optimism for progress, 65 and a call for revision.66 Only a small minority make an appeal against any tampering with the Treaty.

**[ ] All Space treaties fail - Rescue Agreement, Liability Convention, Registration Convention, and Moon Treaty are all ineffective.**

**Sreejith 2008**, **Associate Fellow, The Northern Institute for Environmental and Minority Law** [38 Cal. W. Int'l L.J. 331 2007-2008 Content downloaded from HeinOnline (http://heinonline.org) Wed Jun 22 16:40:20 2011 WHITHER INTERNATIONAL LAW, THITHER SPACE LAW: A DISCIPLINE IN TRANSITION S.G. SREEJITH]

With the Outer Space Treaty, UNCOPUOS nevertheless accomplished the first step towards its mission of securing international cooperation in outer space. The Committee paid no heed to the repercussions in the form of generality that its course of action had wrought throughout the discipline. The space law that developed afterward in UNCOPUOS also focused on international cooperation, 67 regardless of the normative compromises it might have to make in securing cooperation. Further efforts to craft specific obligations, in the "cooperation compromise," created more general and inconsequential obligations even for specific activities. For example, the Rescue Agreement 68 imposes an unconditional obligation to return astronauts and space objects to the launching state but lacks any specific provision for the settlement of claims. 69 The Liability Convention 70 lays down absolute and fault liability for the damage caused by space objects yet leaves the compensation concerns to be determined by the myriad principles of equity and justice.7 The Registration Convention 72 is no more than a log-book system.7 3 And, the Moon Agreement74 witnessed the heights of legal speculation, as a result of which states fought a war of shadows and came out with nothing. 7

**[ ] Space law is not based on international law – it has divorced itself from its base**

**Sreejith 2008**, **Associate Fellow, The Northern Institute for Environmental and Minority Law** [38 Cal. W. Int'l L.J. 331 2007-2008 Content downloaded from HeinOnline (http://heinonline.org) Wed Jun 22 16:40:20 2011 WHITHER INTERNATIONAL LAW, THITHER SPACE LAW: A DISCIPLINE IN TRANSITION S.G. SREEJITH]

G. A Closed Group Space law, since its genesis, has had to confront many conflicting issues and values in its efforts to deal with diverse national interests in space, all against the backdrop of common interests. The absence of any academic values and the general goal of "peaceful uses of outer space" has created a nomadism among scholars in the discipline. Yet, the pioneers and a few generalist international law scholars, despite the complexity of the task, preserved and elaborated the discipline in terms of the norms and values of international law. However, a perceptible change in the structure of the discipline's beliefs, which afterward crept into the organizational structures, appears to have taken space law far away from international law. Ironically, those who effected the change were not entirely conscious of the cause of the shift. The discipline eventually developed a closed group, deemphasized and abandoned its traditional international law base, withdrew into itself, and stood insulated from any ideological, doctrinal, and theoretical influences. Space law has never made methodical use of its traditional concepts and approaches since, and has subsequently turned into a unique branch of law, one active in its own ambit.

**[ ] Space law has been coopted by business interests – it is now corrupted for exploitation**

**Sreejith 2008**, **Associate Fellow, The Northern Institute for Environmental and Minority Law** [38 Cal. W. Int'l L.J. 331 2007-2008 Content downloaded from HeinOnline (http://heinonline.org) Wed Jun 22 16:40:20 2011 WHITHER INTERNATIONAL LAW, THITHER SPACE LAW: A DISCIPLINE IN TRANSITION S.G. SREEJITH]

2. The "Progressive Sensibility" of Space Law2 4 6 In its first era, space law functioned as a branch of international law characterized by a treaty regime that aimed at ensuring peaceful uses of outer space for the benefit of humankind. However, in the wake of the commercialization of outer space, and prompted by the forces of globalization, space law started responding to continuing global changes. In the initial response, a "hybrid public-private [commercial space] environment, ' 247 whereby the state provides infrastructure and incentives to the private sector to compete in the market, replaced the state governed and state controlled system. Consequently, what had been a defense and research and development orientation in space activities shifted towards a market orientation.248 New actors in the space sector developed new strategies and policies to facilitate the development of the market, 249 resulting in a substantial change in the pattern of knowledge production and focus of research. To be in the race, space lawyers must master the art of corporate management and indulge in the rhetoric of business. They compete with management professionals in areas such as identifying and analyzing an industry's strengths, weaknesses, opportunities, and threats, and assisting in the formulation of optimal policies. In the process they also maintain a social perspective by considering the political, legal, and technological influences likely to impact the industry. Modern space lawyers have come far from the mold of ivory tower theoreticians preoccupied with doctrines; instead, they rightly understand society with its present realities and use that understanding to organize technology for the progress of the world.

**[ ] Current international law won’t protect Space Travel – Space Law is different from the Sea and Air**

**Beck 2008 - associate at Kenyon & Kenyon LLP** [New York University J.D. 2008**.** Albany Law Journal of Science & Technology.. The Next, Small, Step For Mankind: Fixing The Inadequacies Of The International Space Law Treaty Regime To Accommodate The Modern Space Flight Industry. NAME: Brian Beck. Lexis Accessed June 21]

The international community must take a different approach to regulating space travel than it has taken in various other related fields, though the approach will be informed by said related fields. The very nature of space flight, the way the science of space flight has developed, and the speed of space flight development differentiate space flight from other forms of transportation, such as aviation and travel on the high seas. The things that can be done in space are sufficiently different from [\*6] what can be done on the high seas or in Antarctica to require different rules from these other areas traditionally not subject to national sovereignty. The civilian and trade-focused aspects of space travel require a different approach from other international regimes established to govern private organizations that take the place of state functions, such as the rules governing corporations in human rights law and the rules governing military contractors. Orbital space flight is a function of basic Newtonian physics. A spaceship in orbit is constantly falling towards the Earth due to the force of gravity, but travels fast enough tangential to the Earth that as it falls it circles the Earth rather than hitting the Earth. 16 The time it takes for an object in orbit to circle the Earth is determined by the average distance. 17 The only way for a satellite to remain stationary with respect to the Earth's surface is to orbit the Earth at the equator at the same speed at which the Earth rotates, once every twenty-four hours. 18 This only happens when a satellite orbits at an altitude of about 35,600 km, called the geosynchronous orbit. 19 In general, any other orbital spacecraft will overfly many different nations, and must cross every longitudinal line on the globe. 20 This physical problem makes it impossible to create a sovereignty regime over outer space by simply extending national boundaries upwards, as was done with airspace. The nature of orbital space flight poses unique issues of sovereignty and regulation that are not present on the high seas. A ship on the high seas, traditionally defined as the parts of the seas or oceans at least twelve miles from the nearest shore, cannot substantially affect inland areas by accident. 21 Until the advent of advanced sensing technologies such as radar, a ship on [\*7] the high seas could not be used to survey any territory of another nation other than the coast. Similarly, a person in Antarctica will not be close to any other nation's sovereign territory. A satellite, on the other hand, will not only have line-of-sight to a much larger area of the earth than any ship can have due to its altitude, but a satellite not in geosynchronous orbit will traverse most of the Earth within the range of its latitudes. 22 While an airplane with advanced sensing technologies traveling over international waters, twelve miles from a nation's border, may be able to collect information about the nation, it is necessarily less than that which can be collected by a satellite. Not only does this mean that a satellite will see a very large portion of the Earth, it also means that a satellite that crashes will spread debris over a larger and much more unpredictable section of the globe than a crashed airplane or sunken ship. Space flight has developed in a very different manner from other forms of transportation, such as aviation and travel on the seas. Humans have built ships since the beginning of recorded history. Aviation has developed more recently, but early developments in commuter aviation were spurred by individual inventors and investors, not by state actors. 23 Space flight, on the other hand, began with large state actors during the Cold War, and private companies became involved much later. 24 This is partly due to the costs involved: the first boat could be made with a dugout tree, the first successful airplane was made by two bicycle mechanics, but the first satellite put into orbit required years of effort on the part of hundreds of Soviet scientists. 25 [\*8] While there are many military applications of space flight, no current space technologies and very few speculative future space technologies can directly and intentionally cause an individual's death on the ground. The primary military uses of space in the current world are for communications and surveillance. 26 In their most directly damaging use, modern space technologies act as force multipliers for ground-based weapons, for example by allowing pinpoint targeting of missiles. 27 Because the most serious space-based weapons, nuclear devices, have been banned by treaty and international norm, 28 the remaining space-based technologies do not have the capacity to directly violate human rights or cause intentional deaths. For all these reasons, space law has had to develop on its own, informed by the concerns of related areas of international law but not as an extension of any of those areas. By this, I do not mean that space law has had to develop in a vacuum, but that it is almost always inappropriate to simply project existing international law on space travel; and the development of space law treaties reflects the field's somewhat independent development. The most closely related area of international law to space law is international aviation law. The first plane took off from Kitty Hawk, North Carolina in 1903; the first international regulation of aviation came with the Warsaw Convention in 1929. 29 The Warsaw Convention instituted a negligence-based limited liability regime for international air travel, with the carrier rather than the state being liable for any injury or property damage. 30 There were no new issues of sovereignty introduced by the advent of flight; it was easy to just declare that a nation had sovereignty over the airspace directly above its land, which was [\*9] done in the Paris Conference of 1919. 31 The nature of commercial air flight allowed for such a system; airplanes were relatively cheap and privately owned, and they moved in a manner similar to cars or ships in terms of ease of maneuverability. Until transcontinental flight became widely available, airplanes rarely flew outside of sovereign airspace. 32 Maritime law shares an important feature with space law: the vehicles do most of their traveling in regions that are res communis, under no nation's sovereignty. 33 However, this is the only significant similarity between the two areas of law. Ships on the high seas typically cannot see or affect areas inland. If ships sink or crash on the high seas, they typically do not do so in such a way that will damage a nation's sovereign territory. Ships move very slowly, and while they are not as maneuverable as a car or plane, they can still make full 360 degree turns. Further, and possibly most importantly for the development of the law, the ship predates the nation-state, so the international norms governing maritime law are formed from millennia of tradition. 34

**[ ] No Spillover Link – the Space Treaty defines “Peaceful Purposes” differently from the Antarctic Treaty.**

**Ramey 2000 - instructor, The Air Force Judge Advocate General School** [International and Operations Law Division,. The Air Force Law Review. : Armed Conflict on the Final Frontier: The Law of War in Space. NAME: Major Robert A. Ramey. Lexis Accessed June 21, 2011 ]

Especially significant is the dissimilarity between the terms "peaceful purposes" as used in the Outer Space Treaty and that in the Antarctic Treaty. As used in the latter treaty, the phrase "peaceful purposes" specifically operates to create a demilitarized zone. Thus, Article 1 specifies that "Antarctica shall be used for peaceful purposes. There shall be prohibited, inter alia, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers as well as the testing of any type of weapons." 471 (emphasis added) Not only does this sweeping language rule out the possibility of "any" activity of a "military nature," but it clarifies the meaning of peaceful purposes as used in the Treaty. 472 For the Antarctic Treaty, peaceful purposes functionally excludes virtually any military activity. Thus, by law, Antarctica has become not only demilitarized, but weapons-free. Not so for outer space. Though the Outer Space Treaty does specifically restrict military activity in Article IV, it conspicuously omits the broad language modifying the phrase "peaceful purposes" as contained in the Antarctic Treaty. This use of the phrase in the Antarctic Treaty was undoubtedly evident to the drafters of the Outer Space Treaty, and provides further, albeit indirect, evidence that "peaceful purposes" under the Outer Space Treaty cannot simply mean non-military. 473 Whether these two treaty regimes provide helpful analogies to outer space depends on the space activity contemplated. When applying the issue to military space combat, the high seas, though perhaps not necessarily the legal [\*108] regime governing the high seas, appears a much better analogy than the territory of Antarctica. For example, while space affords tremendous tactical and strategic military advantage, Antarctica does not. 474 Further, although Article 2 of the Outer Space Treaty prohibits claims of national appropriation and sovereignty in space, the Outer Space Treaty also implies the legitimacy of weapons in space, 475 a possibility the Antarctic Treaty forecloses 476 for Antarctica, but the LOS Convention for the high seas does not. 477

**[ ] Space militarization doesn’t violate Environmental treaties – they don’t prevent self defense**

**Maogoto 2007, Senior Lecturer in International Law, University of Newcastle** [ Connecticut Journal of International Law. Winter,: the final frontier: the laws of armed conflict and space warfare. Name: Jackson Maogoto and Steven Freeland. Lexis Accessed June 21, 2011]

Subsequent to the diplomatic conference which adopted the Additional Protocols to the Geneva Conventions, there have also been a growing number of other important treaties that have added to the corpus of international humanitarian law and the rules regulating armed conflict, particularly in relation to restrictions on specific weapons and means of warfare. These include, in chronological order, treaties on biological weapons, 62 environmental modification, 63 conventional weapons, 64 chemical weapons, 65 blinding lasers, 66 and anti-personnel mines. 67 Of these, the most likely to affect potential means and methods of space warfare is the Environmental Modification Treaty (ENMOD), which was the first instrument that dealt with deliberate destruction of the environment during warfare, although it also applies in time of peace. 68 This treaty proscribes the "military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party." 69 The treaty is of particular importance to space warfare in that 'environmental modification techniques' are defined to include "any technique for changing-through the deliberate manipulation of natural processes-the dynamics, composition or structure of the earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space." 70 ENMOD's provisions make clear that its purpose is not so much environmental protection, as a restriction against States making or attempting changes to environmental processes as an instrument of warfare. The means of warfare prohibited by the treaty need not adversely affect the environment itself, because the prohibitions of Article I apply only to the use of the environment as a [\*176] weapon. 71 So long as space weapons do not change the outer space environment through the deliberate manipulation of natural processes, the treaty is not likely to serve as a bar to the development or use of space weapons. 72 In dealing with the issue of environmental protection during times of armed conflict, the International Court of Justice has stated that it does not consider that the treaties protecting the environment could have intended to deprive a State of the exercise of its right of self-defense under international law because of its obligations to protect the environment. 73 Nonetheless, the International Court of Justice did emphasize the importance of environmental considerations in the planning and conduct of military activities, stating: States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality. 74

**[ ] Turn – militarizing of space helps enforce international law – surveillance satellites enforce arms control – the ABM treaty proves**

**Maogoto 2006, Senior Lecturer in International Law, University of Newcastle** [Paper 1347. The Military Ascent into Space: From Playground to Battleground: The New Uncertain Game in the Heavens. Jackson N. Maogoto. University of Newcastlle. Bepress legal series <http://law.bepress.com/cgi/viewcontent.cgi?article=6239&context=expresso> Accessed 6/23/2011.]

Article V (1) provides that “[e]ach party undertakes not to develop, test, or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based.” Though there were no space-based A.B.M. systems in existence in 1972 when the treaty was adopted, the space program of each Party was highly advanced and each could foresee the use of space-based A.B.M. systems. Article XII is perhaps even more significant to the long-term use of space by military systems beyond the narrower question of A.B.M. systems: 1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law. 2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article. Paragraph 1 is significant. Though the legality of military surveillance activity from space was established in international law previous to the A.B.M. Treaty, the treaty gave formal sanction to the practice by the two leading space-faring states. In particular it acknowledged the legality of space-based surveillance via satellite and entrenched this as “an essential component of the international arms control regime.” Thus, while the term “peaceful” is contained in all U.N. documents devoted to outer space matters, Richard A. Morgan notes that most experts agree that the Outer Space Treaty does not prohibit “military use” of space. 101 He goes on to note that there is a “consensus, within the United Nations that ‘peaceful’ more specifically equates to ‘nonaggressive.’” However the general stance by commentators noted by Morgan is at odds with the Conference on Disarmament’s observation in 1986 that “[n]o country should develop, test or deploy space weapons in any form.” In sum, despite the use for peaceful purposes centerpiece of the space law regime, key provisions readily lend themselves to interpretations that would support many aspects of militarization and weaponization of space. The matter is thus open and dependent on what perspective a state adopts since it can readily stretch the elastic nature of the space law regime to fit its particular analysis.

