# \*\*WDCA Space Aff\*\*

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### File Notes

This affirmative argues that the United States should use diplomacy with China to increase cooperation over outer space activities, specifically over removing space debris. Space debris is trash that is orbiting in space that could potentially collide with satellites and make outer space unusable. It is an enormous problem that threatens both United States and Chinese satellites.

The status quo prevents the United States and China from cooperating over civil space activities, due to a law called the Wolf Amendment, which bans NASA from cooperating with Chinese scientists. The affirmative plan would lift that ban to allow scientists from both countries to work on solutions for tracking and removing space debris.

The first advantage claims that because the United States and China don’t formally cooperate over space, they don’t share information about either country’s space program and they fear that each program could be used for military uses. Space technology is dual use – which means most technology can be used for both military and civilian purposes. For example, the GPS on your phone was developed by the Department of Defense for the purpose of moving troops accurately. The affirmative claims that the lack of cooperation has increased mistrust between the United States and China, and that this mistrust may result in conflicts in space that could cause war. The affirmative solves this because increasing civilian cooperation will increase dialogue and transparency over each country’s space program, and will reassure them that the other country’s intentions are benign.

The second advantage claims that the United States refusal to cooperate with China undermines its leadership in outer space internationally. The United States is not seen as a credible leader because it is not willing to work with one of the largest space programs in the world. This cost on leadership means that the international community is far less likely to listen to the United States on cleaning up space debris or forming arms control agreements on outer space activities. The affirmative solves this both by working directly with China to clean up space debris, but also by increasing the credibility of US diplomacy on a global scale.

### Glossary

Arms Race: A competition between two or more parties to have the best armed forces. Each party competes to produce larger numbers of weapons, greater armies, superior military technology, etc. in a technological escalation.

Anti-Satellite Weapons (ASAT): Space weapons designed to incapacitate or destroy satellites for strategic military purposes.

Balance of Power: The balance of power theory in international relations suggests that national security is enhanced when military capability is distributed so that no one state is strong enough to dominate all others.

Bright Line: A clearly defined rule or standard, composed of objective factors, which leaves little or no room for varying interpretation.

Civil Space Program: A non-military space program.

China National Space Administration (CNSA): The national space agency of the People's Republic of China.

Counterspace: Space activities designed to counter another state’s outer space presence. (Space Policy Online)

De Facto: A Latin expression that means "in fact, in reality, in actual existence, force, or possession, as a matter of fact.” In law, it often means "in practice but not necessarily ordained by law."

Department of Defense (DOD): An executive branch department of the federal government of the United States charged with coordinating and supervising all agencies and functions of the government concerned directly with national security and the United States Armed Forces.

Dual Use Technology: Products and technologies normally used for civilian purposes but which may have military applications.

Flashpoint: An area or dispute that has a strong possibility of developing into a war.

Geostationary Orbit: A circular orbit 35,786 kilometres (22,236 mi) above the Earth's equator and following the direction of the Earth's rotation. An object in such an orbit has an orbital period equal to the Earth's rotational period (one sidereal day) and thus appears motionless, at a fixed position in the sky, to ground observers. Communications satellites and weather satellites are often placed in geostationary orbits, so that the satellite antennas (located on Earth) that communicate with them do not have to rotate to track them, but can be pointed permanently at the position in the sky where the satellites are located.

Global Commons: The earth's unowned natural resources, such as the oceans, the atmosphere, and space. (Google Dictionary)

Global Positioning System (GPS): A global navigation satellite system (GNSS) that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

Hypervelocity Kinetic Kill Systems: A type of space weapon that attacks a planetary surface with an inert projectile, where the destructive force comes from the kinetic energy of the projectile impacting at very high velocities. The concept originated during the Cold War.

### Glossary

Inter-Agency Space Debris Coordination Committee (IADC): An international governmental forum for the worldwide coordination of activities related to the issues of human-made and natural debris in space. (IADC Online)

International Space Station (ISS): An international habitable space station. The ISS serves as a microgravity and space environment research laboratory in which crew members conduct experiments in biology, human biology, physics, astronomy, meteorology, and other fields. Numerous countries participate in the project.

Militarization: The process by which a society organizes itself for military conflict and violence.

Multipolar: An international system in which more than two states are dominant.

National Aeronautics and Space Administration (NASA): An independent agency of the executive branch of the United States federal government responsible for the civilian space program as well as aeronautics and aerospace research.

Nuclear Deterrence: A theory which holds that nuclear weapons are intended to deter other states from attacking with their nuclear weapons, through the promise of retaliation and possibly mutually assured destruction (MAD).

People’s Liberation Army (PLA): The armed forces of the People's Republic of China.

Proximity Operations: The phase of a rendezvous in which one spacecraft approaches the other at a distance of less than 1,000 meters.

Rendevous: An orbital maneuver during which two spacecraft, one of which is often a space station, arrive at the same orbit and approach to a very close distance, often for one space station to dock at another.

Satellite: An artificial object which has been intentionally placed into orbit.

Space Debris: The collection of defunct human-made objects in space – old satellites, spent rocket stages, and fragments from disintegration, erosion, and collisions – including those caused by debris itself.

Statutory: Required, permitted, or enacted by statute. (Google Dictionary)

Unilateral: An action performed by or affecting only one person, group, or country involved in a particular situation, without the agreement of the others. (Google Dictionary)

Unipolar: An international system in which one state is dominant.

Wolf Amendment: An amendment passed in 2011 that bars all researchers from the U.S. National Aeronautics and Space Administration (NASA) from working bilaterally with Chinese citizens affiliated with a Chinese state enterprise or entity.

Xi Jinping: President of the People's Republic of China.

\*\*All definitions sourced from Wikipedia, unless otherwise noted

# 1AC – Space

### 1AC – Inherency

#### Contention One is Inherency:

#### The Wolf Amendment created a statutory ban on civil space cooperation with China

Jie, 16 – staff for Global Times (Kou, “Experts say Sino-US space collaboration is likely to stay sci-fi” Global Times, 5/26, http://www.globaltimes.cn/content/985361.shtml