**[ ] No link – space weaponization does not violate international law – only aggression is outlawed, not the weapons.**

**Maogoto 2006, Senior Lecturer in International Law, University of Newcastle** [Paper 1347. The Military Ascent into Space: From Playground to Battleground: The New Uncertain Game in the Heavens. Jackson N. Maogoto. University of Newcastlle. Bepress legal series <http://law.bepress.com/cgi/viewcontent.cgi?article=6239&context=expresso> Accessed 6/23/2011.]

The most relevant provisions regarding weaponization of space are Articles IV and IX. Article IV provides: States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner. The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the moon and other celestial bodies shall also not be prohibited. The language in the provision above specifically refers to the limitation of nuclear weapons or any other kinds of weapons of mass destruction from being placed “in orbit around the earth ... install on celestial bodies ... nor station in outer space in any manner.” This language refers to nuclear weapons and other weapons of mass destruction specifically and not to peaceful purposes generally. In this regard, Anderson notes that “Article IV (1) is viewed by most commentators as only a limited disarmament provision.” The phrase “weapons of mass destruction” is generally accepted to include nuclear, chemical and biological weapons. This essentially means that the weapons of mass destruction provision does not apply to conventional weapons , nor does it apply to land-based intercontinental ballistic missiles. Evidence that the drafters only intended Article IV (1) to ban orbiting nuclear-type weapons is the drafters’ agreement that the Treaty does not prohibit the stationing of land-based ICBMs, even though their flight trajectory would take them through outer space. It is well established that the only specific limitation placed on the use of the outer void space for military purposes is that found in Article IV (1). Professor Cheng asserts that “the outer void space as such can be used for any military activity that is compatible with general international law and the Charter of the United Nations, so long as no “nuclear weapons or any other kind of weapons of mass destruction are stationed there.” The practical import of this analysis is captured in Anderson’s observation that: Under this…interpretation, none of the exotic future weapons systems currently being proposed or researched by the United States would violate this provision of the Outer Space Treaty. For instance, laser beam weapons are intended to destroy their targets by delivering a high impulse shock that causes structural collapse of the rocket booster or by remaining on the target until a hole is burned through the missile… violations would only occur if any of the weapon systems included a nuclear explosion to propel them or as a means of destroying a target. Alongside the specific reference the restriction of only particular weapons, Article IV is the setting for much greater controversy. It provides for two separate legal regimes for military activity in outer space: (1) activity conducted on the moon and other celestial bodies, and (2) activity conducted in outer space itself. Article IV divides the extraterrestrial universe into three parts: the Earth’s orbit, celestial bodies, and outer space. This then means that the Outer Space Treaty does not completely free all of outer space from military use. Military activity by its terms, including deployment of the A.S.A.T., is prohibited specifically on the moon and other celestial bodies. Outer space, as such, remains open to military activity that is non-aggressive, in line with the United Nations Charter, international law as long as such activity does not involve nuclear weapons or weapons of mass destruction. Professor Bin Cheng notes that subject to the second paragraph in article IV, “nothing in article IV (1) itself prohibits the stationing of any other type of weapons in outer space, including the moon and other celestial bodies, or in fact the use of outer space, including the moon and other celestial bodies, for military purposes in any other way.” From the foregoing paragraphs, it can be deduced that Article IV of the Outer Space Treaty contemplates the military use of space for scientific research and grants a carte blanche to civilian scientific applications. The reality is that civilian applications of space capabilities such as weather, navigation, communications and remote sensing are equally significant for military purposes. In addition, as a technical matter, there is no bright line between military “missiles” and civilian “space launch vehicles.” Technologies used to build sophisticated weaponry are often similar or even identical to the technologies required for civilian space programs. “The differences relate to intentions, not capabilities.” The tacit acceptance of military usages coupled with the explicit permission to civilian endeavors provides a strong argument that militarization of space through placement of nonnuclear and other weapons of destruction is in and of itself permissible under the space law regime. The argument then moves to whether the acceptance of space militarization under this interpretation permits the deployment of offensive and defensive capabilities in space in a variety of respects. Pursuing this line of argument further, a military-biased interpretation of article IX of the Outer Space Treaty would seem to provide for the possibility of space combat in a variety of respects. It provides, in part: “States Parties to the Treaty shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space, including the moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty.” The provision, like Article IV and for that matter most key space law provisions, makes no distinction between military and civilian activities. Based on this lack of clarity, and depending on the interpreter, the provision would apply fully to military operations in space. In any case, the United States has imported a military-oriented view in interpretation by maintaining that all States possess the inherent right to defend against foreign aggression in outer space, as well as within earth’s atmosphere. As Professor A. Vlasic notes: If one chooses to ignore the controversy concerning the “true” meaning of “peaceful” in the Outer Space Treaty, it is safe to conclude that the Treaty permits the deployment in outer space of anti-satellite weapons, directed energy weapons, or any other kind of weapon, as long as these weapons are not in conflict with the prohibitions of Article IV [such as weapons of mass destruction in orbit] of the Outer Space Treaty, or some other international agreement.

# Treaty Counterplan Responses

**[ ] Even if we pursue international agreements, we should still increase space defense to preserve hegemony**

**Tellis 2007 – Senior Lecturer at the Carnegie Endowment for Peace** [Ashley J., *China's Space Weapons*, <http://www.globalcollab.org/mailinglists/eassnet/archives/2007/aug/Chinas_Space_Weapons.pdf>, Accessed June 21, 2011]

Weaker but significant challengers, like China, simply cannot permit the creation of such a space sanctuary because of its deleterious consequences for their particular interests. Consequently, even though a treaty protecting space assets would be beneficial to Washington, its specific costs to Beijing -- in the context of executing China's national military strategy -- would be remarkably high. Beijing's attitude toward space arms control will change only given a few particular developments. China might acquire the capacity to defeat the U.S. despite America's privileged access to space. Or China's investments in counterspace technology might begin to yield diminishing returns because the U.S. consistently nullifies these capabilities superior technology and operational practices. Or China's own dependence on space for strategic and economic reasons might intensify to the point where the threat posed by any American offensive counterspace programs exceed the benefits accruing to Beijing's own comparable efforts. Or the risk of conflict between a weaker China and any other superior military power, such as the U.S., disappears entirely. Since these conditions will not be realized anytime soon, Washington should certainly discuss space security with Beijing, but, for now, it should not expect that negotiation will yield any successful agreements. Instead, the U.S. should accelerate investments in solutions that enhance the security of its space assets, in addition to developing its own offensive counterspace capabilities. These avenues -- as the Bush administration has correctly recognized -- offer the promise of protecting American interests in space and averting more serious threats to its global primacy.

**[ ] Permutation – do both – space weaponization is a necessary compliment to international space law because conflict is inevitable**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

This article asserts that strategic defense is the best strategy for maintaining putative U.S. command of space 10 and the foundation for such a defense must be constructed by utilizing the mechanisms of international law. A successful strategic defense does not require, however, that America forego research and development of potential offensive capabilities. On the contrary, offensive counter-space is a necessary component of the defense through the pursuit of negative command when necessary. 11 However, offensive counterspace capabilities must be viewed within the context of strategic defense since these capabilities may pose serious risks to America's own space assets. Thus, the United States must always first consider defense of its assets. To that end, law is a central element in any defensive strategy to achieve putative command of space. Given the relative peace between nations, some may question the necessity of a warfare approach to law. However, war is in the nature of man and, if history is a teacher, the issue is not if, but when war will reach outer space. Nonetheless, looking solely to military science as a method of securing command of space disserves U.S. interests. Indeed, as military methods focus on actions taken subsequent to the initiation of hostilities, it is necessary to pursue a strategy that remains as applicable in peace as in war, for it is in peace that decisive victories might be gained which provide benefits that could not accrue [\*110] through armed force. 12 The strategic legal vision offered herein attempts to satisfy that purpose.

**[ ] Permutation – do both – even if we develop space agreements, we need to develop weapons, in case negotiations fail, because conflict is inevitable**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

The United States has an amazing opportunity to implement a vision that will help shape the world in the 21st century. Space is only one of many places where this opportunity presents itself, but space is unique in many ways. Space envelops the earth and reaches to the stars. Space has the ability to effect, in some way, every person’s life on this planet. Without a peer competitor, the United States has the opportunity now to take advantage of the unique attributes of space, but the nation has not yet stepped up to the challenge. Conflict in space is inevitable. No frontier exploited or occupied by humans has ever been free from conflict, but the United States has a remarkable chance to mold and shape how these conflicts will be resolved in the future. There is no threat right now that demands the deployment of space weapons. Opportunities exist in the Conference on Disarmament and through bilateral negotiations to make progress in eliminating the future need for such weapons. At the same time the United States cannot afford to be caught off guard in the future—the nation cannot afford to be second in the deployment of space weapons. The only way to ensure this happens is through a robust development program for an entire spectrum of space control capabilities—deferring the decision to deploy space weapons until a clear requirement exists. If the United States remains strong, if space truly is a clear vital national interest, if we negotiate openly with the nations of the world, if we allow our industry to fully exploit space and become the unquestioned leader of the information age, and if we develop the means and methods to effectively deal with the inevitable conflicts that will occur in space in the next century, perhaps President Kennedy’s new ocean could remain primarily a "sea of peace." If, however, the United States continues without an integrated national strategy, if we fail to define a vision of space for the future, if we decide to develop space weapons in a vacuum apart from the rest of the space community, if we refuse to negotiate with other nations, or if we fail to fully establish a comprehensive commercial space policy, then the ocean will undoubtedly become "a terrifying new theater of war."

**[ ] Even if we pursue international cooperation, we should still protect our military space assets, because there is no guarantee that treaties will work**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Recommendation #3: The United States should enter into bilateral negotiations with other nations and multinational negotiations within the U.N. concerning the broad issue of space in the future. This does not mean the United States should immediately support or sign a blanket treaty to "preserve space for peaceful purposes" or eliminate all future weapons in space. At this time, such an action is clearly not in the best interest of the United States. Other nations need to understand that the United States does not claim any sovereign right to space, rejects any nation’s claim to such sovereignty, and desires space be available for use by all humanity—but at the same time, the U.S. considers the use of space to be a vital national interest—an interest Americans will be willing to protect if called upon. The United States currently achieves such a tremendous strategic advantage from the use of space, that signing such a treaty would effectively result in a unilateral decision to level the playing field. The United States would not want to take such a step unless other nations could ensure some maintenance of the status quo (a U.S. strategic advantage) into the future. Preserving this strategic advantage should be a guiding principle behind any future U.S. initiatives. Space has long been militarized, but in order to keep it from being weaponized, other nations would have to give up some of their own potential to use space for military purposes. Other nations need to understand that if they use space systems to target, exploit, or attack U.S. citizens or resources, these systems will be attacked in return. Such a response could occur through an attack on the ground segment or the communication links, but could if necessary, require the use of space weapons. A negotiating position for the United States could be: if the world desires the U.S. not to develop space weapons, other nations must make concessions that will allow for the status quo in the current use of military space systems to support terrestrial operations. Without maintaining the status quo, United States military forces will become increasingly vulnerable around the globe from the indirect military use of space systems. It is not clear or even likely that other nations would desire to agree to such a construct, but U.S. refusal to negotiate ignores the possibility for mutually beneficial, peaceful solutions to conflict. The current Administration’s foreign policy is based on a concept of international engagement. By engaging around the world, it is often possible to find common ground and mutual interests that can improve the situation for both (or many) countries. The same opportunity to engage is available in space. The nation needs to take advantage of this opportunity.

# Arms Control Counterplans Responses

**[ ] Arms control fails in space – they assume peaceful Chinese intentions.**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

Third, arms control is not the path to security or stability. Arms control advocates naturally use the Chinese test to advance their agenda. Just to cite one, my colleague, Ed Markey of Massachusetts, said: "American satellites are the soft underbelly of our national security, and it is urgent that President Bush move to guarantee their protection by initiat­ing an international agreement to ban the develop­ment, testing, and deployment of space weapons and anti-satellite systems."[6] Advocates of such arms control put far too much stock in China's public statements that it has noth­ing but peaceful intentions and wants to avoid an arms race in space. A review of Chinese military doctrine and numerous writings makes it clear: China does not believe that space can, or should, be free of military capabilities. China believes that it must develop space weapons for its own security, specifically in preparation for a possible conflict with the U.S. over Taiwan. China is also concerned that its nuclear deterrent is at risk of being degraded by improving U.S. mis­sile defense capabilities. By having the ability to destroy the satellites that tie our ballistic missile defense system together, China hopes to seriously degrade its effectiveness as a deterrent.

**[ ] Arms control fails – impossible to verify due to the speed of technological change**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

FRANK GAFFNEY, CENTER FOR SECURITY POLICY: I wanted to pick up on something that's central to your critique of the alternative approach. I had the privilege of serving with President Reagan 24 years ago. Henry Cooper and I collaborated in an interagency study, at congressional request, that looked exhaustively at whether there was any way to come up with a verifiable, effective arms control treaty banning anti-satellite activities and weapons, and we found there simply wasn't. I'm unaware of any changes that have actually made that more possible today. In fact, everything, as you indicate in your speech, suggests otherwise. How can it possibly be that the United States State Department as recently as Friday, as you pointed out, is talking about preventing the militarization of space, which is, of course, the code under which this idea of banning such weapons would be advanced? Could you speak to both the intractable arms control problems and why this State Depart­ment is similarly drinking the Kool-Aid? SENATOR KYL: The State Department's posi­tion runs counter to expressed presidential direc­tion. I refer any of you who would like to get the real detailed information on this to the report to the Congress on U.S. policy on ASAT arms control dat­ed March 31, 1984, by Frank Gaffney and Ambas­sador Hank Cooper. It is a wonderfully documented paper on all of the reasons why, as much as you might try to verify this kind of a treaty, it is inherent­ly impossible to do so. Without trying to character­ize all of the arguments here, I tried to summarize them very briefly. Frank Gaffney is exactly correct. The modern technology since 1984 has simply demonstrated (a) the correctness of this position and (b) the fact that the genie is far more out of the bottle now than it was back there. There are now simply so many dif­ferent ways that you could have an impact on this that it would be inherently impossible to verify. When people talk about the grand goal of some­how eliminating something that, in reality, cannot be limited except by the voluntary compliance of all the parties, then you also have to examine the intentions of the parties. As I said before, like so many other treaties, this is a perfect example of one in which the people who don't need a treaty to comply would, and, of course, those who would violate the treaty demonstrate the inappropriateness of that as the way to try to limit the activity. This is a classic case of a sit­uation where, because of technology verification of an ASAT capability, it is simply impossible.

**[ ] Space Arms control fails – China will not give up its military space capabilities – they are the only response to US dominance**

**Tellis 2007 – Senior Lecturer at the Carnegie Endowment for Peace** [Ashley J., *China's Space Weapons*, <http://www.globalcollab.org/mailinglists/eassnet/archives/2007/aug/Chinas_Space_Weapons.pdf>, Accessed June 21, 2011]

The importance of space denial for China's operational success implies that its counterspace investments, far from being bargaining chips aimed at creating a peaceful space regime, in fact represent its best hope for prevailing against superior American military power. Because having this capacity is critical to Chinese security, Beijing will not entertain any arms-control regime that requires it to trade away its space-denial capabilities. This would only further accentuate the military advantages of its competitors. For China to do otherwise would be to condemn its armed forces to inevitable defeat in any encounter with American power. This is why arms-control advocates are wrong even when they are right. Any "weaponization" of space will indeed be costly and especially dangerous to the U.S., which relies heavily on space for military superiority, economic growth and strategic stability. Space arms-control advocates are correct when they emphasize that advanced powers stand to gain disproportionately from any global regime that protects their space assets. Yet they are wrong when they insist that such a regime is attainable and, therefore, ought to be pursued. Weaker but significant challengers, like China, simply cannot permit the creation of such a space sanctuary because of its deleterious consequences for their particular interests. Consequently, even though a treaty protecting space assets would be beneficial to Washington, its specific costs to Beijing -- in the context of executing China's national military strategy -- would be remarkably high. Beijing's attitude toward space arms control will change only given a few particular developments. China might acquire the capacity to defeat the U.S. despite America's privileged access to space. Or China's investments in counterspace technology might begin to yield diminishing returns because the U.S. consistently nullifies these capabilities superior technology and operational practices. Or China's own dependence on space for strategic and economic reasons might intensify to the point where the threat posed by any American offensive counterspace programs exceed the benefits accruing to Beijing's own comparable efforts. Or the risk of conflict between a weaker China and any other superior military power, such as the U.S., disappears entirely. Since these conditions will not be realized anytime soon, Washington should certainly discuss space security with Beijing, but, for now, it should not expect that negotiation will yield any successful agreements. Instead, the U.S. should accelerate investments in solutions that enhance the security of its space assets, in addition to developing its own offensive counterspace capabilities. These avenues -- as the Bush administration has correctly recognized -- offer the promise of protecting American interests in space and averting more serious threats to its global primacy.

# Code of Conduct Counterplan Responses

**[ ] Permutation – do both. Developing a Code of Conduct doesn’t prohibit ASATs, but makes their development safer.**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Finally, the United States and China need to recognize that they must make an effort to manage their emerging competition in military space in a manner that does not undercut their own national security, as well as the security of others. Breaking off nascent discussions about space cooperation in favor of launching a kind of Cold War in space is bound to backfire on both Washington and Beijing in the long run. Instead, a frank and open dialogue about each side’s national security concerns in space is called for – along with serious consideration of how a new code of conduct for behavior in space might be drafted to clearly demark the boundaries of acceptable and unacceptable behavior in space. A code of conduct for space is not a radical, or even new, idea. Indeed, the administration of Ronald Reagan, while pursuing space-based missile defenses and an ASAT program, also was considering the value of pursuing a code of conduct that might include measures such as barring attacks on early warning satellites.53 Pursuit of a space code more recently has been endorsed by a number of international media outlets, including The Economist, a libertarian-oriented British magazine, and U.S. trade journal Aviation Week & Space Technology.54 China and the United States should take heed, and seek to shape rules of the road that can help ensure mutual security in space for all. Failure to act to restrain unfettered military competition in space is bound to result in a “Wild West” environment that raises the risks not only to Chinese and U.S. uses of space, but to the peace and prosperity of the entire world.

**[ ] Permutation – Do Both – diplomacy complements defensive military preparations**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

The strategic landscape of this new space era is largely unexplored and poorly understood. Nonetheless, certain objectives are clearly in the interest of the United States. The risks inherent in space conflict, where vital U.S. interests are at stake, suggest that preventing space conflict should be a major U.S. security objective, and that all instruments of U.S. power, not just military measures, should be drawn upon to this end. The United States needs to deter others from attacking its space capabilities and bolster an international space regime that reinforces deterrence, the absence of conflict in space, and the preservation of space as an environment open to all. Such a regime would allow the United States to continue reaping the critical information and service benefits that U.S. military space assets provide. To achieve this, the United States needs vigorous diplomatic initiatives as well as defense programs and strategy. Such a stable space regime would seek to: – focus U.S. policies on stability, deterrence, escalation control, and transparency; – create incentives that encourage nations to avoid actions that are inherently destabilizing and cannot be reversed; – construct a military space architecture on the basis of an in-depth, layered defense in order to ensure the availability of vital space services; – reduce incentives to and the ability of adversaries to target space capabilities; – foster uncertainty with respect to the consequences of such an adversarial action; – increase warning time to enable both strategic- and operationallevel actions; – facilitate agreements and understandings that would constrain the most destabilizing dimensions of space competition and provide ground rules for normal space operations; and – maintain ongoing dialogue among U.S., Chinese, and other military and policy experts to promote greater understanding and reduce chances for misunderstanding and miscalculation.

**[ ] Doing both solves better – best mix of options**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

The fundamental U.S. security interest in the wake of China’s 2007 ASAT test should be deterring China and others from attacking U.S. assets in space, using both a combination of declaratory policy, military programs, and diplomacy, and promoting a more stable and secure space environment. At the same time, the United States and China should both pursue diplomatic options to increase clarity and minimize misunderstanding on space-related matters, and reduce the chances of accidental conflict. This comprehensive mix of military and diplomatic measures is more likely to achieve U.S. space and larger national security objectives than either by itself.

**[ ] A code of conduct fails – it is impossible to define key terms, and it depends on peaceful intentions**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

As discussed above, the protection of space lines of communication is synonymous with American command of space. 138 In seeking to protect those lines of communication, some advocate the introduction of kinetic weapons in space. 139 This is impractical and ill-advised in the space environment. Employment of kinetic weapons in space generates an extremely dangerous debris cloud with a very long orbital life--in effect, perpetual shrapnel that poses a grave threat to all other satellites in orbit. While our potential adversaries may consider such weapons, the United States must avoid doing so because of the great risk of collateral damage to our own and our allies' space lines of communication. The United States should pursue a prohibition on the use of such weapons in order to preserve the global commons of space from space debris. 140 [\*131] Any such prohibition, however, must focus on the effect to be prevented rather than any particular weapon. 141 One method to address this issue is the proposed development of a Space Code of Conduct that would require states "to refrain from harmful interference against space objects." 142 However, as acknowledged by its drafters, this suggestion suffers from the same challenge as the exercise of defining space weapons: what is "harmful interference"? 143 While it would obviously encompass permanent physical destruction or functional disablement of a satellite, what about temporary interference with a satellite's operation or capabilities that causes no long term damage or limitation? The principal drafter of the code believes that the inclusion of radio frequency jamming within the definition of harmful interference would likely limit significant support for adoption of the code by space-faring nations. 144 Moreover, since the code itself is not binding, debris mitigation is still left to the goodwill of space-faring nations. As a proposal, the code's redemptive value lies in the fact that it directs attention away from space weapons per se to instead focus on the intent of the space actor, that is, the desired effect, by proscribing intentional generation of space debris regardless of method or means. This is a critical step in developing a successful international space debris mitigation strategy that would be compatible with U.S. space security. However, in order to not limit the right of self-defense, the proposed prohibition would have to permit the potential use of non-kinetic measures that do not generate such debris. 145 For example, the [\*132] European Code of Conduct for Debris Mitigation simply prohibits the "intentional destruction of a space system or any of its parts in orbit." 146 This language could serve as the foundation for a broader international agreement to prohibit the intentional creation of space debris, which would be compatible with U.S. command of space. However, such a prohibition alone is insufficient to provide an effective foundation for U.S. space security. America cannot rely solely upon the professed peaceful intentions of its strategic competitors. Indeed, our reliance on space assets presents a lucrative target for any potential adversary. 147 Several non-kinetic measures could provide a defensive capability without also jeopardizing America's own space assets or that of its allies. Rather than destroying an adversary satellite, such measures could temporarily disable, degrade, or otherwise render it incapable of functioning to the adversary's benefit. Such measures could limit an adversary's space lines of communication without endangering our own or that of a third party. 148

**[ ] The Rules of Road don’t protect satellites from ground based ASATs**

**Hui 2007 - Research associate at Harvard University** [Zhang http://www.wsichina.org/space/focus.cfm?)focusid=94&charid=1 Space Weaponization And Space Security: A Chinese Perspective Accessed June 24

Furthermore, a number of measures could be taken to secure space assets by multilateral rules or agreements. Specific rules or agreements for space use might include, for example, “keep-out zones,” a non-interference rule for satellites, cooperation on reducing space debris, notification of space launch, development of safe traffic management procedures, and building a hotline between major missile and space powers. These “rules of the road” would be intended to reduce suspicion and encourage the orderly use of space. However, it should be noted that the above technical measures and rules, although important for reducing present risks, would not remove the implicit threat of ASAT attacks. A potential rule on “keep-out-zones” would not prohibit an attack by a space-based laser at long distance. Technical solutions are unlikely to suffice in the absence of strengthened international agreements on space activity. In addition, hardening satellites would be extremely costly, and potentially infeasible, in particular for civilian and commercial satellites. It would impair the operational flexibility of satellites.

# Congress Counterplan Responses

**[ ] Executive action is necessary on space military planning – it is key to coherence**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

The international nature of space as a commons is what makes the problem of dealing with conflict so difficult. The U.S. military, as a minority player in space and in the absence of a coherent national strategy, is finding it increasingly difficult to develop the means to deal with conflict in space in the next century. Therefore, it is impossible for the military alone to effectively plan for and deal with all the elements of space as it relates to national security. It is a national problem and must be dealt with in a coherent manner by the executive branch—integrating all the elements of national power into a coherent policy.

**[ ] Executive action is key to solvency – only it can coordinate different plans – congress is too deliberative**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

Recommendation #1: The Administration should reconstitute the National Space Council. The National Science and Technology Council (NSTC) is currently "the principle forum" for resolving issues related to national space policy.22 Unfortunately, very few of the critical decisions regarding the future of space are issues of science and technology. They are issues that cross the boundaries of many agencies in government and impact everything from national security to economic prosperity. Addressing these issues in the context of science and technology gives them the wrong focus. The result has been the development of disparate visions and plans (in Commerce, Defense, State, NASA, etc.) for dealing with the future of space without an integrated assessment of their impact on the other instruments of national power. Science and technology plans are integrated, but the overall national policy is unclear. What is clear is that the problem must be handled in the executive branch of government. Congress is beginning to legislate different elements of the problem, but by its very nature, Congress will have a difficult time attempting to integrate the different elements of foreign and economic policy that mostly lie within the executive branch. The original National Space Council (disbanded in 1992) effectively integrated the different elements of the executive branch and allowed the development of coherent strategies. Having the council chaired by the Vice President gave it the authority needed to make the tough decisions. Having a new National Space Council chaired by the Vice President may be politically obsolete, but a similar body needs to be chartered with the power and authority to make critical policy recommendations to the President. It should include senior representatives from all the impacted segments of the government—state, defense, commerce, CIA, NASA, the National Security Council, to name but a few. Its first order of business should be to define the overarching space policy of the nation that must contain a clear vision for the next century. This vision must be more than simply being committed to "the exploration and use of outer space by all nations for peaceful purposes."

# Conditioning Counterplan Responses

**[ ] Counterplan will fail – China will not use space military capability as a bargaining chip**

**Tellis 2007 – Senior Lecturer at the Carnegie Endowment for Peace** [Ashley J., *China's Space Weapons*, <http://www.globalcollab.org/mailinglists/eassnet/archives/2007/aug/Chinas_Space_Weapons.pdf>, Accessed June 21, 2011]

The importance of space denial for China's operational success implies that its counterspace investments, far from being bargaining chips aimed at creating a peaceful space regime, in fact represent its best hope for prevailing against superior American military power. Because having this capacity is critical to Chinese security, Beijing will not entertain any arms-control regime that requires it to trade away its space-denial capabilities. This would only further accentuate the military advantages of its competitors. For China to do otherwise would be to condemn its armed forces to inevitable defeat in any encounter with American power.

# Reject OST Counterplan Responses

**[ ] Turn – rejecting the Outer Space treaty would destroy commercialization of space – it would undermine the legal regime that makes development possible**

**Gabrynowicz 2005,** **Director, National Center for Remote Sensing, Air and Space Law** [THE INTERNATIONAL SPACE TREATY REGIME IN THE GLOBALIZATION ERA. BY JOANNE IRENE GABRYNOWICZ. Ad Astra, the magazine of the National Space Society – Fall 2005 issue. [http://www.space-settlement-institute.org/Articles/IntlSpaceTreatyGabryno.pdf Accessed June 23](http://www.space-settlement-institute.org/Articles/IntlSpaceTreatyGabryno.pdf%20Accessed%20June%2023), 2011.]

As regards to property rights per se, the Outer Space Treaty is silent. It contains no prohibition. Here it is important to note that the space treaty regime is comprised of interrelated treaties that are all specifically based on the Outer Space Treaty. Rejecting the Outer Space Treaty because it is silent on property rights will bring into question the rest of the regime that contains the fundamental legal structure needed for commercial activities. It will also call into question the future applicability of the private law that has developed over the years in the form of contracts and insurance agreements. If the treaty regime needs further clarification regarding property rights, the answer is to develop the political will to do precisely that, and not to cause legal instability by eliminating the existing legal structure. By rejecting the space treaty regime, the right of the private sector to operate in space could be jeopardized. When the space treaties were negotiated, it was far from obvious that the legal regime would allow commercial activities and private actors. In fact, the not unexpected position of the former Soviet Union was that the only proper actors in space were nation states. The also not unexpected position of the United States was that private entities were to be legally recognized actors. Article 6 of the Outer Space Treaty contains the compromise that allows private actors to participate in space under government supervision. In the case of U.S. law, this supervision exists in the form of licensing regulations for launches, remote sensing systems and other applications. Without this specific provision, it should not be assumed that the private sector would be accepted as legal space actors. In the era of globalization, communist ideology may no longer be available to threaten private actors in space, but as popular anti-globalization demonstrations grow in size and strength around the world, so does the evidence that other ideologies may have arisen that can do the same.

**[ ] Withdrawing from space treaties won’t improve hegemony – Space command depends upon legitimacy which comes from the law**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

An operative definition for command of space adequately balances the temporal and conceptual dimensions of command such that it is an entirely legitimate pursuit. "Command" is typically thought of as being attained and maintained through the use of military force and thought of in terms of "space control." 90 However, command of space "is inclusive of much more than 'space control.'" 91 The U.S. DOD defines space control as "combat, combat support, and combat service support operations to ensure freedom of action in space for the United States and its allies and, when directed, deny an adversary freedom of [\*123] action in space." 92 The failure to embrace the broader definition of command of space in favor of a more narrow emphasis on measures to achieve space control generates a mistaken belief that space control equates to hegemony. From a strictly military standpoint, outer space is viewed by some as the ultimate high ground. 93 The highest available ground in a military operation has always been viewed as the most desirable location given its predominance of the surrounding terrain and its concomitant advantages in combating an enemy. 94 These advantages include commanding overviews, enhanced fields of fire, and a more secure defensive position. 95 While such advantages are certainly desirable in times of armed conflict, the emphasis on means of combat invokes the illegitimate hegemonic, normative definitional construct of command of space. For example, one theorist offers a three-part plan, based on the political doctrine of astropolitik, 96 to achieve space control. 97 Demonstrating the plan's illegitimacy under the current international space law regime, he first advises U.S. withdrawal from all space-related treaties. 98 Next, he advocates that the United States immediately "seize control of low-Earth orbit" which would, in effect, establish "a police blockade of all current spaceports, monitoring and controlling all traffic both in and out." 99 Lastly, he suggests the creation of a national space agency to regulate all space activity. 100 These three steps would provide the total domination in space that some within the U.S. military advocate. 101 Clearly, the requirement for legitimacy to achieve effective U.S. command of space prohibits withdrawing from the current international [\*124] legal regime governing space. Rather, at a minimum, legitimacy would require firm grounding upon the principle of freedom of use outlined in Article I of the Outer Space Treaty, rather than any high ground theory. The distinction illustrates the difference between positive and negative command. Much like space control, positive command denotes access assurance, while negative command represents access denial with respect to an adversary. 102 However, negative command does not constitute or require unilateral action outside the existing legal regime. Rather, positive command and negative command are inextricably linked, in that both seek to maintain freedom of access to and use of outer space. 103 Negative command is the self-defense component of command of space when positive command is challenged by an adversary. 104

**[ ] China uses claims of vertical sovereignty to deny access to “Chinese” space**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