In the 2015 sci-fi box office smash The Martian, China and the US, supposedly space rivals, have buried the hatchet and jointly pushed mankind deeper into outer space than ever before, a scenario which experts say is highly unlikely in the short term. At an event hosted by the Mitchell Institute on Washington DC's Capitol Hill on Monday, Administrator Charles Bolden of NASA said he hopes the US can someday cooperate with China in manned space exploration, though he himself admitted that this dream may not be realized during his tenure, as the US government currently bans NASA from cooperating with Chinese scientists, according to Voice of America (VOA). "We were in an incredible Cold War with the Soviets at the time we flew Apollo-Soyuz (a US-Soviet joint space project)……I think we will get there [with China] and I think it is necessary," Bolden was quoted as saying by the VOA. Though the remarks do suggest the possibility of a future thaw in tensions between the two nations in space cooperation, experts believe that the current distrust is not going anywhere soon. "Space technologies can be used for military purposes, while astronautic and aeronautics weapons will play a great role in future wars. Due to the countries' national interests, the US and China still face difficulties in space cooperation," Huang Jun, a professor at the School of Aeronautic Science and Engineering at Beihang University, told the Global Times. Cooperation stonewalled According to a law passed by the US Congress in 2011, NASA is prohibited from engaging in bilateral agreements and coordination with China, hosting Chinese visitors at its facilities or working with researchers affiliated to any Chinese government entity or enterprise. "China and the US had some space cooperation in the 1980s, but there was no substantial progress afterwards. Nowadays, even some ordinary academic conferences can be restrained [by the law]," Huang said. The law has frustrated not only Chinese scientists, but also their US counterparts. In 2013, NASA faced fierce backlash from US researchers after it cited the law and rejected applications from Chinese nationals who wanted to attend a conference at the agency's Ames Research Center in California on the grounds of national security. "Space cooperation between the US and China is still a sensitive topic. US law bans Chinese scientists from cooperating with NASA, but NASA personnel are also not allowed to enter Beijing's aerospace town while their European counterparts can," an insider told the Global Times. Aerospace City, one of the world's top aerospace centers, is in Beijing's northwestern outskirts. Tensions between the US and China have pushed the latter to find other partners, which has led to the development of relatively close relations with Russia and Europe on space cooperation in recent years. "China and Europe have been working together towards deeper space exploration cooperation as highlighted by joint projects such as Double Star, a satellite-based space mission conducted by the China National Space Administration and the European Space Agency, which has had a great deal of scientific achievements," Pang Zhihao, a Beijing-based aerospace expert, told the Global Times, adding that the two organizations have also cooperated in data exchange. China and Russia have also cooperated, mainly focusing on manned space flight including spacesuit technologies, Pang said, "From the perspective of science, mutual communication and cooperation on space technologies can help the two countries learn from each other and push mankind deeper in the space," Huang said, adding that ideology shouldn't hinder Sino-US cooperation. Possible approaches "One of the main reasons for US reluctance cooperate with China is because of the latter's relatively low technological level. The US fears that China may study its technologies to close their gap," Hung said. Frank Wolf, a former US legislator who was instrumental in passing the law to hinder the two countries' space cooperation, was quoted as saying by Science Magazine that "the US doesn't want to give China the opportunity to take advantage of US technology, and the US has nothing to gain from dealing with them." "Though China has achieved a lot in space technology in recent years, it still has a long way to catch up with the US," Huang said, adding that China should improve its own technological level first. "The US and Russia's space cooperation can serve as an example, as both countries have advanced space station technologies," Huang said. "As space technologies become more sophisticated and expensive in the future, international collaboration is needed to share the load, which can also improve the utilization of the scientific achievements," Huang added.

### 1AC – Relations Advantage

#### Contention Two is Space Cooperation:

#### Isolating China in space is counterproductive: it drives China to challenge the international order through space militarization.

Daniels, 16 - Laura Daniels works at a leading Washington, D.C., think tank where she specializes in U.S. foreign policy and grand strategy. She holds a Master of Public Administration in International Security Policy from Columbia University (“Look Up, America: China Is Playing By Its Own Rules in Space” The National Interest, 2/18, http://nationalinterest.org/blog/the-buzz/look-america-china-playing-by-its-own-rules-space-15248

That China is pushing back against the U.S.-led international order is no secret. Beijing is exerting pressure through various avenues: duplicating the architecture of the international order, bolstering its military capacity and challenging access in the global commons. While much attention has been focused on China’s pursuits in the Asia Pacific and within the global economic system, Beijing is also advancing its interests in the stars above. Take for example China’s plans for a manned space station. Due largely to counterproductive U.S. legislation, China has been barred from participating in the International Space Station. Rather than call it quits, Beijing has resolved to make its own station instead. If this sounds familiar, it’s because China has reacted in the same way when denied inclusion as an equal in prominent international institutions on Earth. The textbook example of this is China’s launch of the Asian Infrastructure Investment Bank (AIIB) following the U.S. Congress’s refusal to allow Beijing a greater say in the International Monetary Fund, a mainstay of the Western-led international order. Experts believe Chinese motivation for the space station is their unmet desire to be accepted as a major power that sets the rules on the world stage, which echoes the motivation analysts infer for the AIIB. And as with the AIIB, which attracted fifty-seven founding nations, including close U.S. allies, the Chinese space station is pulling major powers into Beijing’s orbit. The European Space Agency and others have already voiced interest and signed preliminary cooperation agreements. Also significant is China’s buildup of its military capability, a key component of its potential to exert influence over the international order. This has extended into Earth’s orbit, where China has advanced its anti-satellite (ASAT), command and control, and intelligence technology, in line with a military doctrine that underscores the importance of parity in space. This has strong implications for the United States and the international order it undergirds, as U.S. superiority in the “ultimate high ground” of space gives the American military a technological edge that is indispensable on the modern battlefield. With growing military capacity comes the ability to contest freedom of movement in the global commons. In the expansive global commons of outer space, China’s ASAT technology affords it an increasing ability to deny access and disrupt assets critical to the global economy. While these same developments unfolding in the South and East China Seas are of more immediate concern, free movement of satellites within space is vital, contributing to approximately $1.6 trillion of U.S. commercial revenue. The prescription for dealing with Chinese pressure on the international order is much the same in space as on land: build on the order’s strengths, and adjust it for an increasingly multipolar environment. The United States should pursue cooperation with China on benign space research to better integrate China as a partner in the established order and to afford U.S. security strategists a window into Chinese decision making and intentions. The State Department’s recent cooperation initiative is a step in the right direction. Simultaneously, the United States should promote deterrence by improving on an array of resilience and counterspace abilities, but without growing alarmism—after all, often cited as the greatest threat to national security in space is floating junk. Finally, reviving the political will to maintain U.S. leadership in space and abroad will be a boon to national security. All this will help ensure that destabilization of the international order doesn’t fly over our heads.