C. Chinese Assertions of Vertical Sovereignty in Space Absolute national sovereignty over the airspace above a state's territory has "been claimed and exercised as far back into history as proof may exist of the creation and protection by state law of exclusive private property rights in such place." 187 Land and airspace, therefore, were viewed as inseparable; a rule that can be traced to Roman times. 188 This right of absolute vertical sovereignty continued to prevail until the Chicago Convention of 1944 when, despite the convention's failure to define airspace, it defined an aircraft as "any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of air against the earth's surface." 189 By indicating that the convention would apply "only to those parts of the atmosphere where gaseous air is sufficiently dense to support balloons and airplanes," the convention set a de facto limit on airspace. 190 This proposition was reinforced when no nations objected to the overflight of satellites above their territorial airspace at the dawn of the space age. 191 However, the lack of a definitive resolution of this issue in international law has permitted some in China to advocate vertical sovereignty in space. 192 Consistent with China's seamless view of warfare, a number of Chinese authors 193 are exploring the nexus between traditional notions [\*139] of state sovereignty and space, with particular emphasis on attempting to establish a legal foundation for potential military operations in space. Although such apparent assertions of Chinese vertical sovereignty may only be in their formative stages, the United States must respond and counter them now or risk permitting China to gain credibility, regarding potential military operations, which would restrict freedom of movement in the space domain. 1. The Chinese Position and Its Implications China's most prominent advocate for vertical sovereignty is Major General Cai Fengzhen, the Deputy Chief of Staff of the People's Liberation Army Air Force. 194 General Cai contends that the space above ground, including airspace and space, is inseparable and integrated. 195 Thus, General Cai reaches back to the Roman-based doctrine of cujus est solum, ejus est usque ad coelum, 196 which essentially means "he who owns the soil, owns up to the sky." 197 Absent a clear demarcation between airspace and space, international law does not directly contradict or prohibit this view. 198 Indeed, Bin Cheng warned in 1997 that "States which object to certain types of satellites, such as those that engage in remote sensing, [may] claim sovereignty over national space above the usual heights at which such satellites orbit so as to subject them to the consent and control of the States overflown but not necessarily to exclude them." 199

**[ ] The Outer Space Treaty prohibits Vertical Sovereignty claims**

**Bellflower 2010, instructor at the Advanced Space Operations School** [Air Force Judge Advocate General School. The Air Force Law Review. The influence of law on command of space name: major john w. Bellflower Lexis Accessed June 21, 2011]

2. Legal Analysis Reliance on the absence of an explicit airspace-space demarcation ignores historical context by attempting to identify a minimum altitude at which space begins. In fact, there is no controversy that all current satellite orbits transit within the space domain. 211 Irrespective of the demarcation argument, Articles I and II of the Outer Space Treaty (OST) expressly refute any conception of vertical sovereignty. 212 Article I designates outer space, including the moon and other celestial bodies, as "the province of all mankind." This language has been universally understood to mean that "all nations have a [\*142] nonexclusive right to use and explore space." 213 Article II further prohibits in space any "national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." Thus, the OST clearly permits all uses of the space domain short of an appropriation by claim of sovereignty or the like. 214 It therefore seems clear that the plain language of the OST prohibits any claim of vertical sovereignty in space. Sovereignty denotes supreme authority within a territory, 215 "the right to command and correlatively the right to be obeyed," with the term "right" connoting legitimacy. 216 Thus, a claim of sovereignty over space, or any portion thereof, seeks, in some measure, to extend a state's territorial sovereignty into the space domain. 217 The holder of sovereignty derives its authority for sovereignty from some mutually acknowledged source of legitimacy. 218 In space, the OST's explicit prohibition on appropriation removes the essential support for legitimate sovereignty. 219

# Arms Race Disad Responses

**[ ] U.S. space militarization does not lead to arms race- too expensive and time-consuming**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

And America would respond … finally. But would another state? If America were to weaponize space today, it is unlikely that any other state or group of states would find it rational to counter in kind. The entry cost to provide the infrastructure necessary is too high; hundreds of billions of dollars, at minimum. The years of investment it would take to achieve a minimal counter-force capability—essentially from scratch—would provide more than ample time for the US to entrench itself in space, and readily counter preliminary efforts to displace it. The tremendous effort in time and resources would be worse than wasted. Most states, if not all, would opt not to counter US deployments in kind. They might oppose US interests with asymmetric balancing, depending on how aggressively America uses its new power, but the likelihood of a hemorrhaging arms race in space should the US deploy weapons there—at least for the next few years—is extremely remote.–-

**[ ] Non-Unique – weaponization now – Chinese ASAT tests prove**

**Broad 2007 - Senior Writer at The New York Times** [William J. and David E. Sanger, Chief Washington Correspondent for the New York Times, *China Tests Anti-Satellite Weapon, Unnerving U.S.*, New York Times, <http://www.nytimes.com/2007/01/18/world/asia/18cnd-china.html?ex=1184212800&en=7faa759d46da0a05&ei=5070>, Accessed June 22, 2011]

China successfully carried out its first test of an anti-satellite weapon last week, signaling its resolve to play a major role in military space activities and bringing expressions of concern from Washington and other capitals, the Bush administration said Thursday. Only two nations — Russia and the United States — have previously destroyed spacecraft in anti-satellite tests, most recently the United States in the mid 1980s. Arms control experts called the test, in which a Chinese missile destroyed an aging Chinese weather satellite, a troubling development that could foreshadow either an anti-satellite arms race or, alternatively, a diplomatic push by China to force the Bush administration into negotiations on a weapons ban. “This is the first real escalation in the weaponization of space that we’ve seen in 20 years,” said Jonathan McDowell, a Harvard astronomer who tracks rocket launchings and space activity. “It ends a long period of restraint.” White House officials said the United States and other nations, which they did not name, had “expressed our concern regarding this action to the Chinese.” Despite its protest, the Bush administration has long resisted a global treaty banning such tests because it says it needs freedom of action in space.

[ ] Militarization inevitable – Chinese ASAT development proves

Devan 2007 [Janadas Devan ,Senior writer, The Straits Times HOW impressive was the Chinese Asat weapon? February 2; Lexis Accessed June 21 ]

Other analysts saw things differently. Chinese strategists, they noted, have spoken openly of acquiring an Asat capacity. This would be an existential necessity for China, especially if the US missile defence system - a system that would be heavily reliant on satellites - proves viable. The US could launch a pre-emptive nuclear strike on China and expect its interceptors to take care of whatever remains of China's limited nuclear arsenal. An Asat capacity would help preserve China's second-strike capability. And it would enable the Chinese to disrupt US military operations in the event of a war over Taiwan. Chinese strategists have spoken of the possibility of waging 'asymmetrical warfare' against the better-equipped US military, and Asat weapons would fit the bill. So, whatever its public claims, why would China want a space treaty, these analysts asked. It would not be in its interest to sign a treaty banning Asat weapons.

**[ ] No Link – plan doesn’t cause destabilizing Arms Race – space militarization wouldn’t be any different from sea or land weapons**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

The author Steven Lambakis is a leading proponent of weaponizing space. Below is a summary of his arguments excerpted from one of his published articles. Lambakis begins by asking a rhetorical question: Should space be treated any differently from the land, sea, or air? He answers in the negative by stating that in his view, despite physical differences between the earth and space environments, there should be no difference from the point of view of policy and strategy. He also says that whether or not the United States chooses to put weapons in space, it is inevitable that some other country would. He refutes the case against weaponization by challenging the validity of some tacit assumptions made by opponents. For example, he notes that opponents say space combat would be destabilizing. Lambakis counters this assumption by saying that there is no way of knowing whether placing weapons in space would be destabilizing since we have no experience in space warfare. He asks why shots in space would be any more harmful than shots on earth. He notes, for example, that it is not self evident that a sudden loss of a communications satellite would precipitate a wider-scale war. Lambakis also finds fault with opponents' wish to "draw a line in space;" he argues that such a line is strictly conceptual. Nothing in the tactics and strategy of war-fighting nor the logic of deterrence says there must be such a line, he adds. The example of Soviet efforts to develop the MIRV was a case in point, he says. Many people argued at the time that the Soviet MIRV nuclear weapon was a direct response to the U.S. action in developing such a weapon. But Lambakis writes that the Soviets had embarked on the MIRV program on their own and would have exploited their innovation irrespective of the U.S. action. Could we stop the historical progression of weaponry at the edge of the earth, he asks. It is a political decision, he contends, adding that the absence of universal political will means there is no practical way to enforce any treaty or law. As for critics' assertion that the United States will lose international support if it deploys space weapons, Lambakis offers the following rebuttal. He says that when the stakes are high, the United States must act in self-defense and that our allies will judge U.S. actions appropriately. For example, despite widespread antiAmericanism, the United States was able to put together a large coalition to fight the Gulf War in 1991. Again, he calls such widely held assumptions as "ASATs are destabilizing" or "space must remain a sanctuary" as old-fashioned dogmas that should not stand in the way of implementing new security policies. He referred especially to Ballistic Missile Defense, which he says ought to be viewed in the "broader context of space power." Finally, he adds an important caveat to his arguments for weaponization by making the following statement: "Should military requirements warrant and cost permit, space weapons could be invited to join the rest of the arsenal…."

**[ ] Space militarization doesn’t cause weaponization – it doesn’t deny other nations access to space**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons,date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

Many nations benefit from space assets used for military purposes, including communications, reconnaissance, and positioning. However, space militarization does not necessarily mean space weaponization; the important distinction between the two lies in the unfettered use of space. While space militarization has indispensably augmented U.S. conventional military forces, such capabilities do not deny others the use of similar capabilities. Space weaponization, on the other hand, can seek to prevent an adversary from using space for military purposes. According to the U.S. Air Force, space weaponization, or “offensive counterspace capabilities,” would involve space-based or earthbased weapons that could destroy, disable, or disrupt space-based systems such as satellites. Earth-based weapons capable of attacking satellites’ ground stations and communications links must also be considered as part of any evolving space-weaponization architecture.

# Russia Disad Responses

**[ ] Russia isn’t serious about space arms control – reaction to Chinese ASATs proves**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Somewhat surprisingly, Russia’s response to the news of the Chinese test was muddled, at best, and disingenuous at worst. Russian Defense Minister Sergei Ivanov at first denounced reports about the Chinese test as “rumors.”33 ITAR-Tass quoted Maj. Gen. Vyacheslav Fateyev as calling the test “hooliganism,” but noting that it demonstrated a “strong capability;” and Lt. Gen. Leonid Sazhin as saying the test was a response to U.S. development of space weapons, to ensure China’s security.34 Russian President Vladimir Putin, addressing the issue in a Jan. 25 press conference in New Delhi with Indian Prime Minister Manmohan Singh, also blamed U.S. plans for space weapons as the reason for the Chinese test and avoided any direct criticism of China, while reiterating Russia’s opposition to space weaponization. “We must not let the genie out of the bottle,” Putin said.35 Considering that Russia has been China’s chief partner in calling for a space weapons ban – even going so far as to make a unilateral declaration that it would not be the first to deploy weapons in space and urging others to do so – Moscow’s failure to reprimand Beijing raises questions about Russia’s seriousness on the issue, as well as its commitments regarding space debris mitigation. Further, the attempt to shift primary blame onto the United States plays into the hands of those in Washington who have long argued that the main goal of the Chinese-Russian weapons ban proposals has been to tie U.S. hands while strengthening their own positions to counter U.S. capabilities.

**[ ] Non-Unique – Russia is already in a space arms race with the US**

**MacDonald 2008 – Council on Foreign Relations** [Bruce, Council Special Report No. 38 September China, Space Weapons, date accessed : June 24th, 2011, http://www.cfr.org/china/china-space-weapons-us-security/p16707]

While China represents the most prominent challenge to U.S. space assets, it is not the only one. Russia and others7 are taking another look at space to counter U.S. military capability, and friendly countries such as India are reexamining space’s role in this new era, in at least partial response to China’s 2007 test. India’s army chief of staff has stated that “the Chinese space program is expanding at an exponentially rapid pace in both offensive and defensive content,” and another Indian general has observed that “with time we will get sucked into a military race to protect our space assets and inevitably there will be a military contest in space.”8 Such actions could possibly trigger responses from other regional adversaries as well.

# US China Relations Disad Responses

**[ ] Non Unique - Chinese ASAT tests undermind US Chinese civilian projects and military to military cooperation**

**Hitchens 2008 - Director of World Security Institute’s Center for Defense Information** [Theresa, leads CDI’s Space Security Project. She serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies:http://kms1.isn.ethz.ch/serviceengine/Files/ISN/31975/ichaptersection\_singledocument/bba43944-559b-431b-8695-aeb531994ec/en/cs5\_chapter2.pdf accessed 6-23-11]

On the civil space side, Beijing is also likely to feel repercussions in its efforts to spur cooperation with NASA on planetary exploration. Considering that there were strong voices in the U.S. national security establishment, and in Congress, opposing last year’s visit to China by NASA Administrator Michael Griffin and accusing China of wanting nothing except access to technology it could supply to its military programs, it is almost inconceivable that any new progress can be made in the wake of the ASAT test. And since civil cooperation in space is largely a political exercise for the United States, withholding cooperation is also a method of political punishment. Indeed, U.S. National Security Council spokesman Gordon Johndroe told reporters on Jan. 18 that “The United States believes China’s development and testing of such weapons is inconsistent with the spirit of cooperation that both countries aspire to in the civil space area.”18 Likewise, military-to-military cooperation in space as a means of confidence-building – as called for by Gen. James Cartwright, head of U.S. Strategic Command last year19 – is now unlikely to get anywhere fast. Sen. Bill Nelson, D-Fla., the chairman of the Senate Armed Services strategic forces subcommittee that oversees military space spending, called a closed-door hearing on the Chinese test on Jan. 25, and reminded reporters that he has long been concerned about the transfer of U.S. technology to China that could allow it to become a space competitor.20 Christopher Padilla, assistant secretary for export administration at the U.S. Commerce Department, told reporters in Beijing on Jan. 25 that the test had contributed to distrust between the U.S. and Chinese governments. Padilla, who was in China to explain a proposed U.S. plan to heighten export controls on high technology to China, said: “I raised the point that the test is one more example of how a lack of transparency and clarity requires the U.S. to hedge its relations with China.”21 This is too bad, for both sides, in that such cooperation and confidence-building – even if baby steps – would work to improve understanding between Chinese and American space officials and help mitigate against future misunderstandings.

**[ ] US militarization is less threatening the Chinese – it is done openly and more safely with less debris**

**Mackey, 2009 - Air Force Institute of Technology [**Accessed on 6-21-11 Fall Birmingham- Southern College;; Deputy group commander at Eglin AFB, Florida -Air and Space Power Journal “US and Chinese Anti-satellite Activities” proquest]

Several notable differences distinguished the ASAT missions as well- for example, the altitudes of the satellites. Only a few days away from reentry into the atmosphere and potential impact with the surface, USA-1 93 orbited at a relatively low 247 kilometers at the time of its destruction, whereas Feng Yun-lC orbited at the significantly higher altitude of 864 kilometers. This 617-kilometer difference is important because of the time that the residual debris field will remain in orbit, posing a threat to other satellites. According to Geoffrey Forden, even residual segments from the USA-1 93 intercept that acquired a greater speed due to the collision will have an orbital perigee of 210 kilometers and should degrade in altitude, burning up in reentry far more rapidly than the remnants of Feng Yun-lC.30 Estimates for the debris from USA-1 93 indicate no remaining pieces in orbit after 40 days; meanwhile, modeling suggests that debris from Feng Yun may stay in orbit for up to 100 years.31 In an interview prior to the USA-1 93 shoot-down, Gen James Cartwright (USMC), vice-chairman of the Joint Chiefs of Staff, avowed that the US test launch differed from the Chinese launch, pointing out that the United States was providing the world advance notification of its launch and that the US intercept would occur at a very low orbital altitude to assure that no residual debris remained in long-term orbit.32 This difference in altitude also drove the size of the launch vehicle. Given the estimated six times greater mass of the Chinese kinetic-kill vehicle and the higher altitude, the DF21 /KT-I had a launch mass 20 times greater than that of the SM-3. Furthermore, the US missile relied upon the global positioning system (GPS) and inertial navigation system with radar guidance, whereas the DF-21/KT-1 employed an inertial navigation system with terminal radar guidance (table 3).