### 1AC – Relations Advantage

#### The risk of a space war is high and it will cause global conflict

Billings 15 space journalist, written and published five books about space exploration; (Lee Billings; “War in Space May Be Closer Than Ever,” Scientific American; August 10, 2015; <http://www.scientificamerican.com/article/war-in-space-may-be-closer-than-ever/>

The world’s most worrisome military flashpoint is arguably not in the Strait of Taiwan, the Korean Peninsula, Iran, Israel, Kashmir or Ukraine. In fact, it cannot be located on any map of Earth, even though it is very easy to find. To see it, just look up into a clear sky, to the no-man’s-land of Earth orbit, where a conflict is unfolding that is an arms race in all but name. The emptiness of outer space might be the last place you’d expect militaries to vie over contested territory, except that outer space isn’t so empty anymore. About 1,300 active satellites wreathe the globe in a crowded nest of orbits, providing worldwide communications, GPS navigation, weather forecasting and planetary surveillance. For militaries that rely on some of those satellites for modern warfare, space has become the ultimate high ground, with the U.S. as the undisputed king of the hill. Now, as China and Russia aggressively seek to challenge U.S. superiority in space with ambitious military space programs of their own, the power struggle risks sparking a conflict that could cripple the entire planet’s space-based infrastructure. And though it might begin in space, such a conflict could easily ignite full-blown war on Earth. The long-simmering tensions are now approaching a boiling point due to several events, including recent and ongoing tests of possible anti-satellite weapons by China and Russia, as well as last month’s failure of tension-easing talks at the United Nations. Testifying before Congress earlier this year, Director of National Intelligence James Clapper echoed the concerns held by many senior government officials about the growing threat to U.S. satellites, saying that China and Russia are both “developing capabilities to deny access in a conflict,” such as those that might erupt over China’s military activities in the South China Sea or Russia’s in Ukraine. China in particular, Clapper said, has demonstrated “the need to interfere with, damage and destroy” U.S. satellites, referring to a series of Chinese anti-satellite missile tests that began in 2007. There are many ways to disable or destroy satellites beyond provocatively blowing them up with missiles. A spacecraft could simply approach a satellite and spray paint over its optics, or manually snap off its communications antennas, or destabilize its orbit. Lasers can be used to temporarily disable or permanently damage a satellite’s components, particularly its delicate sensors, and radio or microwaves can jam or hijack transmissions to or from ground controllers. In response to these possible threats, the Obama administration has budgeted at least $5 billion to be spent over the next five years to enhance both the defensive and offensive capabilities of the U.S. military space program. The U.S. is also attempting to tackle the problem through diplomacy, although with minimal success; in late July at the United Nations, long-awaited discussions stalled on a European Union-drafted code of conduct for spacefaring nations due to opposition from Russia, China and several other countries including Brazil, India, South Africa and Iran. The failure has placed diplomatic solutions for the growing threat in limbo, likely leading to years of further debate within the UN’s General Assembly.

### 1AC – Relations Advantage

#### Increasing engagement over civil space will spill over to create a stronger overall relationship, preventing war through miscalculation

Weeden, 15 - Brian Weeden is the Technical Advisor for Secure World Foundation and a former U.S. Air Force Officer with sixteen years of professional experience in space operations and policy (“An Opportunity to Use the Space Domain to Strengthen the U.S.-China Relationship” 9/9, <http://nbr.org/research/activity.aspx?id=602>

The U.S.-China relationship in space has the potential to be a stable foundation for a stronger overall relationship between the two countries. Space was arguably a stabilizing element in the relationship between the United States and Soviet Union during the Cold War by providing national capabilities to reduce tensions and an outlet for collaboration. Although the future of the U.S.-China relationship will be characterized by both competition and cooperation, taking concrete steps to stabilize relations in space can be part of the solution to avoiding the “Thucydides trap,” where an established power’s fear of a rising power leads to conflict. The Role of Space in the U.S.-China Relationship Space is a critical domain to the security of the United States. Space capabilities enable secure, hardened communications with nuclear forces, enable the verification and monitoring of arms control treaties, and provide valuable intelligence. Such capabilities are the foundation of the United States’ ability to defend its borders, project power to protect its allies and interests overseas, and defeat adversaries. The space domain, however, is currently experiencing significant changes that could affect the United States’ ability to maintain all these benefits in the future. A growing number of state and nonstate actors are involved in space, resulting in more than 1,200 active satellites in orbit and thousands more planned in the near future. Active satellites coexist in space along with hundreds of thousands of dead satellites, spent rocket stages, and other pieces of debris that are a legacy of six decades of space activities. As a result, the most useful and densely populated orbits are experiencing significant increases in physical and electromagnetic congestion and interference. Amid this change, China is rapidly developing its capabilities across the entire spectrum of space activities. It has a robust and successful human spaceflight and exploration program that in many ways mirrors NASA’s successes in the 1960s and 1970s and is a similar source of national pride. Although it still has a long way to go, China is developing a range of space capabilities focused on national security that one day might be second only to those of the United States. Some of China’s new capabilities have created significant concern within the U.S. national security community, as they are aimed at countering or threatening the space capabilities of the United States and other countries. The massive changes in the space domain and China’s growing capabilities have affected the U.S.-China relationship in space. There is growing mistrust between the two countries, fueled in part by their development and testing of dual-use technologies such as rendezvous and proximity operations and hypervelocity kinetic kill systems. This mistrust is compounded by a misalignment in political and strategic priorities: China is focused on developing and increasing its capabilities in the space domain, whereas the United States is focused on maintaining and assuring access to its space capabilities. Recommendations for Managing Tensions and Promoting Positive Engagement Despite these challenges and concerns, there are concrete steps that the United States and China can take to manage tensions and possibly even work toward positive engagement. In 2011, President Barack Obama and then Chinese president Hu Jintao issued a joint statement on strengthening U.S.-China relations during a visit by President Hu to the White House. As one of the steps outlined in the statement, the two presidents agreed to take specific actions to deepen dialogue and exchanges in the field of space and discuss opportunities for practical future cooperation. President Xi Jinping’s upcoming visit presents an opportunity to build on the 2011 agreement and take steps toward these goals. The first step should be to have a substantive discussion on space security. President Obama should clearly communicate the importance that the United States places on assured access to space, U.S. concerns with recent Chinese counterspace testing, and the potential negative consequences of any aggressive acts in space. Both countries should exchange views on space policies, including their interpretations of how self-defense applies to satellites and hostile actions in space. Doing so can help avoid misunderstandings and misperceptions that could lead either country to unwittingly take actions that escalate a crisis. Second, Presidents Obama and Xi should discuss specific ideas for cooperation in civil and scientific space activities and the use of space for peaceful applications on earth. Continuing to exclude China from civil space cooperation will not prevent it from developing its own capabilities; this approach will only ensure that China cooperates with other countries in space in a way that advances its own national interests and goals. Space weather, scientific research, exploration, capacity building for disaster response, and global environmental monitoring are all areas where the United States and China share joint interests and could collaborate with each other and other interested countries to help establish broader relationships outside the military realm. <<card continues>>