# Spending Responses

**[ ] Satellite hardening doesn’t cost much – small fraction of satellite costs**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

The FAS Panel is aware that some U.S. military satellites are being hardened adequately and recommends that hardening of individual military and commercial satellites, especially commercial satellites used by the military, be taken into account before the government puts them to any critical use. It is important to note that the GPS satellites, which are at 20,000-km altitude, are designed to survive a million-rad dose of total radiation over a 10-year lifetime. Moreover, the cost of shielding GPS satellites is reported to be 1% of the program cost. 37 The GPS constellation consists of 24 satellites, which are spread over different orbital planes at an altitude of 20,000 kilometers. To substantially degrade the GPS, the satellites have to be attacked individually, which is difficult to do. The satellites are also hardened against nuclear effects and have on-orbit spares. The robustness of the GPS constellation has been analyzed by Geoffrey Forden and is reported in Appendix D. The analysis shows that the GPS constellation is robust to the extent that it can lose up to four satellites and yet only suffer from periodic loss of function at any place. As stated earlier, this robustness makes the vulnerability of the GPS constellation to ASAT-type attacks rather small.

# Security Kritik Responses

**[ ] Aff best solves the Security Dilemma – China’s capabilities and intentions uniquely represent Genuine threats, A strong response is key to Clarity which avoids misperception, and the Kritik creates Inaction, which worsens the dilemma.**

**Kyl 2007 – US senator and Attorney.** [Jon Kyl. Published on February 1, 2007. Delivered on January 29, 2007. China's Anti-Satellite Weapons and American National Security. The Heritage Foundation. <http://www.heritage.org/Research/Lecture/Chinas-Anti-Satellite-Weapons-and-American-National-Security>. Accessed June 21]

QUESTION: I am a student from George Mason University School of Public Policy. We know that, in international relations, a so-called security dilemma often happens. The U.S. suspects the intentions of China, and China also suspects the intention of the U.S. So how can you give a solution to the security dilemma between the U.S. and China, and how can the two nations assure each other that they are not hostile to each other? SENATOR KYL: Probably no country more than China represents this dilemma today with respect to intentions as well as capabilities. It is in the United States' interest to have good relations with a grow­ing, freer, peaceful China, and we look for ways to try to foster that kind of a relationship and influence Chinese development along those lines. But China is a great power, a huge future powerhouse peopled with very smart, well-educated people with a very long history and a long-range view of things as com­pared to our very short-range view sometimes. There are clearly areas in which hostilities between the two countries could quickly become very serious, Taiwan being the most obvious. There are also important areas for both countries that sug­gest that cooperation between the two countries would be the best course of action, and I suspect that both countries are trying to manage this evolv­ing difficult relationship. The area in which I criticize our government is in being sometimes unwilling to speak truth to these issues. Sometimes trying to be too diplomatic cre­ates confusion and uncertainty, and in some areas you need clarity. I understand that in the diplomatic world, some­times you need lack of clarity as well. But when you're talking about two countries with military potential to hurt themselves, you better be pretty clear with each other. Second, I quoted Reagan: We've never had a problem in wars when we were too strong. It's when we've been perceived as being too weak, when we do not respond to potential challenges with strength, that we create the impression that it is pos­sible for a country to gain leverage over us by con­tinuing to push in the direction that they're pushing and that maybe the United States will not respond. Unfortunately, what happens too frequently with the United States is that we don't respond. We want to be left alone. We're all for peace. They clearly can't mean it. Maybe they can be appeased. And then, finally, when the other side has actually com­mitted itself to action adverse to the United States, we wake up to the threat and have to get engaged in a catch-up way, sometimes after a war has been declared against us, and it's too late to save a lot of the lives that could be saved otherwise. So it's better, I think, as you go along, to express our displeasure and to do things which clearly can be seen, by the Chinese in this case, as a serious effort on our part to defend ourselves in the event that the Chinese intentions are not benign and then, finally, to use all of the leverage that we have in dealing with a great country like China.

**[ ] Public debate on space military policy is essential – it pushes us past outdated ideas and refocuses the debate**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

The future of the United States is, in many ways, tied to the future development of space. One would think that, given the serious issues facing this development and the potential for conflict, the debate over this future would be widespread and vigorous. This is not the case. Even though a debate is occurring within limited political and military circles, it is not being addressed in any real depth on a national level. In the 1970s and 1980s, in the midst of an active Soviet space threat, the debate was loud, vigorous, and involved not only leading military officers, presidents, and congressmen, but many from the scientific and academic community as well. Significantly, it was also extremely well covered by the mainstream national media. The debate today lacks this national attention and committed involvement as evidenced by the lack of response to a major speech given at the Fletcher School of Diplomacy in November of 1998 by Senator Bob Smith, Chairman of the Strategic Forces Subcommittee of the Senate Armed Services Committee. In this speech, he proposed, in very strong terms, the need for space weapons and perhaps even the need for a separate space force to develop and operate these weapons. Media response to these radical and bold proposals was almost non-existent. For many weeks, the only media coverage to be found was in primarily defense-related periodicals such as Inside the Air Force.5 The first mainstream American newspaper to even mention this speech was the Washington Times when it published an editorial by James Hackett on January 11, 1999 (nearly two months after the speech).6 Even though Congress subsequently passed legislation, included in the Fiscal Year 2000 Defense Authorization Bill, which established a special commission7 to evaluate these proposals, the national media has still largely ignored the issue. But at least the debate is beginning. Unfortunately, the discourse thus far seems to focus on two very strong, opposing positions: the need for space weapons vs. the need to maintain space as a sanctuary. This should not be the focus. The focus should be on choices—choices that can help define the future of this nation, and the world, in space. Many aspects of conflict, certainly in the near term, can be assuaged without requiring the controversial development and use of space weapons—without military intervention in space. To do so, however, requires the aggressive implementation of other instruments of national power, specifically economic and political. This also has not occurred. General Richard B. Myers, Commander in Chief of the United States Space Command (CINCSPACE), said in a speech in early 1999, "Just as we can’t expect to successfully fight the next war with the equipment of the last war, we surely won’t see victory in the next war using the policies of the last war. To best prepare for the future, we have to energize our thinking too. We need that national debate on the existing policies and open questions affecting future military capabilities and possibilities in space. And we need resolution of that debate sooner rather than later."8 We are at the dawn of a new century. Now is the moment to be farsighted as we chart a path into the new millennium.

# Astropolitik Responses

**[ ] Offering concrete policy options for space militarization is critical to clarifying the public discourse – this avoids misperceptions and communication**

**Lambakis 2007, Senior Analyst for the National Institute for Public Policy** [Steven Lambakis. and Managing Editor, Comparative Strategy “Missile Defense from Space: A More Effective Shield.” Policy Review no. 141. February 1, 2007. <http://www.hoover.org/publications/policy-review/article/6124>. Accessed June 22, 2011.]

Congress should push the Bush Administration to begin studying the feasibility of integrating a space-based layer into the missile defense system. Experiments must be conducted if we are to determine whether space basing makes sense from an overall system point of view. Perhaps we will not get as much out of a space-based layer as we thought, or perhaps the cost will be too great. We need to settle these questions. We also need to take some of the technical challenges off the table. Can we do proper command and control? Can space-based sensors provide the data needed to discriminate target objects? How long can we keep interceptors loaded with solid propellant on-station in space? There are strong arguments for going to space, but we need to find out where truth lies. Once the technical questions are answered, it will be up to the critics of expanding military uses of space to explain why it is that the Earth’s orbits ought to be exempted from the logic of war and military competition that otherwise govern military behavior on land, at sea, and in the air. No nation has a right to deny our access to space to defend this country or promote economic prosperity. This has been understood for over 45 years, but I believe that the consequences of this statement have yet to be fully comprehended. With a debate in Congress over space-based missile defense interceptors, I believe we will finally be able to bring some clarity to the discussion of weapons in space. The positions we take in this argument will have consequences for space control and offensive strike weapons. The nation’s leaders should welcome this opportunity to grapple with an issue that is certain to affect the influence and power of the United States for the remainder of this century and beyond. There will be ambiguity and vacillation in our public discourse and lawmaking until we define a clear vision for the use of space and have established the right policies to support it. There is a strong case to be made for clarifying the options before us and for determining whether it makes sense to invest more in space defenses. Evolving the ballistic missile defense system to incorporate a layer that will allow us to better protect ourselves is logical. Should it become clear that space defenses would deliver an improved missile defense system, pursuing this course of action would also be a strategically prudent and morally desirable step to take.

**[ ] Public debate on space military policy is essential – it pushes us past outdated ideas and refocuses the debate**

**Hyten 2001 Director, Space Programs, Office of the Ass Secretary of the Air Force for Acquisition,** [4 January 01. Air & Space Power Journal . A Sea of Peace or a Theater of War: Dealing with the Inevitable Conflict in Space. Lt Col John E. Hyten. http://www.airpower.maxwell.af.mil/airchronicles/cc/Hyten.html Accessed June 21, 2011.]

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**[ ] US hegemony is the best option to lead humanity into space – Americans are less likely to abuse hegemonic power due to a systemic angst**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

Conclusions: Space weaponization is a critical and necessary component in the process of transformation well under way, a process that cannot be reversed. Once America demonstrated the capacity to strike precisely, it could only go back to the kind of indiscriminant targeting and heavy collateral damage that characterized pre-space warfare if it were engaged in a war of national survival. And if there are future technological, economic, and perhaps social benefits to -be derived from developing and deploying weapons, they will certainly not come from increasing the stock of current systems. They will only come, if at all, from the development of new, highly complex and scientifically heuristic space, stealth, precision, and information systems. As leader of the international community, the United States finds itself in the unenviable position that it must make decisions for the good of all. On the issue of space weaponization, there appears no one best option. No matter the choice selected, there are those who will benefit and those who will suffer. The tragedy of American power is that it must make a choice, and the worst choice is to do nothing. And yet, in the process of choosing, it has a great advantage—the moral ambiguity of its people regarding the use of power. There is no question that corrupted power is a dangerous thing, but perhaps only Americans are so concerned with the possibility that they themselves will be corrupted. They fear what they could become. No other state has such potential for self restraint. It is this introspection, this self-angst that makes America the best choice to lead the world today and tomorrow. It is not perfect, but perhaps it is perfectible. Perhaps the most important insight to come from a discussion of transformation in war is the notion that space weapons, along with the parallel development of information, precision, and stealth capabilities, presents in our era a true revolution in military affairs. As such, these technologies and capabilities will propel the world into an uncertain New Age. For better or worse, the future can be denied only by a spasm of nuclear nihilism. The states that move forward against the fears of the many, and harness these new technologies to a forward-looking strategy of cooperative advantage for all, have the potential to initiate humanities’ first global golden age. The very nature of space requires that the ultimate use of it must be both encompassing and incorporating, but the nature of international relations and the lessons of history dictate that it begin with the vision and will of a few acting in the benefit of all.

# China Threat Kritik Responses

**[ ] Discussing and planning for military capabilities in space is key to avoiding misperceptions of Chinese intentions due to their lack of transparency and threatening tests**

**O’Brian 2007 - Washington, DC correspondent for Wired News** [Luke, *Fanning Fears of a Space War*, Wired, <http://www.wired.com/science/space/news/2007/01/72563>, Accessed June 22, 2011]

Kulacki called much of the commission report unrealistic. But he also stressed that the secrecy of the Chinese government makes it impossible to fathom the intentions or abilities of an increasingly powerful and wealthy nation.

"There's a lot of confusion and lack of transparency on both sides," said Victoria Samson, a research analyst at the Center for Defense Information, a research group that tracks military programs. "China's actions over the past week or so have indicated the importance of sitting down and talking about what's going on in space." Other space-faring nations such as Russia, Japan and India were also rattled by the missile test. In space, China is a distant competitor to the United States, which owns more than half the satellites in the sky. But that hasn't dampened concern that the missile test could encourage a space arms race involving multiple countries. Or that the test will be used by "star warriors" to push an agenda that could heighten the risks of nuclear engagement.

**[ ] A lack of knowledge about Chinese intentions is a Reason to do plan – it means we must be ready for everything**

**Everett, 2008** [ Rep. Terry Everett, Alabama Republican, is ranking member on the House Armed Services Subcommittee on Strategic Forces Needed: strategy for space protection Washington Times; Lexis, Date Acessed: June 21 words January 11, ]

Second, we have long viewed the use of space as a privilege for all nations so long as that access is peaceful.This policy has existed since the Eisenhower administration and has been reinforced through subsequent international agreements. It is therefore unacceptable for any nation or non-state actor to have the power to "hold at risk" American satellite systems or any other nation's systems, thereby placing all of the commercial, civil and military uses of space at risk. China's anti-satellite (ASAT) weapon test was a stark reminder of a growing threat that we do not fully understand. The debris created from the test will have to be monitored in the future (the Air Force currently watches over 8,000 objects in space) and Chinese intent is unknown. Their actions are at odds with their assertion that the test was "peaceful." China continues to increase its ASAT inventory and expand its counterspace capabilities beyond ballistic missiles, according to the Pentagon's annual China military report. We can't assume satellites would be attacked only in times of war or only for military gains. Both Libya and Iran have disrupted satellite operations because they did not agree with TV broadcasts carried over communications satellites. Less than four percent of our nation's budget for national security space capabilities goes toward protection. This did not change after the ASAT test. Congress called for the secretary of defense and director of national intelligence to develop a comprehensive space protection strategy. It's purpose would be to guide what investments the nation should make to better understand the space environment and take specific actions to defend our satellites and our national security interests in space. I hope the president's budget for fiscal 2009 will request increased investment and a coherent strategy for space protection. Beyond the necessary budget increases, the Department of Defense must prepare for future challenges to our use of space and our available strategic options if China, or another nation, threatens our space capabilities. We need to understand the consequences of our space capabilities being destroyed or debilitated, and how we would adapt. Have we communicated our possible responses should the Chinese threaten our space systems? More importantly, do we know our own procedures should there be an attack in space? Our national space policy was written before this ASAT test occurred and it needs revision. Like other issues of the day, space protection demands international cooperation. The best pressure we can apply to China, and any others who might threaten our space capabilities, is multilateral pressure. We should be engaging the international community - our NATO allies are a good start - to put more pressure on China to explain its test and its intentions. This is an opportunity for the United States and our allies to lay claim to the peaceful use of space and put pressure on those who might have different intentions. It is frankly unacceptable that a year after this test, we still do not have a coherent explanation from China on why they destroyed the satellite in space. Given our reliance on space, we have no choice but to prepare for the worst-case scenario, particularly if China continues to refuse to engage and disclose its intentions.

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QUESTION: I am a student from George Mason University School of Public Policy. We know that, in international relations, a so-called security dilemma often happens. The U.S. suspects the intentions of China, and China also suspects the intention of the U.S. So how can you give a solution to the security dilemma between the U.S. and China, and how can the two nations assure each other that they are not hostile to each other? SENATOR KYL: Probably no country more than China represents this dilemma today with respect to intentions as well as capabilities. It is in the United States' interest to have good relations with a grow­ing, freer, peaceful China, and we look for ways to try to foster that kind of a relationship and influence Chinese development along those lines. But China is a great power, a huge future powerhouse peopled with very smart, well-educated people with a very long history and a long-range view of things as com­pared to our very short-range view sometimes. There are clearly areas in which hostilities between the two countries could quickly become very serious, Taiwan being the most obvious. There are also important areas for both countries that sug­gest that cooperation between the two countries would be the best course of action, and I suspect that both countries are trying to manage this evolv­ing difficult relationship. The area in which I criticize our government is in being sometimes unwilling to speak truth to these issues. Sometimes trying to be too diplomatic cre­ates confusion and uncertainty, and in some areas you need clarity. I understand that in the diplomatic world, some­times you need lack of clarity as well. But when you're talking about two countries with military potential to hurt themselves, you better be pretty clear with each other. Second, I quoted Reagan: We've never had a problem in wars when we were too strong. It's when we've been perceived as being too weak, when we do not respond to potential challenges with strength, that we create the impression that it is pos­sible for a country to gain leverage over us by con­tinuing to push in the direction that they're pushing and that maybe the United States will not respond. Unfortunately, what happens too frequently with the United States is that we don't respond. We want to be left alone. We're all for peace. They clearly can't mean it. Maybe they can be appeased. And then, finally, when the other side has actually com­mitted itself to action adverse to the United States, we wake up to the threat and have to get engaged in a catch-up way, sometimes after a war has been declared against us, and it's too late to save a lot of the lives that could be saved otherwise. So it's better, I think, as you go along, to express our displeasure and to do things which clearly can be seen, by the Chinese in this case, as a serious effort on our part to defend ourselves in the event that the Chinese intentions are not benign and then, finally, to use all of the leverage that we have in dealing with a great country like China.