### 1AC – Relations Advantage

<<card continues>> In addition, the United States should take steps on its own to stabilize the relationship. First and foremost, it should get serious about making U.S. space capabilities more resilient. Increasing resilience would support deterrence by decreasing the benefits an adversary might hope to achieve and also help ensure that critical capabilities can survive should deterrence fail. While resilience has been a talking point for the last few years, the United States has made little progress toward achieving the goal. Radical change is thus needed in how Washington develops and organizes national security space capabilities. Moreover, the United States should embrace commercial services to diversify and augment governmental capabilities, while encouraging allies to develop their own space capabilities. Second, the United States should continue to bolster the transparency of space activities by increasing the amount of space situational awareness (SSA) data available to satellite operators and the public. Greater transparency reinforces ongoing U.S. and international initiatives to promote responsible behavior in space and also helps mitigate the possibility for accidents or naturally caused events to spark or escalate tensions. Shifting responsibility for space safety to a civil agency that can share and cooperate more easily with the international community and working with the international community to develop more publicly available sources of SSA data outside the U.S. government are two steps that would enhance trust, improve data reliability, and reinforce norms of behavior. The consequences of not addressing the current strategic instability in space are real. A future conflict in space between the United States and China would have devastating impacts on everyone who uses and relies on space. Both the United States and China have acknowledged the dangers of outright conflict and have pledged their interest in avoiding such an outcome. Taken together, the initial steps outlined here could help stabilize the U.S.-China strategic relationship in space, mitigate the threat of the worst-case scenario, and work toward a more positive outcome that benefits all.

### 1AC – Leadership Advantage

#### Contention Three is the Leadership Advantage:

#### The refusal to cooperate with China over civil space destroys United States space leadership internationally. That means the United States is far less effective at achieving its space agenda, including debris cleanup and multilateral space arms control

Johnson-Freese, 15 - Johnson-Freese is a Professor of National Security Affairs at the U.S. Naval War College (Joan, Testimony before the U.S.-China Economic & Security Review Commission “China’s Space & Counterspace Programs”, 2/18, <http://www.uscc.gov/sites/default/files/Johnson%20Freese_Testimony.pdf>)

The question of whether China is challenging U.S. leadership in space has received considerable media attention in the form of a U.S. – China “space race,” prompted largely by perceptions of declining U.S. space leadership. The U.S. civil space program is not dying, military space activities continue to expand, and no country is doing anything in space that has not already been done by the United States. But having started with such a spectacular accomplishment as the Apollo Program, it has been difficult to maintain the public enthusiasm required to fund further space spectaculars, such as a human spaceflight mission to Mars. Although not completely unsupportive, the U.S. public treats the space program as expendable to other government programs. The reality is that space, as with other areas of international relations, will likely be a multipolar environment in the future.42 America’s unipolar moment is over, and as long as it is reluctant to work with rising partners such as China, the perception of its space leadership will continue to decline as well. That is not to say that the United States will not continue to lead in some areas of space activity. If only by virtue of a heftier budget, the United States will be able to lead in select areas. But the days of total leadership are over. It will be a tough pill to swallow for those who crave exceptionalism— but if we are unwilling to pay the price tag, then swallow it, we must.43 In that respect, China has not “usurped” the perception of U.S. space leadership, it is being ceded to them. This rebuttal to Congressman Wolf’s views assumes that the United States has a choice regarding whether or not to work with China. If, however, sustainability of the space environment upon which the U.S. generally and the U.S. military specifically relies upon for advantages is to be maintained, the space debris issue alone requires that the U.S. not exclude diplomacy as a policy option. While missile defense/ASAT testing has been conducted in ways to minimize debris issues since 2007, the potential threat to the space environment in non-test circumstances has become clear. If there was any upside to the 2007 Chinese test, it was the frightening realization by all countries of the fragility of the space environment. With regard to China specifically, since this 2007 test China has done nothing further in space that can be considered irresponsible or outside the norms set by the United States. Mankind’s dependence on space assets thereby makes it in the best interests of all spacefaring nations to cooperate to maintain that environment. China was scheduled to host an international meeting of the Inter-Agency Space Debris Coordinating Committee (IADC) only days after its 2007 ASAT test that significantly worsened space debris, resulting in China cancelling the meeting out of embarrassment. There is a certain (understandable) glee in the U.S. military, which has the most sophisticated government space tracking abilities, at being able to warn China of potential collisions between its own space junk and its own satellites.44 More recent constructive Chinese involvement with the IADC indicates recognition of need to sustain the space environment and cooperated on relevant issues, particularly the space debris issue.45 These are the type of “common ground” issues that provide opportunities to work with all spacefaring nations to protect the “congested, contested and competitive” space environment. U.S. emphasis on counterspace is often presented as in response to actions and intentions of other countries, specifically China, presumably recent. Increasingly, however, it seems speculation about Chinese intentions is based on material not publically shared, making the feasibility of both the speculation and appropriate U.S. responses difficult to assess. For example, to my knowledge China has done nothing since its admittedly irresponsible 2007 ASAT test that goes beyond what the U.S. considers international norms of responsible behavior. Pursuing efforts to enhance transparency, confidence-building measures, toward identifying “common ground among all space-faring nations,” and resiliency for military systems (NSSS, p.8) all must be pursued with the same energy and commitment as counterspace operations. Otherwise, just as efforts to isolate Chinese space activities have backfired on the U.S. in areas such as export control, the unintended consequences of a principally “deter, defend, defeat” strategy could trigger an arms race that puts the sustainability of the space environment at significant risk, to the detriment of U.S. national security. With regard to the resilience, specifically the purview of the Department of Defense (DOD) and Office of the Director of National Intelligence (ODNI), resilience has faced resistance from elements within as being too expensive or, as with space arms control, just too difficult.46 The Air Force appears to be taking the time honored approach of studying the problem rather than acting on it. Center for Strategic and Budgetary Assessments analyst Todd Harrison characterized part of the problem as a lack of interest on the part of Pentagon leaders. He stated, “While everyone recognizes space as a critical enabler for the war fighter at all levels of conflict, from low to high end, it is not the sexy weapon system that puts hot metal on a target. <<card continues>>

### 1AC – Leadership Advantage

<<card continues>> So it doesn’t attract much interest from senior leaders.”47 Counterspace, however, offers that sexy option. Regarding transparency, the need to share information about satellite locations was recognized by the private satellite owners and operators, promoting the formation of the Space Data Association. At the government level, Space Situational Awareness (SSA) efforts have largely been to “formalize the existing model of one-way data flow from the American military to other countries and satellite operators”48 and the U.S. signing bi-lateral agreements with France49 and Japan, and the U.S., United Kingdom (U.K.), Canada and Australia signing a limited agreement in 2014.50 While U.S. efforts to provide collision-avoidance information to other countries – including China – are admirable, as an increasing number of countries place an increasing number of satellites in orbit, improving current techniques and increasing collaboration and cooperation on exchanges of information must be aggressively pursued. And while the U.S. has rhetorically supported the European led efforts toward an International Code of Conduct, continued Congressional restrictions regarding bilateral U.S.-China space cooperation sends a powerful signal regarding U.S. seriousness regarding its intent to work with all space faring nations for the good of the space environment. Anything less than a comprehensive effort to constructively deal with issues related to the “space commons” can yield limited success at best. Regardless of various interpretations of Chinese intent, the United States must pursue all policy goals of the NSS, NSP and NSSS. That will inherently involve working with China in some areas, and pursuing a full range of approaches to policy goals. The sustainability of the space environment is as key to protecting assets as is protecting assets from hostile actions. They are inherently intertwined. Policies attempting to constrain, contain and control Chinese space activities have been repeatedly demonstrated of limited value. The most viable way for the U.S. to stay ahead of China in space capabilities is to focus on what it does have control over; its own programs. Funding, acquisition processes, strengthening the industrial base, cultivating and supporting science, technology, engineering and math (STEM) education programs and opportunities, resilience and broad based research and development will yield as much or more gain toward achieving U.S. space policy goals are key in the regard. To summarize, the U.S. cannot “control” Chinese space ambitions; even influence is limited. Nor can the U.S. “control” space in the same way that it can control airspace. Yet space is a global commons the sustainability of which is critical to U.S. national security. Consequently, cooperation with China in areas of shared interests is in the best interests of U.S. national security. In order to protect U.S. assets and achieve stated U.S. goals, all approaches stated in the nested U.S. space strategies must be pursued with equal attention. Full implementation of U.S. space strategies is the prudent way forward.

#### US-China space cooperation is key to space debris management and preventing catastrophic collisions

Anzaluda and Dunlop 15- Anzaluda worked for 16 years with the Foreign Service of the U.S. State Department where he carried out diplomatic and science-related world, President of the Tucson Chapter of National Space Society, docent for the Planetary Science Institute. Dunlop is Chair of the National Space Society International Committee and former NSS Board of Directors, Co-founding Editor Moon Miner’s Manifesto India Quarterly and To the Stars International. (Al Anzaluda and David Dunlop; “Overcoming non-technical challenges to cleaning up orbital debris,”; The Space Review; November 9, 2015; <http://www.thespacereview.com/article/2863/1>)

There is nothing for the US and other countries to lose and much to gain by reaching out to Russia to clean up orbital debris. The same goes for reaching out to China, which has recently signed agreements with Russia regarding cooperation in space (Song 2015). Although the 2011 Wolf amendment effectively bars NASA from engaging in bilateral space agreements with China, there is growing debate over whether that legislation is counterproductive and should therefore be overturned (David 2015). For dealing with either country, provisions of the International Traffic in Arms Regulations (ITAR) may also need also to be addressed. Continuing to exclude China from civil space cooperation will not prevent it from developing its own capabilities (Weeden 2015). Space weather, scientific research, exploration, disaster response, and global environmental monitoring are areas where the US and China could collaborate with each other and other interested countries in a way that would lower tensions while achieving positive gains (Weeden 2015). No country alone can affordably clean up enough debris to remove the threat of catastrophic collisions, and both Russia and China are key players in cleaning up orbital debris. We therefore recommend that the United States actively seek to include both countries in its international, public-private efforts to clean up orbital debris. To facilitate cooperation with China, we also recommend that the US Congress repeal the 2011 Wolf amendment, which bars the use of federal funds by NASA to conduct bilateral science exchanges with China. Instead, Congress might consider the option of limiting science exchanges to areas of overwhelming common interest, such as orbital debris, planetary defense, and space weather. Facilitating remediation of current and future orbital debris The worldwide space community, and the public it serves, needs national and international entities to cooperatively generate policies and guidelines for orbital debris cleanup. From the standpoint of international law, existing and future operating spacecraft and debris are the responsibility of each spacefaring government (Treaty 1967). Therefore, to honor this responsibility in matters of remediating existing or future debris, we recommend that the White House create by executive order a new national entity called the Space Traffic Management Executive Committee (STM ExCom) to carry out space debris cleanup in collaboration with analogous entities in spacefaring countries worldwide.

### 1AC – Leadership Advantage

#### Space debris risks catastrophic chain reactions that will collapse the global economy

Dillow, 10 – staff writer for Popular Science (Clay, “PENTAGON: A SPACE JUNK COLLISION COULD SET OFF CATASTROPHIC CHAIN REACTION, DISABLE EARTH COMMUNICATIONS” Popular Science, 5/27, <http://www.popsci.com/technology/article/2010-05/dod-space-junk-tipping-point-collision-could-set-catastrophic-chain-reaction>

Every now and again someone raises a stern warning about the amount of space junk orbiting Earth. Those warnings are usually met with general indifference, as very few of us own satellites or travel regularly to low Earth orbit. But the DoD's assessment of the space junk problem finds that perhaps we should be paying attention: space junk has reached a critical tipping point that could result in a cataclysmic chain reaction that brings everyday life on Earth to a grinding halt. Our reliance on satellites goes beyond the obvious. We depend on them for television signals, the evening weather report, and to find our houses on Google Earth when we're bored at work. But behind the scenes, they also inform our warfighting capabilities, keep track of the global shipping networks that keep our economies humming, and help us get to the places we need to get to via GPS. According to the DoD's interim Space Posture Review, that could all come crashing down. Literally. Our satellites are sorely outnumbered by space debris, to the tune of 370,000 pieces of junk up there versus 1,100 satellites. That junk ranges from nuts and bolts lost during spacewalks to pieces of older satellites to whole satellites that no longer function, and it's all whipping around the Earth at a rate of about 4.8 miles per second. The fear is that with so much junk already up there, a collision is numerically probable at some point. Two large pieces of junk colliding could theoretically send thousands more potential satellite killers into orbit, and those could in turn collide with other pieces of junk or with satellites, unleashing another swarm of debris. You get the idea. To give an idea of how quickly a chain reaction could get out hand consider this: in February of last year a defunct Russian satellite collided with a communications satellite, turning 2 orbiting craft into 1,500 pieces of junk. The Chinese missile test that obliterated a satellite in 2007 spawned 100 times more than that, scattering 150,000 pieces of debris. If a chain reaction got out of control up there, it could very quickly sever our communications, our GPS system (upon which the U.S. military heavily relies), and cripple the global economy (not to mention destroy the $250 billion space services industry), and whole orbits could be rendered unusable, potentially making some places on Earth technological dead zones.