**[ ] Chinese intentions are not assumed from capabilities – our arguments rely on Chinese military doctrine**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Despite the worldwide acknowledgement of China's recent tests, China's anti-satellite program can be characterized by a lack of transparency and conflicting public messages. In the immediate aftermath of the January 2007 test, Chinese officials provided a mixed public response that was several weeks late, indicating a lack of coordination between the civilian government and the People's Liberation Army who controls the anti-satellite program. While the civilian government likely approved the program, they probably did not fully understand the international implications of the test. Further, the aggressive anti-satellite program counters China's public calls for a global ban on space weapons. The threshold for Chinese use of anti-satellite weapons is hard to determine with certainty, although several Chinese military writers advocate using anti-satellite weapons preemptively to prevent the United States from entering a conflict. Colonel Li Daguang in 2001 's Space War states that "the offensive capability in space should, if necessary, be capable of destroying or temporarily incapacitating all enemy space vehicles that fly above our sovereign territory."? This view directly threatens LEO satellites that periodically pass over China and contradicts international law which permits ''unimpeded satellite overflight of other nations through space.,, Colonel Li Daguang further postulates that development of anti-satellites must be conducted covertly: "construction of such a unit [space force] should be carried out secretly by keeping a low profile." Colonel Yuan Zelu argues in 2005's Space War Campaigns that an early use of anti-satellite weapons may preclude United States action: "[the] goal of a space' shock and awe strike is [deter] the enemy, not to provoke the enemy into combat. For this reason, the objectives selected for strike must be few and precise." If Chinese anti-satellite weapons are not used at the outset of a conflict, they can be quickly negated by US precision strikes against launch sites and command and control centers. Based on the intended use of anti-satellite weapons, the lack of transparency, and Chinese writings, the United States must assume a Chinese anti-satellite strike at the outset of conventional hostilities, rather than being withheld until later, and thus must build an effective defensive capability to deter and recover.

**[ ] Even if we cannot know China’s intentions, that is because of a lack of transparency – this justifies military protection**

**Putnam, 2009 Maj. United States Air Force - Marine Corps Command and Staff College** [Christopher, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA510842&Location=U2&doc=GetTRDoc.pdf Countering the chinese threat to low earth orbit satellites: Building a defensive space strategyOMB No. 0704-0188

Of particular concern was the timing of the BX-1 test. The Chinese launched the BX-1 in close proximity to the International Space Station (ISS) and provided no warning. Although the test, however, ensured that the international community would take notice of the achievement. While the Chinese claim peaceful intentions for the BX-l, its dual use applicability easily makes this an effective anti-satellite weapon. The lack of transparency further Clouds the true intentions of the test. Unless China notifies the United States of its actions, many of these tests could go unnoticed. The United States cannot afford to believe the stated Chinese intentions and must develop its defense as if the BX-I is the precursor to an operational anti-satellite weapon.

**[ ] Perception of China as a threat is inevitable – ASAT tests**

**Kahn 2007 - Deputy Foreign Editor of the New York Times** [Joseph, *China Shows Assertiveness in Weapons Test*, New York Times, <http://www.nytimes.com/2007/01/20/world/asia/20china.html?pagewanted=1>, Accessed June 22, 2011]

Russia and China have advocated such a treaty, but President Bush rejected those calls when he authorized a policy that seeks to preserve “freedom of action” in space Chinese officials have warned that an arms race could ensue if Washington did not change course. At a United Nations conference in Vienna last June on uses of space, a Chinese Foreign Ministry official, Tang Guoqiang, called the policies of “certain nations” disconcerting. “Outer space is the common heritage of mankind, and weaponization of outer space is bound to trigger off an arms race, thus rendering outer space a new arena for military confrontation,” he said, according to an official transcript of his remarks. Even so, Mr. Pollack, of the Naval War College, said that if China hoped that demonstrating a new weapon of this kind would prompt a positive response in Washington, they most likely miscalculated. “Very frankly, many people in Washington will find that this validates the view of a China threat,” Mr. Pollack said. “It could well end up backfiring and forcing the U.S. to take new steps to counter China.”

**[ ] China is a growing threat – Anti-U.S policies and nuclear ambitions**

**Gertz 2010 – reporter at the Washington Post** [Bill, China rhetoric raises threat concerns: http://www.washingtontimes.com/news/2010/mar/5/harsh-words-from-chinese-military-raise-threat-con/print/, Accessed 6-24-11]

Recent statements by Chinese military officials are raising concerns among U.S. analysts that the communist government in Beijing is shifting its oft-stated "peaceful rise" policy toward an aggressive, anti-U.S. posture. The most recent sign appeared with the publication of a government-approved book by Senior Col. Liu Mingfu that urges China to "sprint" toward becoming the world's most powerful state. "Although this book is one of many by a senior colonel, it certainly challenges the thesis of many U.S. China-watchers that the People's Liberation Army's rapid military growth is not designed to challenge the United States as a global power or the U.S. military," said Larry M. Wortzel, a China affairs specialist who until recently was co-chairman of the congressional U.S.-China Economic and Security Review Commission. A Reuters report on Col. Liu's book, "The China Dream," appeared Tuesday in the Communist Party newspaper People's Daily. It quoted the book as stating China and the United States are in "competition to be the leading country, a conflict over who rises and falls to dominate the world." Mr. Wortzel said the statements in the book contradict those of former President Jiang Zemin and other Chinese leaders who said China's rise to prominence in the 21st century would be peaceful. They also carry political weight because the book was published by the Chinese military. The book was released after calls by other Chinese military officials to punish the United States for policies toward Taiwan, U.S. criticism of China's lack of Internet freedom and U.S. support for the exiled Tibetan leader Dalai Lama. One official, Maj. Gen. Luo Yuan, called for using economic warfare against the U.S. over arms sales to Taiwan and urged selling off some of China's $750 billion in holdings of U.S. debt securities. China's military also recently cut off military exchanges with the Pentagon after the announcement of a $6.4 billion sale of helicopters and missiles to Taiwan. Asked about Col. Liu's book, State Department spokesman P.J. Crowley said it would be wrong for China to view itself as a U.S. competitor. For the 21st century, U.S.-China relations are the most important ties in the world and "it is a mistake to see the relationship in zero-sum terms," Mr. Crowley said. Some U.S. officials in the past dismissed similar alarming statements from the Chinese military as not reflecting official views. However, Chinese leaders have not disavowed Gen. Luo's remarks or those of others, such as Maj. Gen. Zhu Chenghu, who in 2005 said China would use nuclear weapons against the United States in response to any firing of conventionally armed long-range cruise missiles against Chinese cities. The statement contradicted Beijing's declared policy of not using nuclear weapons first in a conflict. Gen. Zhu reportedly was criticized and demoted but surfaced in print Feb. 10, calling for increased defense spending and boosting military deployments in response to the Taiwan arms sale. China on Thursday announced that it would increase defense spending this year by 7.5 percent, a smaller increase than in previous years, in an apparent effort to limit criticism of its double-digit annual spending increases for more than a decade. The recent military statements also counter insistence by many U.S. officials that China's strategic intentions toward the United States are masked by the lack of "transparency" in the communist system. U.S. intelligence analysts, in analyses and estimates, also have dismissed or played down evidence of Chinese military deception to hide its true goals. They instead have said in classified reports that the use of strategic deception to hide China's military buildup is similar to masking efforts of Western powers. Critics of those analysts' "benign China" outlook say such views resulted in missing major strategic and military developments by China for more than a decade, such as new missiles, submarines and other advanced military hardware, some that were built in complete secrecy. The recent Chinese military statements have renewed the long-running debate in U.S. policy and intelligence circles about China's long-term military intentions and whether they pose threats to U.S. interests. Mr. Crowley said the U.S. is a global power and "will remain so for the indefinite future," while China is a rising global power moving to gradually integrate into the global system. Both countries "have a shared responsibility to cooperate where we can to solve critical international challenges, and manage areas where our national interests may collide," he said. Michael Pillsbury, a Pentagon policy official in the Reagan administration, said Chinese military authors have reignited a "nasty debate" in Washington on China. Mr. Pillsbury, author of two books on Chinese military views of the future, said some U.S. China hands tried to trivialize the nationalistic views because senior Chinese officials do not make such statements at official meetings with U.S. counterparts. "China's foreign minister once told the U.S. secretary of state that China has no intention of ever pushing the U.S. out of Asia," he said. Yet, "the Chinese military itself seems to function with considerable autonomy and no real civilian oversight, so it is plausible that these Chinese military hawks are not mere mavericks or fringe elements at all. Rather, their publications may be indicators of future Chinese programs that are veiled today," he said. For example, reports of China's development of a high-tech ballistic-missile design to attack aircraft carriers first surfaced 15 years ago but were dismissed by many analysts as implausible. U.S. naval intelligence sources, however, expect China to conduct a flight test soon of the new missile that increases the threat to U.S. warships in the western Pacific. Adm. Robert Willard, the new commander of the U.S. Pacific Command, added fuel to the debate last fall by highlighting intelligence shortfalls on Beijing's arms buildup. He told reporters that for more than a decade China "exceeded most of our intelligence estimates of their military capability." Earlier this year, Adm. Willard questioned Chinese assertions about a peaceful rise, saying they are "difficult to reconcile with new military capabilities that appear designed to challenge U.S. freedom of action in the region and, if necessary, enforce China's influence over its neighbors." He told the House Armed Services Committee Jan. 13 that the Chinese military buildup was "aggressive." For years, senior U.S. civilian and military officials, including Defense Secretary Robert M. Gates, have stated in public that they do not consider China a "threat" or an "enemy." Yet military statements like those of Col. Liu are making it difficult to continue those claims. "I don't think anyone who reads Col. Liu's work can honestly deny that it reflects a consensus mindset in the Chinese military and political leadership," said John Tkacik, a former State Department China hand. "There's no question that Col. Liu and other very influential and like-minded strategists ... are psychologically preparing the People's Liberation Army for confrontation with the United States." Richard Fisher, a China military analyst with the International Assessment and Strategy Center, said Col. Liu's book has helped the debate by "piercing the Beijing-Washington propaganda continuum of China's 'benign intent.'" Chinese Embassy spokesman Wang Baodong did not address the Chinese military statements but said Chinese leaders have said repeatedly that China seeks peaceful development. "China pursues a national defense policy of [a] defensive nature, will not engage ... in any arms race, and will never seek hegemony," he said.

# \*\*\*ADD-ONS\*\*\*

# Economy Add-On

**[ ] Space militarization is key to jobs and technological innovation**

**Pinkerton 2009 - Fellow at the New America** **Foundation** [James Pinkerton. January 14, 2009. Beam Us Up, Barack!. New America Foundation. Fox News.[http://newamerica.net/publications/articles/2009/beam \_us\_barack\_9943](http://newamerica.net/publications/articles/2009/beam%20_us_barack_9943). Accessed June 23, 2011]

There’s only one best way: Put space exploration at the center of the new stimulus package. That is, make space the spearhead rationale for the myriad technologies that will provide us with jobs, wealth, and vital knowhow in the future. By boldly going where no (hu)man has gone before, we will change life here on earth for the better. To put it mildly, space was not high on the national agenda during 2008. But space and rocketry, broadly defined, are as important as ever. As Cold War arms-control theology fades, the practical value of missile defense–against superpowers, also against rogue states, such as Iran, and high-tech terrorist groups, such as Hezbollah and Hamas–becomes increasingly obvious. Clearly Obama agrees; it’s the new president, after all, who will be keeping pro-missile defense Defense Secretary Robert Gates on the job at the Pentagon. The bipartisan reality is that if missile offense is on the rise, then missile defense is surely a good idea. That’s why increasing funding for missile defense engages the attention of leading military powers around the world. And more signs appear, too, that the new administration is in that same strategic defense groove. A January 2 story from Bloomberg News, headlined, “Obama Moves to Counter China With Pentagon-NASA Link,” points the way. As reported by Demian McLean, the incoming Obama administration is looking to better coordinate DOD and NASA; that only makes sense: After all, the Pentagon’s space expenditures, $22 billion in fiscal year 2008, are almost a third more than NASA’s. So it’s logical, as well as economical, to streamline the national space effort.

**[ ] Collapse in space would crush the global economy and American hegemony – precision and C3I**

**Dolman 2005, Associate Professor of Comparative Military Studies at the US Air Force School of Advanced Air and Space Studies** [Everett C. Dolman. “US Military Transformation and Weapons.” September 14, 2005. <http://www.e-parl.net/pages/space_hearing_images/ConfPaper%20Dolman%20US%20Military%20Transform%20%26%20Space.pdf>. Accessed June 24, 2011.]

No nation relies on space more than the United States—none is even close—and its reliance grows daily. For both its civilian welfare and military security, a widespread loss of space capabilities would prove disastrous. America’s economy, and along with it the world’s, would collapse. Its military would be obliged to hunker down in defensive crouch while it prepared to withdraw from dozens of then-untenable foreign deployments. For the good of its civilian population, and for itself, the United States military—in particular the United States Air Force—is charged with protecting space capabilities from harm and ensuring reliable space operations for the foreseeable future. As a martial organization, the Air Force naturally looks to military means in achievement of its assigned ends. And so it should. The United States has embarked on a revolutionary military transformation designed to extend its dominance in military engagements. Space capabilities are the lynchpin of this transformation, enabling a level of precision, stealth, command and control, intelligence gathering, speed, maneuverability, flexibility, and lethality heretofore unknown. This twenty-first century way of war promises to give the United States a capacity to use force to influence events around the world in a timely, effective, and sustainable manner. And this is a good thing, a true transformation from conflicts past.

**[ ] Object-tracking satellite system protects economy- communications satellites integral part**

**Ghoshroy 2004,** **Research Associate at MIT** [Subrata Ghoshroy. “Ensuring America’s Space Security: Report of the FAS Panel on Weapons in Space.” The Federation of American Scientists. September 2004. <http://www.fas.org/pubs/_pages/space_report.html>. Accessed June 22, 2011.]

One the United States' highest priorities should be to establish a fully spacebased network of satellites dedicated to tracking space objects. The recent addition of a space-based sensor to the NORAD space-tracking network has remarkably improved space awareness. Given the importance to the U.S. economy of communications satellites, this system should have the explicit requirement of scanning the entire space environment out to geostationary orbit at least once every 5½ hours, the time it takes for the transfer from a low-Earth "parking" orbit to a geostationary orbit. Such a system was analyzed by the Congressional Budget Office in 2000 and estimated to cost approximately $550 million over ten years, including operating costs.

**[ ] Space conflict will spill over to terrestrial impacts – it will devastate the global economy**

**Col Shaw, USAF 2009** BS, Astronautical Engineering, USAFA; MS, Astronautics, University of Washington; MA, Organizational Management, George Washington University; MS, National Security Strategy, National Defense University [Towards a New National-Security Space Strategy through an analysis of US Maritime Strategy, Air & Space Power Journal, Spring 2009,]

Thus, as described above, the United States requires an implementing national-security space strategy to accompany its national space policy. In fact this need is greater than ever before, driven and reinforced by four key trends in the current geopolitical environment with regard to space. The first and perhaps most dominant trend is the enhanced degree to which spaceborne and space-related capabilities *are now integrated into terrestrial activities*of all kinds. During the first few decades of human activity in space, the medium was much more a separate stage, one of more abstract political and strategic activity.11 That has changed quickly and dramatically; space has woven itself into the economic, sociocultural, and security fabrics of modern global society. In many ways, space capabilities are collectively the central nervous system of the global economy, delivering vital, information-based products (communications, imagery, precision navigation and timing, etc.) and underpinning economic infrastructure (banking, transportation, etc). In fact it is now essentially impossible to quantify how much human activity relies on space because it has cascaded into second- and third-order applications and beyond. Also, this intertwining of space and nonspace, particularly in the defense arena, has had the collateral effect of reshaping policy paradigms. The age-old debate over “weaponization of space” (which struggles even to define the basic terms *weaponization* and *space*, let alone shape the various positions around varying definitions) finds itself on the brink of obsolescence. Because treating the medium of space separately and distinctly from its terrestrial counterparts has become increasingly difficult, if not impossible, it is correspondingly almost impossible to practically discuss weaponization of space without the subject’s having embedded (and likely intractable) implications for terrestrial weapons and forces.12 This new and ever-increasing inseparability of activities in or through space and the terrestrial environment—whether political, economic, military, or some other form of activity—demands a corresponding, integrated space-security strategy.

# Middle East Peace Add-On

**[ ] Space militarization key to middle east peace – satellites monitor accords and missile defense prevents attacks**

**Pinkerton 2009 - Fellow at the New America** **Foundation** [James Pinkerton. January 14, 2009. Beam Us Up, Barack!. New America Foundation. Fox News.[http://newamerica.net/publications/articles/2009/beam \_us\_barack\_9943](http://newamerica.net/publications/articles/2009/beam%20_us_barack_9943). Accessed June 23, 2011]

So we, as a nation, might further consider the value of space surveillance and missile defense. It’s hard to imagine any permanent peace deal in the Middle East, for example, that does not include, as an additional safeguard, a significant commitment to missile and rocket defense, overseen by impervious space satellites. So if the U.S. and Israel, for example, aren’t there yet, well, they need to get there. Americans, who have often hoped that space would be a demilitarized preserve for peaceful cooperation, need to understand that space, populated by humans and their machines, will be no different from earth, populated by humans and their machines. That is, every virtue, and every evil, that is evident down here will also be evident up there. If there have been, and will continue to be, arms races on earth, then there will be arms races in space. As we have seen, other countries are moving into space in a big way–and they will continue to do so, whether or not the U.S. participates.

# Homeland Security Add-On

**[ ] Satellite surveillance is critical to homeland security**

**Best, 2011 – National Defense Expert at Congressional Research Service [** Richard Congressional Research Service, “Satellite Surveillance: Domestic Issues”, January 13 2011, Accessed June 26 2011, [*www.fas.org/sgp/crs/intel/RL34421.pdf*](http://www.fas.org/sgp/crs/intel/RL34421.pdf) *]*

Reconnaissance satellites, first deployed in the early 1960s to peer into denied regions of the Soviet Union and other secretive enemy states, have from time to time been used by civilian agencies of the federal government to assist with mapping, disaster relief, and environmental concerns. These uses have been coordinated by the Civil Applications Office at the U.S. Geological Survey, a component of the Interior Department. Post 9/11, the Bush Administration sought to encourage use of satellite-derived data for homeland security and law enforcement purposes, in addition to the civil applications that have been supported for years. In 2007, it moved to transfer responsibility for coordinating civilian use of satellites to the Department of Homeland Security. The initiative was launched, however, apparently without notification of key congressional oversight committees. Members of Congress and outside groups raised concerns that using satellites for law enforcement purposes may infringe on the privacy and Fourth Amendment rights of U.S. persons. Other commentators questioned whether the proposed surveillance will violate the Posse Comitatus Act or other restrictions on military involvement in civilian law enforcement, or would otherwise exceed the statutory mandates of the agencies involved. Such concerns led Congress to preclude any funds in the Consolidated Appropriations Act, 2008 (H.R. 2764, P.L. 110-161), from being used to “commence operations of the National Applications Office ... until the Secretary [of the Department of Homeland Security] certifies that these programs comply with all existing laws, including all applicable privacy and civil liberties standards, and that certification is reviewed by the Government Accountability Office.” (Section 525.) Similar language has been included in a subsequent Continuing Appropriations Act (P.L. 110-329) approved in September 2008. The Obama Administration conducted its assessment of the issue and terminated the NAO in June 2009, maintaining that there were better information sharing programs to meet the needs of state and local homeland security partners. Little public information is available concerning current policies for the use of satellite information for domestic purposes. This report provides background on the development of intelligence satellites and identifies the roles various agencies play in their management and use. Issues surrounding the current policy and proposed changes are discussed, including the findings of an Independent Study Group (ISG) with respect to the increased sharing of satellite intelligence data. There follows a discussion of legal considerations, including whether satellite reconnaissance might constitute a “search” within the meaning of the Fourth Amendment; an overview of statutory authorities, as well as restrictions that might apply; and a brief description of executive branch authorities and Department of Defense directives that might apply. The report concludes by discussing policy issues Congress may consider as it deliberates the potential advantages and pitfalls that may be encountered in expanding the role of satellite intelligence for homeland security purposes.

**[ ] Satellite surveillance is critical to intelligence activities – the CIA and NSA rely on remote sensing data**

**Best, 2011 – National Defense Expert at Congressional Research Service [** Richard Congressional Research Service, “Satellite Surveillance: Domestic Issues”, January 13 2011, Accessed June 26 2011, [*www.fas.org/sgp/crs/intel/RL34421.pdf*](http://www.fas.org/sgp/crs/intel/RL34421.pdf) *]*

The development of satellite reconnaissance systems is one of the major and enduring accomplishments of the U.S. Intelligence Community. Beginning in the Eisenhower Administration, officials in the Department of Defense (DOD) and the Central Intelligence Agency (CIA) developed “remote sensing” devices that would permit the gathering of accurate information on capabilities of potential enemies without entailing the risks of manned overflights or of covert agents. Satellite imagery undergirded U.S. strategic planning for a quarter century and a series of arms control agreements with the Soviet Union. In early years, film canisters were returned to earth and processed at ground stations for further dissemination. In the 1970s it became possible to forward data by electrical transmission directly to collection agencies. The efforts of intelligence agencies are focused abroad, and satellite passes were optimized to gather information on areas of interest, mostly in Europe and Asia. At the same time, satellites also passed over U.S. territory, and collection on domestic targets could be obtained as a “free good.” In addition, it was often necessary to undertake “engineering passes” by which technical specialists could compare imagery with data obtained directly from ground observation. Engineering passes provided detailed aerial photography of domestic sites. Declassified documents published by the National Security Archive indicate that as early as 1968 consideration was being given to provide images captured by intelligence satellites to civilian agencies on issues such as hydrology and oceanography, mapping, and emergency preparedness.1 In the mid-1970s, there was extensive concern about past efforts of the CIA and other agencies to monitor U.S. persons, and these concerns extended to reconnaissance satellites.2 The 1975 Rockefeller Commission (the Commission on CIA Activities Within the United States) reviewed the issues involved in domestic overhead photography and reported that the CIA, then in charge of most satellite efforts, had provided photography for mapping, assessing natural disasters, conducting route surveys for the Alaska pipeline, national forest inventories, determining the extent of snow cover in the Sierras to forecast the extent of runoff, and detecting crop blight in the Plains States. The Commission noted that it was possible that a small percentage of aerial photography was being used for law enforcement and was “outside the scope of proper CIA activity. The Commission believes, however, that the legislators, when they prohibited the CIA from engaging in law enforcement activities in the 1947 enactment of the National Security Act, could not have contemplated the systems presently in use.”3 In response to the Rockefeller Commission’s conclusions and other concerns, the Civil Applications Committee (CAC) was established in 1975 to serve as an interface through which the needs of civilian agencies for satellite data could be reviewed and prioritized. The CAC was created by a joint memorandum signed by the Assistant to the President for National Security Affairs, the Director of the Office of Management and Budget, and the Director of Central Intelligence. With a staff of some 10 officials, the CAC has provided the principal means of communication between civil users of intelligence capabilities and the providers in the Intelligence Community under the chairmanship of the Director of the U.S. Geological Survey, a component of the Interior Department, and there is a secretariat hosted by the Geological Survey.4

**[ ] Intelligence agencies use satellite data to track WMD transportation**

**Best, 2011 – National Defense Expert at Congressional Research Service [** Richard Congressional Research Service, “Satellite Surveillance: Domestic Issues”, January 13 2011, Accessed June 26 2011, [*www.fas.org/sgp/crs/intel/RL34421.pdf*](http://www.fas.org/sgp/crs/intel/RL34421.pdf) *]*

Although the precise capabilities of intelligence satellites are classified, they are known to have greater resolution than anything available in commercial markets, such as Google Earth, SPOT, or Landsat. Their usefulness would appear to be unquestionable for map-making and related civilian uses. Satellite information has continued to have important civil applications in such disparate areas as the movement of glaciers in Yakutat Bay in Alaska, forest fires in Montana, and near Mount Pinatubo in the Philippines. They are regularly relied on to provide coverage of environmental events. Information from intelligence satellites supplements other sources of overhead imagery available to government agencies—from NASA satellites, commercial satellites, or from manned aircraft or unmanned aerial vehicles (UAVs). Generally, satellite-derived intelligence is combined by the National Geospatial-Intelligence Agency (NGA) with information from airborne platforms, commercial imagery, and other information to meet the needs of military commanders and senior policy makers. The NGA employs a wide range of techniques to prepare mapping and elevation data, scene visualization, and situation analysis. Working through the CAC, the NGA has become a routine partner in disaster relief efforts such as those following the 2004 undersea earthquake and tsunami in the Indian Ocean and Hurricane Katrina in 2005, when the NGA provided graphics for “relief efforts that depicted the locations of major airports, police and fire stations, emergency operations centers, hazardous materials, highways and schools.”9 NGA argues that it “has a strong tradition of collaborating with colleagues across government, non-profit academia and industry arenas to exchange ideas, share best practices, display new GEOINT [geospatial intelligence] solutions and technologies and discuss potential tradecraft advances as they relate to GEOINT.”10 Thus, even though commercial data are available for procurement by any government agency, the NGA and other intelligence agencies believe that their experience and expertise will enable them to provide “value-added” information support to agencies responsible for homeland security and law enforcement. Satellites are also capable of supporting measurement and signature analysis (MASINT), which is an important, but little known, intelligence discipline, involving information derived from the analysis of radar, laser, infrared, and other emanations. MASINT could be useful for domestic applications in some circumstances; in particular, it might provide evidence of the existence and location of weapons of mass destruction (WMD) materials or WMDs themselves prepared or smuggled in by hostile individuals or groups. The capabilities that satellite-derived information might add to homeland security and law enforcement efforts are inevitably classified but could be investigated and assessed by congressional committees. The comparative advantages of intelligence satellites are that they can be targeted in an emergency (assuming no foreign intelligence requirements take precedence), their products are cost-free to the requesting agency, and their resolution is higher than what is otherwise available. On the other hand, they may not be available for civil use at a particular time—a prolonged international crisis or ongoing combat operations could significantly limit their availability for civilian uses. They do not “belong” to the civilian agency on a permanent basis. Furthermore, the extreme resolution of their imagery may be superfluous for the tasks at hand. It nevertheless remains uncertain exactly how much “value added” satellites would offer for homeland security and law enforcement purposes. Clearly, additional imagery sources could be useful in many situations, and sophisticated techniques for acquiring information about the presence of WMD materials would be highly valuable, albeit in extremely unlikely circumstances. What other uses would be important remain uncertain and cannot be determined on the basis of unclassified, public materials.

# India China Add-On

**[ ] India takes Chinese ASAT test as a threat – they will take steps to increase their own ASATs against China**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

And the most worrisome question of all – beside the potential for sparking a Sino-U.S. ASAT race – is whether China’s other rival nations, most specifically, India, will seek to react in kind. India’s media, predictably, has been harshly denouncing the Chinese test as a threat to India. “It threatens our own expanding civilian space assets, undermines the credibility of our nuclear deterrent, and exposes New Delhi's lack of a military space strategy,” the Indian Express newspaper said in an editorial on Jan. 20.41 M. Natarajan, science advisor to India’s Defense Ministry, said the government would be especially concerned if such Chinese missiles could “disable” satellites with military and/or navigation capabilities and told reporters that the Indian government is assessing “steps we need to initiate in this direction.”42 Unfortunately, the Chinese test comes amid a renewed push by the Indian Air Force to establish a military hold on Indian space policy and funding; a push that has been underpinned by Air Force lobbying regarding the “China threat.”43 There has been a steady drum-beat for a number of years regarding India’s need to compete in military space, including the development of ASAT weaponry. In April 2005, Chief Air Marshall S. P. Tyagi told reporters in New Delhi that India intends to set up a Strategic Air Command, in part to lay the groundwork for counter-space capabilities.44 His remarks echoed those of his predecessor, Srinivaspuram Krishnaswamy, made in October 2003, telling reporters that work on the command was aimed at deploying weapons in space: “Any country on the fringe of space technology like India has to work towards such a command as advanced countries are already moving towards laser weapon platforms in space and killer satellites.”45 While up to now, the Indian government has largely turned a deaf ear to Air Force advocacy, the Chinese ASAT test may turn the tide in its favor. When asked about India’s anti-satellite capabilities, Natarajan refused comment, but noted: “Maybe we need to talk to ISRO [Indian Space Research Organisation].”46

# Japan BMD Add-On

**[ ] Chinese ASATs will cause Japanese support for BMD**

**Hitchens 2007 – Director of World Security Institute’s Center for Defense Information** [Thersea, *U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space?*, cs5\_chapter2.pdf, Accessed June 21, 2011]

Likewise, the Chinese action may spur Japan not only to speed its efforts at developing missile defenses but possibly to develop military space capabilities. “It may fuel the argument that Japan should develop space technology for national defense, especially as it came in the midst of the North Korean nuclear crisis,” said Yasunori Matogawa, a professor of space engineering at the Institute of Space and Astronautical Science, part of the Japan Aerospace Exploration Agency.47 Japanese Prime Minister Shinzo Abe said Tokyo had demanded an explanation from the Chinese government; while Foreign Minister Taro Aso criticized Beijing for failing to give advance notice of the test which he doubted was for “peaceful use” of space.48 Japanese officials have continued to charge that the Chinese government has yet to give a full and credible account of the test and future plans.49

# \*\*\*\*MISC\*\*\*\*

# Lunar Mining Links

**[ ] Lunar mining motivates militarization to maintain a monopoly over the resources**

**Wolf 2004** [Jim, staffwriter for Reuters, U.S. Eyes Space as Possible Battleground [http://www.indiadivine.org/audarya/world-review/35659-u-s-eyes-space-possible-battleground.html accessed June 24](http://www.indiadivine.org/audarya/world-review/35659-u-s-eyes-space-possible-battleground.html%20accessed%20June%2024), 2011]

Theresa Hitchens of the private Center for Defense Information said the capabilities to conduct space warfare would move out of the realm of science fiction and into reality over the next 20 years or so. "At the end of the day it will be political choices by governments, not technology, that determines if the nearly 50- year taboo against arming the heavens remains in place," she concluded in a recent study. Outlining his election-year vision for space exploration last week, Bush called for a permanent base on the moon by 2020 as a launch pad for piloted missions to Mars and beyond. One unspoken motivation may have been China's milestone launch in October of its first piloted spaceflight in earth orbit and its announced plan to go to the moon. "I think the new initiative is driven by a desire to beat the Chinese to the moon," said John Pike, director of GlobalSecurity.org, a defense and space policy research group. Among companies that could cash in on Bush's space plans are Lockheed Martin Corp., Boeing Co. and Northrop Grumman Corp., which do big business with the National Aeronautics and Space Administration as well as with the Pentagon. The moon, scientists have said, is a source of potentially unlimited energy in the form of the helium 3 isotope -- a near perfect fuel source: potent, nonpolluting and causing virtually no radioactive byproduct in a fusion reactor. "And if we could get a monopoly on that, we wouldn't have to worry about the Saudis and we could basically tell everybody what the price of energy was going to be," said Pike. Gerald Kulcinski of the Fusion Technology Institute at the University of Wisconsin at Madison estimated the moon's helium 3 would have a cash value of perhaps $4 billion a ton in terms of its energy equivalent in oil. Scientists reckon there are about 1 million tons of helium 3 on the moon, enough to power the earth for thousands of years. The equivalent of a single space shuttle load or roughly 30 tons could meet all U.S. electric power needs for a year, Kulcinski said by e-mail. Bush's schedule for a U.S. return to the moon matches what experts say may be a dramatic militarization of space over the next two decades, even if the current ban on weapons holds.