#### That risks global war

Moore, 9—research fellow with the Independent Institute and a former editor of the Bulletin of the Atomic Scientists, is the author of Twilight War: The Folly of U.S. Space Dominance, published last year by the Independent Institute (Mike, “Space Debris: From Nuisance to Nightmare,” February 12th,

<http://www.foreignpolicy.com/articles/2009/02/11/space_debris_from_nuisance_to_nightmare>)

A nightmare scenario: The United States continues to work on its defensive ASAT systems. China and Russia do the same to counter U.S. capabilities. India and Japan put together their own individual systems. Ditto for Pakistan, if it survives as a coherent country. Israel follows suit, as does Iran. In a time of high tension, someone preemptively smashes spy satellites in low-earth orbits, creating tens of thousands of metal chunks and shards. Debris-tracking systems are overwhelmed, and low-earth orbits become so cluttered with metal that new satellites cannot be safely launched. Satellites already in orbit die of old age or are killed by debris strikes. The global economy, which is greatly dependent on a variety of assets in space, collapses. The countries of the world head back to a 1950s-style way of life, but there are billions more people on the planet than in the 50s. That's a recipe for malnutrition, starvation, and wars for resources.

### 1AC – Leadership Advantage

#### Space debris collisions could destroy nuclear deterrence and risk accidental war

Bowlby 15-, journalist for BBC specializes in space; “Could a war in space really happen?” Chris Bowlby; BBC; December 19, 2015 <http://www.bbc.com/news/magazine-35130478>

Millions have been enjoying the Hollywood version of conflict in distant parts of the universe as the new Star Wars film is released. It's enjoyable escapism - space conflict is, after all, nothing to do with reality. Or is it? According to military analyst Peter Singer of the New America Foundation, "the idea of… fighting in space was once science fiction and now it's real". Space wars may not involve intergalactic empires or spacecraft zapping each other. If they occur they are likely to be focused on things that matter hugely to all of us - satellites. They are more and more crucial to the way we lead our lives. They help us tell the time or draw money from a bank, or work out where to go using a smartphone or satnav. And for the modern military too, life without satellites would be a nightmare. They are used for targeting weapons, or finding things that need targeting in the first place. They form the US military's "nervous system", according to Singer, used for 80% of its communications. And this includes the communications central to nuclear deterrence. There has to be an "absolutely reliable" communications channel at all times between US nuclear forces and the president, says Brian Weeden, a former US intercontinental ballistic missile launch officer. "The thinking was you might have nuclear detonations going off and you might have to co-ordinate some kind of a responsive strike." The satellites designed to secure these communications - and to detect any possible nuclear attack - sit in geostationary orbit high above earth in what was thought until recently to be a kind of sanctuary, safe from any attack. No longer, thanks to a Chinese experiment with a missile in 2013 which reached close to that orbit, some 36,000km above the Earth. In a rare public statement earlier this year Gen John Hyten of US Space Command expressed his alarm at the implications of these Chinese tests. "I think they'll be able to threaten every orbital regime that we operate in," he told CBS news. "We have to figure out how to defend those satellites. And we're going to." It's not the first time that the prospect of a conflict waged in space has suddenly presented itself as a frightening possibility. In 1983 US president Ronald Reagan launched his Strategic Defence Initiative, widely known as Star Wars, proposing the development of space-based weapons to defend against Soviet missiles. This marked a dramatic new phase as it suddenly appeared that space power could undermine the delicate balance of superpower weaponry on earth. One Soviet response was to begin thinking about how to target US satellites in a time of war. Bhupendra Jasani of King's College London, a veteran observer of space security, says the Soviets "actually launched an anti-satellite weapon test in orbit... they were actually playing a nuclear war scenario. That if there is a war we will knock down the spy satellites, we will knock down the communications satellites and the rest of them". Today's China, he suggests, is thinking along similar lines. And today's world - with only one military superpower, the US - is far more unpredictable than it was in the 1980s, according to Brian Weeden. "There was a tacit understanding between the US and Soviet Union that an attack on specific satellites that could disrupt and disable nuclear command and control or the ability to warn about an attack would be seen as a de facto nuclear attack. That served to deter both sides from attacking satellites," he says. "There are now more incentives for a potential adversary, such as China, to attack satellites or disable them as part of a conventional conflict [because] they know full well that space capabilities are at the core of the US's ability to project power." In this climate of suspicion there is also a risk of accidental damage to key military satellites - caused perhaps by space junk or debris - being interpreted as a hostile act. China's 2007 test destruction of a satellite created thousands of tiny fragments circulating in space, which could potentially collide with another satellite. "Debris is sometimes so small you can't even track (it)," says Jasani. "So if a part of the debris hits a sensitive satellite you will never know if it was debris or deliberate. Military reaction is to take the worst case scenario - that it was hit by somebody else. And that's a trigger point."

### 1AC – Plan

#### Thus, we propose the following plan: The United States federal government should substantially expand its engagement over civil space cooperation, including over joint space debris removal, with the People’s Republic of China.

### 1AC – Solvency

#### Contention Four is Solvency:

#### An active debris removal project should be the starting point for US-Sino space diplomacy. That creates the foundation for sustainable space dialogue that reduces the risks of miscalculation and nuclear launch

Hitchens, 16 - Theresa Hitchens is a senior research scholar at the University of Maryland’s Center for International and Security Studies at Maryland (CISSM) and former director of the United Nations Institute for Disarmament Research (UNIDIR) (“Toward a New National Security Space Strategy: Benefiting from Entanglement with China” China-US Focus, 6/28, <http://www.chinausfocus.com/peace-security/toward-a-new-national-security-space-strategy-benefiting-from-entanglement-with-china/>

As China becomes increasingly dependent on space assets, it organically becomes entangled in the responsibilities of a space-faring nation with a growing stake in containing and abating space debris. China irresponsibly contributed to the space debris issue with its 2007 anti-satellite (ASAT) weapon test that exponentially increased the debris in orbit. Subsequently though, on more than one occasion the U.S. Air Force provided China with warnings, through the State Department, of a potential debris collision with a Chinese satellite, warnings China never acknowledged. But in 2014 China took the unprecedented step of requesting a direct link with U.S. Air Force Space Command for collision warnings. Clearly, China has recognized the debris hazard as a peril to all space faring nations, including itself, thereby giving China a vested interest in working with others toward prevention and abatement. China is a member of the Inter-Agency Space Debris Coordinating Committee (IADC) that has created guidelines for prevention. A bilateral (or multilateral) active removal project could be a useful step forward for both countries toward addressing an acknowledged threat to space assets, and through entanglement create a need for consistent communication between the U.S. and China regardless of externalities. The benefits of communication are maximized when it takes place at multiple levels. High level, strategic communication ideally provides opportunities for decision-makers to clearly convey their “bright lines.” As we point out in our Atlantic Council strategy paper, if China is unaware of what constitutes U.S. “bright lines” regarding negative behavior in space, during either peacetime or wartime, the risk of unwanted escalation grows. As an example, the Defense Department’s 2016 report to Congress on Chinese military power states that China may be considering using counterspace capabilities to target U.S. early warning and navigation satellites. If true, it shows that there is an enormous misunderstanding by China of the importance to the United States of early warning satellites in the nuclear kill chain—something even the Soviet Union understood, hence the mutual ban on attacking these assets embedded in US-USSR bilateral nuclear-arms-control agreements. Communication at lower levels allows both parties to learn the parameters within which their counterparts operate and make decisions, something that has been especially difficult for the United States because of Chinese cultural and political opacity. Because space technology is largely dual use, the United States is too-often left speculating on Chinese motivations and intentions, often assuming worst-case scenarios which spin-up security dilemmas with accompanying unwinnable arms races. The learning process through working-level communication is accelerated when parties are not just talking, but actually have to work together toward shared goals, such as is the case with the ISS. With station operations run through both Moscow and Houston, communication and cooperation are required. Entanglement also creates stakeholders in involved countries. Currently, largely due to the legislative ban on U.S.-China bilateral space cooperation, there is little or no incentive for those in the Chinese space or security communities to argue in support of prudent space policy or behavior, because they have nothing to lose by unrestrained actions they may perceive to their benefit. Effective deterrence requires both carrots and sticks, and there are a variety of carrots that could be offered through NASA and the U.S. civil space program.

### 1AC – Solvency

#### Chinese space development is inevitable. Engagement is key to U.S. influence to make the program stay peaceful

Aliberti, 15 – resident fellow at the European Space Policy Institute (Marco, When China Goes to the Moon… p. 233-234)

In addition, "if any interaction with the Chinese space programme is assumed to involve an associated interaction with the Chinese military,—Andrew Johnson has ironically remarked—then many of the United States' closest allies have already taken a step in that direction".202 The US restrictions intended to limit (or even control) Chinese access to space technology have pushed China towards other global suppliers, which are increasingly available and disposed towards cooperation. Ironically, this has afforded less control over technology transfer than previously. As Joan Johnson-Freese puts it, "if the goal of the U.S is to assure that Chinese space development occurs in a peaceful, non-threatening manner, then the US must consider that it could actually be more effective in influencing Chinese programmatic direction and in determining what globally-available technology reaches China through engagement rather than detachment, and by stressing innovation and staying ahead, versus trying to constrain China".203 Thus, cooperation may introduce an important benefit by offsetting the need for China to develop unilaterally. Collaborating with China—instead of isolating it— could keep the country reliant on US technology rather than forcing it to develop technologies alone or purchase them on the global market. This could in turn give the United States leverage in other areas of the relationship and be more broadly conducive to an improvement in political relations.204 Another potential positive payback stemming from cooperating with China would be greater US insight into China's space programme, technical capabilities, and intentions. While there is currently uncertainty and lack of transparency over China's space goals, resulting in the need for worst-case planning, regular dialogue and exchange of information could help the two nations understand each other's intentions more clearly, overcoming mutual mistrust and ambiguity. Over the long term, dialogue and cooperation could potentially give way to strengthen confidence and assurance of intentions and concerns about space and help address national security concerns while increasing transparency across the board. 205

### 1AC – Solvency

#### China is the litmus test for global cooperation – the plan restores US global space leadership

Aliberti, 15 – resident fellow at the European Space Policy Institute (Marco, When China Goes to the Moon… p. 234)

Equally importantly, cooperative undertakings could be an important way to maintain and in a sense renew US leadership. Many space policy experts believe that NASA is losing its appeal as trailblazer of the international space community's efforts. However, by leveraging the fact that the United States has already accomplished a manned lunar landing, embarking upon a cooperative programme with China (as well as other spacefaring nations) could generate the public perception of the United States assisting other nations to go beyond Earth, in a true spirit of leadership. As the National Research Council notes, the underlying issue is that the "U.S can advance its national goals in space by sharing the responsibility on a global scale—making the U.S a real leader among a host of nations contributing to space exploration and reaping the benefits", rather than excluding them. Such a posture would provide an important impetus to allaying the fears of the international community about the alleged US intention of pursuing space dominance. Finally, advocates of cooperation highlight a fact that is too often overlooked: the alternative to cooperating with China could be a descent into an unpromising space race (also at the strategic threat level), bringing unaffordable financial and political burdens for the United States. The United States increased NASA's budget by 89 % in the months following Kennedy's 1961 Moon speech,206 and NASA's expenditure peaked at 5.3 % of the federal budget in 1965.207 This is unimaginable today, given the severe budget constraints faced by NASA and the fact that the United States is not a rapidly expanding but a plateauing economy. It thus behoves the United States to discard a space race scenario and consider opportunities for cooperation. Indeed, a gradual increase in cooperation with China would "make sense because it would reduce the cost of US space exploration, enabling both countries to continue gaining scientific knowledge" and also improving relations to a degree.

# Case Extensions

## Inherency

### AT: Status Quo Cooperation Solves

#### State Department cooperation fails because NASA can’t legally follow through

Sterner, 15 - Eric Sterner is a fellow at the George C. Marshall Institute. He held senior staff positions for the U.S. House Science and Armed Services committees and served in DoD and as NASA’s associate deputy administrator for policy and planning (“China, Talk and Cooperation in Space” Space News, 8/6,

<http://spacenews.com/op-ed-china-talk-and-cooperation-in-space/>

NASA leads civil space activities in the United States. But, as space policy expert Marcia Smith points out, the agency and the White House Office of Science and Technology Policy are statutorily prohibited from expending any funds to “develop, design, plan, promulgate, implement, or execute a bilateral policy, program, order, or contract of any kind to participate, collaborate, or coordinate bilaterally in any way with China or any Chinese-owned company.” In short, the State Department just agreed to discuss civil space activities that the relevant U.S. agencies are legally prohibited from pursuing.

#### The Wolf Amendment chills multilateral and private sector cooperation

Kohler, 15 – JD, Georgetown Law (Hannah, “The Eagle and the Hare: U.S.–Chinese Relations, the Wolf Amendment, and the Future of International Cooperation in Space” Georgetown Law Journal, Vol. 103:1135, <http://georgetownlawjournal.org/files/2015/04/Kohler-TheEagleandtheHare.pdf>