**[ ] Moon mining will cause militarization of space to back up competing territorial and resource claims**

**Heinburg 2010 - American journalist and educator** [Richard, who has written extensively on ecological issues DIVIDING THE PIE IN THE SKY: THE NEED FOR A NEW LUNAR RESOURCES REGIME: <http://www.law.emory.edu/fileadmin/journals/eilr/24/24.1/Hatch.pdf>: Accessed 6-24-11]

There are two crucial points, however, that differentiate Antarctica from the Moon and that predict the failure of the OST regime once the Moon becomes a resource base that is readily accessible. First, Antarctica is not a true *res communes*. The Antarctic Treaty did not require states parties to disavow their territorial claims.210 Rather, it only barred the modification of the claims that were in existence in 1959.211 States not only still maintain their claims on Antarctic territory,212 but some have gone as far as to issue postage stamps in the name of their Antarctic territories to reassert the vitality of those claims.213 The impact of this perpetuation of territorial claims has been mitigated by other arrangements in the Antarctic Treaty System that severely limit the profitability of states exploiting their claims, such as the Protocol on Environmental Protection to the Antarctic Treaty,214 which has barred extraction of Antarctic resources until 2048.215 Additionally, Antarctica does not have the mineral or resource wealth of the Moon.216 For these reasons, Antarctica has not been worth developing, much less fighting over. Contrast this with the current dispute over the resource-rich Arctic—where states are trying to maintain assertions of territorial control to horde the energy resources beneath the seabed—and it is clear that where resources and profits are accessible, conflict surely follows. The historical conflicts over imperialist regimes and colonialism tend to suggest that when powerful states have an interest in amassing something that exists in large, previously un-owned quantities in one location, they will inevitably come into conflict with one another. States have a limited economic interest in the Antarctic,218 and so they are unlikely to invest military assets and the necessary financing to vindicate or broaden their claim to something that is not generating them any wealth. In contrast, states seem to believe that they have potentially great economic interests in the Moon and, accordingly may have a correspondingly large motivation to have conflicts over it. states will soon be converging on the Moon to reap the benefits that it may provide. Given the recent actions by the United States and China, and the spirit of conquest and competition that seems to be informing the current Moon rush, the vague and generic OST will not be able to sufficiently stop state conflict over the greatest economic opportunity in history.

# Space Colonies Links

**[ ] Space colonies will lead to space militarization- Threat of WMDs to defend land claims**

**Miller 2008 - Bachelor of Science at Worcester polytechnic institute** [ Joseph, Lunar properties and mining rights: http://www.wpi.edu/Pubs/E-project/Available/E-project-082708-113454/unrestricted/LunarMiningRightsFinal.pdf: Accessed 6-24-11]

This raises a striking comparison with the current Space Race. According to the OST, weapons of mass destruction are prohibited from entering space. Whiskey mixed with weapons, according to Howard, would have made the land rush much more belligerent than it turned out to be. If WMDs were used to back up property claims, the bright promise of the Second Space Race could turn very dark very quickly. The militarization of space could result in populations on Earth being held hostage to gain political advantages in space. One of the most important lessons to take away from the Oklahoma experience is that the Land Rush occurred with just about no rules whatsoever beyond how and where stakes were to be claimed. The only strictly enforced rule was that there was to be no alcohol present. However, there was a political entity with legal jurisdiction and the army and federal marshals were present to keep order. The 12:00pm start time was violated numerous times, most noticeably by the marshals who were charged with protecting the land from 'Sooners,' or people who left too soon to claim property. Upon arriving at the appropriate time, the settlers were dismayed to find that some of the most desirable claims already had been occupied for quite some time by these marshals. Howard makes note of this situation and comments that the only reason the settlers did not get violent was due to their assumption that the government would step 32 in and remove or punish the marshals who had abused their power. It was later found out that many of these marshals had even bribed their way into service specifically to get the prime locations. When it comes to policing the Moon and the Lunar Colonists, if a group gets illegitimate control on the South Pole or the police force (if any) it begins to claim other critical areas there will be a rapid increase in tension. Then violence could easily erupt out of political and economic rivalries fueling the space race.

# Asteroid Mining Links

**[ ] Asteroid mining can transform our space military**

**Ajey Lele, 2011 - a former Air Force Wing Commander, with a post graduate degree in Physics and Defence and Strategic Studies** [Date used: June 24, 2011 <http://www.indiandefencereview.com/military-&-space/Militarization-of-Space-.html> Militarization of Space]

There is an increasing awareness that in the years to come the world will witness another transformation in the conduct of war; its scope will be decided by the emerging RMA, which is significantly governed by space technologies. At the same time space technologies, which essentially covers a wide spectrum of technologies ranging from asteroid mining to rocket science to satellite operations to navigation to telemetry to reentry to artificial intelligence is a specialized field and very few nations possess it. Naturally, those possessing it have an asymmetric advantage over others in these capabilities.

# Realism Misc

**[ ] Realism doesn’t apply in Space – realism failed to predict superpower compromises over outer space.**

**Peterson 1997, Dept of Political Science, University of Massachusetts** [The Use of Analogies in Developing Outer Space Law Author(s): M. J. Peterson Source: International Organization, Vol. 51, No. 2 (Spring, 1997), pp. 245-274 Published by: The MIT Press Stable URL: http://www.jstor.org/stable/2703450 . Accessed: 22/06/2011 16:15]

Realist theorists of international relations would expect the superpowers to define the rules for outer space activity because, in 1957, only they had the capability to act in space. Realists would also expect the superpowers to insist on rules allowing considerable room for unilateral action, particularly in the security realm. Accep- tance of external constraints on state action, whether in the strong form of creating an intergovernmental organization for space exploration or the weak form of mutual monitoring of activity and enforcement of rules would be unlikely in the realist view. Rather, cooperation would be limited, and cooperative ventures would follow the lines of interbloc division. These expectations stem from the basic assumptions of realist theory, which treats states as egoistic rational utility maximizers and assumes that ability to influence outcomes is directly related to a state's capability relative to that of others. Particularly in its more structuralist neorealist versions, realist theory assumes that states derive their utility functions not from any internal source but from the overriding desire to survive and thrive in a severely competitive environment that imposes steep costs on those who fail to act in conformity with competitive necessities. Assuring survival in such a milieu requires maintaining or augmenting power and paying careful attention to relative position. Realists expect, in consequence, that states will seek to maximize freedom to pursue their own policies and forgo cooperative activity if the benefits seem likely to be distributed in ways that permit rivals to improve their relative positions. Current rules for and patterns of outer space activity do conform in many respects to these expectations. Outer space law permits states wide discretion in initiating, continuing, dispensing with, and defining all forms of outer space activity. Joint activity is common, but formally organized multilateral ventures are confined to the European Space Agency, the Soviet bloc Intercosmos program, and the global and regional telecommunications satellite consortia. Even the "global" consortia-the U.S.-led Intelsat and the Soviet-led Intersputnik-reflected bloc divisions until the mid-1970s. These divisions were first overcome with creation of Inmarsat, a specialized venture in ship-to-shore communications. Yet realist expectations are indeterminate at crucial points. In particular, a realist would not have been able to predict whether outer space would be treated as a common area or as something to be "conquered" and parceled out among space- faring states. Both conceptions of space were advanced in the early 1950s; some commentators compared space to the high seas, while others compared it to national airspace. Had the superpowers agreed on one conception and other states on the other, the selection would pose no puzzle for realist theory: the superpowers could simply have imposed their preferences by agreeing between themselves and acting accordingly. However, the superpowers initially disagreed, with the U.S. government preferring the high seas conception and the Soviet government the national airspace conception. Resolution of this disagreement poses a puzzle that cannot be explained using only the resources of realist theory, because neither superpower was in a position to coerce (much less impose on) the other.4 When imposition or coercion is not possible, political actors have to bargain to a compromise or converge through mutual persuasion on a consensus. Compromise involves trade-off, which in the space case would have involved each superpower accepting some elements of the other's preferred conception in return for the other's acceptance of some elements of its own. Persuasion involves offering arguments that bring others to share the same set of presuppositions, assumptions, logic, and conclusions. The development of outer space law did involve moments of compro- mise, but the decision to treat space as a commons involved a clear choice of one conception over the other, an outcome that depended on the Soviet government's shift to accepting the high seas conception. The process by which convergence occurred can be traced in some detail because outer space law was developed in a well-documented multilateral negotiation.

# UnDecided

**[ ] US Space-security policy can mirror the Maritime Environment model**

**Col Shaw, USAF 2009** BS, Astronautical Engineering, USAFA; MS, Astronautics, University of Washington; MA, Organizational Management, George Washington University; MS, National Security Strategy, National Defense University [Towards a New National-Security Space Strategy through an analysis of US Maritime Strategy, Air & Space Power Journal, Spring 2009,]

Given that we need a coherent national-­security space strategy now more than ever, what strategic direction should it endorse, what should it encompass, and what kinds of ends, ways, and means should it employ? Are there any models to draw inferences from, especially ones that acknowledge some of these same geopolitical developments and resultant challenges mentioned above? The *maritime environment* may hold some answers or, at the very least, provide an initial framework for strategic thought. Parallels exist between the space and maritime mediums.15 Ontological similarities include relative vastness, inhospitability to human habitation, and nearly homogeneous topology except for sparse scatterings of “terrain” defined more by their intersection with other domains than by their own features (e.g., littoral areas for the seas, the geosynchronous belt [defined by its orbital alignment with terrestrial rotation] for space). The two mediums also share conceptual similarities: both are widely seen and accepted as global commons and as more abstract, connective mediums linking more tangible regions of terra firma. Beyond the ontological and conceptual similarities—and most relevant for discussion here—a practical convergence of geopolitical challenges can certainly inform responses to security issues in both arenas. The defining geopolitical factors described above regarding space have their direct counterparts in the maritime domain. Just as space faces the trends of increased integration with other domains, the proliferation of actors, shared navigation hazards, and competition for scarce resources, so does the maritime environment confront similar challenges: (1) greater interconnectedness via globalizing dynamics, (2) increasing numbers and types of maritime actors, (3) heightened navigation challenges in increasingly crowded seas, and (4) intensifying competition for coveted maritime regions and resources. Wayne P. Hughes gives an example: “Going beyond long-standing disputes over fishing rights, in recent years the competition for seabed mineral resources has led to broad claims of ocean ‘ownership’ that increasingly will threaten freedom of navigation and breed maritime confrontation.”16 If there is a convergence in terms of strategic issues and challenges for both the seas and for space, can there also be a similar convergence in strategic responses? How is the United States addressing national-security issues in the maritime environment? And how can this inform possible approaches to a US national-security space strategy? In the fall of 2007, the US chief of naval operations, along with the commandants of the Marine Corps and Coast Guard, released a new maritime security strategy entitled *A Cooperative Strategy for 21st Century Seapower*.17 This new strategy first identifies the “challenges of a new era,” highlighting all of the factors identified above regarding the maritime environment: increasing and more diverse maritime activity that undergirds the global economy, a growing number of transnational actors, shared security challenges, and so forth. It then identifies six key tasks (also called strategic imperatives) for maritime security: (1) “limit regional conflict with forward deployed, decisive maritime power,” (2) “deter major power war,” (3) “win our Nation’s wars,” (4) “contribute to homeland defense in depth,” (5) “foster and sustain cooperative relationships with more international partners,” and (6) “prevent or contain local disruptions before they impact the global system.” Declaring that it will implement these imperatives through forward presence, deterrence, sea control, power projection, maritime security, and humanitarian assistance / disaster response, the strategy concludes with three implementation priorities: “improve integration and interoperability,” “enhance awareness,” and “prepare our people.”18 But what are the overarching themes or principles woven into this new maritime strategy that transcend the maritime environment and suggest applicability to the space domain? Are there broader currents of thought that might translate into similar arguments for a space-security strategy? The first such overarching theme—one that serves as the foundation for the rest of the strategy—entails an evaluation of the current global strategic context that recognizes the globalized interconnectedness of the world: “Because the maritime domain . . . supports 90% of the world’s trade, it carries the lifeblood of a global system that links every country on earth.”19 Moreover, it affects not only economies but also “human migration patterns, health, education, culture, and the conduct of conflict.”20 Robert Rubel, involved in the early development of the maritime strategy, describes this as a “big idea” that developed during gaming activities to develop the strategy, adding that the “existing global system of trade and security . . . provided both the context for the new strategy and the intellectual glue that tied together all regions of the world.”21 A second overarching theme unequivocally emphasizes sea power as an essential means to deter, fight, and win the nation’s wars. No reader of the new maritime strategy can help noticing the primary focus on “the use of sea power to influence actions and activities at sea and ashore” and a mandate that “seapower will be globally postured to secure our homeland and citizens from direct attack and to advance our interests around the world.”22 The first four of the six key tasks or strategic imperatives in the strategy (listed above) concentrate on the direct application of sea power; central to this primary focus is the need for effective sea control since “the ability to operate freely at sea is one of the most important enablers of joint and interagency operations.”23 Rubel describes this as the “war-winning power” dimension of the strategy.24 A third key theme deals with recognition that an important function of sea power involves contributing to the maintenance of stability and international law: “Our challenge is to apply seapower in a manner that protects U.S. vital interests even as it promotes greater collective security, stability and trust. . . . Maritime forces enforce domestic and international law at sea.”25 In a sense, this theme unifies the first two, demonstrating that, in the interconnected global system, sea power can be used not only to project military power in wartime but also to maintain order and assist in prevention of war since “the creation and maintenance of security at sea is essential to mitigating threats short of war.”26 A fourth theme—the one that has received the most attention since the strategy’s release—describes the new emphasis on the cooperative approach, acknowledging that the United States cannot conduct effective global maritime security (especially as described in the third theme, above) on its own since “we also join navies and coast guards around the world to police the global commons and suppress common threats. . . . No one nation has the resources required to provide safety and security throughout the entire maritime domain.”27 Indeed, the word *cooperative* is part of the very title of the document. The first of the strategy’s three implementation priorities—to “improve integration and interoperability,” mentioned above—clearly intends to enhance such cooperation. Rubel describes this theme within the strategy as “catalytic” as opposed to “coercive” or “brute force,” aimed at “cooperating to protect the global system.”28 A closely related fifth theme recognizes the need for enhanced awareness, which holds that “there must be a significantly increased commitment to advance *maritime domain awareness*” (emphasis in original).29 Again, cooperation is necessary to achieve a safe level of transparency so that “new partnerships with the world’s maritime commercial interests and the maritime forces of participating nations will reduce the dangerous anonymity of sea borne transport.”30 Lastly, in the course of this analysis, it is prudent to ask whether the maritime strategy got it right. Did it miss any major themes or concepts? In the short time since its release, the strategy has also undergone scrutiny and received some criticism. Former Navy secretary John Lehman (who produced the last enduring maritime strategy in the 1980s) declares it a “bravura performance” but observes that it lacks a fourth implementation priority, “Field the Right Gear,” which would translate the broader imperatives into better defined capabilities.31 (In fairness, Rubel explains that, to avoid an early degeneration into an equipment debate, “the strategy project banned any discussion of force structure.”)32 Also, retired rear admiral William Pendley suggests that the strategy lacks proper prioritization and focus, “fails to differentiate clearly and prioritize present-day threats,” and similarly “lacks even a prioritization of capabilities.” In particular, he points to a lack of discussion on sea basing, which he sees as imperative if the United States is to maintain a global maritime presence.33 In light of this review of the new maritime strategy, and against a geopolitical backdrop that presents similar security challenges in both mediums, some basic principles to inform an effective national-security space strategy can follow. First, although I have noted the increased integration of space activities with terrestrial ones, it would be helpful for a new space strategy to recognize, as the maritime strategy does, that its integration *is part of a broader globalized framework and context of increasing interconnectedness and interdependence* that transcends technologies and economics—and that it involves “human migration patterns, health, education, culture, and the conduct of conflict,” mentioned above. In fact, I argue that such recognition of omnipresent interconnectedness is even more important for space, which, due to its global nature, has the capability to directly and more immediately affect*all*terrestrial regions—in a sense, its littoral areas are everywhere. This also suggests that space, like the seas, actually *enables* globalization through the connectivity and capabilities it delivers around the world.