It seems most likely, then, that the language in Section 532 of the 2014 Appropriations Act (and Section 532 of the 2015 Appropriations Act currently under deliberation in the Senate) was deliberately amended in order to “correct” this perceived security flaw. By forbidding the use of any funds made available under the 2014 Appropriations Act to facilitate official Chinese visitors, Wolf might have hoped to strengthen the restrictive language and ensure that the PLA was not being engaged—even indirectly—by NASA through contracting projects or other such “workarounds,” although the focus on facility use rather than cooperative projects is puzzling. The potential implications of the changed language might even have been inadvertent, as Wolf’s continuing insistence that the Act prohibits bilateral collaboration only does not seem consistent with a plain reading of the 2014 language. At this point, however, it must be considered that Congressman Wolf’s personal interpretation of the statute no longer controls; the plain language of Section 532 does restrict multilateral interaction. The widespread confusion and misapplication of the Amendment between 2011 and 2013 are damning evidence; if the international space community could not parse the wording of the old legislation, it seems unlikely that they will be any less liberal in applying the new, stricter language. The heart of the problem lies in the misapplied focus that Wolf and other members of the House Appropriations Committee have granted to the Amendment. Congressman Wolf, in many of his statements concerning the Amendment, emphasizes the bilateral/multilateral nature of a given activity to determine whether it should be considered prohibited.123 However, this is not the heart of the issue. Although bilateral coordination is unarguably banned in both the 2011 and 2014 versions of the Amendment, the true focus has consistently been on the issue of officialness, not number of parties or even the nature of the activity. Since its inception, the Wolf Amendment has restricted the use of funds in “hosting... official Chinese visitors.”124 It may be that Wolf and the Appropriations Committee have simply considered this limitation enough to prevent abuse of the provision; Wolf has occasionally suggested as much.125 The problem with this assumption is that “official” is never addressed or defined in the Amendment,126 and thus cannot be facially assumed to refer only to citizens representing the Chinese government. Merriam-Webster defines the adjective “official” to be “of or relating to the job or work of someone in a position of authority.”127 Although this covers representatives of the Chinese government, it may also fairly be said to extend to other prominent members of the scientific community (in the sense of an “official visitor”) or members with sufficient standing and authority in any public organization, even reporters working for an official Chinese news agency.128 If Congress wishes to curtail broadly restrictive overapplication of the Amendment through reliance on the “official” language, it should make this clear by including an internal definition of “official” in the text of the 2016 Appropriations Act, making explicit exactly who is being barred from attending events funded by NASA. Until such a definition is agreed upon, both the intention and the effects of the 2014 wording change will be frustratingly obfuscating, and it is likely that industry leaders will continue to interpret the provision broadly (that is, restrictively) for fear of crossing Congress and becoming subject to sanctions under the Antideficiency Act.

### AT: Status Quo Cooperation Solves

#### Congress will enforce the Wolf Amendment

Smith, 16 – staff writer (Marcia, Space Policy Online, “Culberson Will "Vigorously Enforce" Restrictions on NASA-China Relationship” 3/15, <http://spacepolicyonline.worldsecuresystems.com/news/culberson-will-vigorously-enforce-restrictions-on-nasa-china-relationship>

Rep. John Culberson (R-TX) said today that NASA did not fully inform Congress about the recent State Department-led meeting in Beijing on bilateral U.S.-China civil space cooperation as required by law. He stressed that he plans to "vigorously enforce" the law, which requires NASA to notify Congress in advance of such meetings that technology transfer, for example, will not occur. In a statement to SpacePolicyOnline.com, Culberson said: “NASA has failed to provide the committee with details on the depth and scope of the meetings hosted by the Department of State. China’s Space program is owned and controlled entirely by the People’s Liberation Army and the Chinese government have proven to be the world’s most aggressive in cyber espionage. I intend to vigorously enforce the longstanding prohibitions designed to protect America’s space program.” Culberson chairs the House Appropriations Commerce-Justice-Science (CJS) subcommittee, which funds NASA. His predecessor, former Rep. Frank Wolf (R-VA), led the effort to include language in NASA's appropriations bills prohibiting NASA or the White House Office of Science and Technology Policy (OSTP) from spending any funds related to bilateral space cooperation with China unless certain certifications are made to Congress in advance. Culberson echoes Wolf's views and continues the precedent. In June, the State Department announced the initiation of a U.S.-China Civil Space Dialogue with the first meeting scheduled to take place before the end of October. Reaction to the announcement was muted despite the controversy. The first meeting took place in Beijing last month and another is planned in 2016. NASA confirmed that it participated in the Beijing meeting. Section 532 of the FY2015 appropriations law (P.L. 113-235) that funds NASA states that NASA may not spend any funds to "develop, design, plan, promulgate, implement or execute a bilateral policy, program, order, or contract of any kind to participate, collaborate, or coordinate bilaterally in any way with China or any Chinese-owned company unless such activities are specifically authorized by law enacted after the date of enactment of this Act." Those limitations do not apply if "no later than 30 days prior to the activity in question," NASA certifies that the activity poses no risk of the transfer of "technology, data, or other information with national security or economic security implications" and does not "involve knowing interactions with officials who have been determined by the United States to have direct involvement with violations of human rights." Any such certification "shall include a description of the purpose of the activity, its agenda, its major participants, and its location and timing."

## Relations Advantage

### AT: No War

#### A lack of cooperation increases the likelihood of military accidents in space

Fernholz, 15 - Tim Fernholz covers state, business and society for Quartz (“NASA has no choice but to refuse China’s request for help on a new space station” Quartz, 10/13, <http://qz.com/523094/nasa-has-no-choice-but-to-refuse-chinas-request-for-help-on-a-new-space-station/>

The US has a long history of space diplomacy with opponents—as with the USSR during the 1970s. With US policy framing China as a peaceful competitor rather than ideological enemy, the current restrictions on consorting with the Chinese space program has put NASA in a tough spot with space scientists from outside the agency, some of whom have protested the ban by boycotting scientific conferences. If the desire for manned cooperation with the Chinese is not enough to persuade US lawmakers to loosen their restrictions, there’s also the increasing concerns among space agencies and satellite operators that a lack of coordination between burgeoning space programs will lead to potential orbital disaster. Tests of anti-satellite weapons have already resulted in costly, in-orbit accidents. Civil space cooperation between the US and China could provide trust and lines of communication for de-escalation as fears of space militarization increase. And it’s not like there isn’t some cross-pollination already—SpaceNews notes that Zhou received some of his training at the University of Southern California.

### AT: No War

#### Great power war could begin through miscalculation

Christensen, 15 – William P. Boswell Professor of World Politics of Peace and War and Director of the China and the World Program at Princeton (Thomas, The China Challenge: Shaping the Choices of a Rising Power, p. 82-83

Enjoying superior power is preferable to the alternatives, but it is no guarantor of peace. Nor does superior economic and political power guarantee that a nation's political goals will be achieved. A China that lags behind the United States in terms of economics, soft power, military capabilities, and alliances can still pose major challenges to U.S. security interests, particularly in East Asia. Weaker powers have often challenged stronger ones. As John Arquilla has argued, the initiator of great power wars has more often than not proven to be the loser.1 Arquilla's work challenges the realist notion that superior powers should deter aggression from weaker states. Leaders in weaker states often miscalculate the balance of power and overestimate their prospects for success—or they understand the distribution of overall capabilities but challenge stronger ones anyway. They might do so because they believe that they can achieve limited political aims: to coerce stronger powers into concessions on some specific set of issues. Often the calculus takes into account the political willpower of the two sides to pay costs over a contested issue and the perceived importance of the issue. Leaders' perceptions of those realities are more important than the physical and political realities in determining whether a nation will initiate a limited conflict. Most of international security politics involves political battles over limited political and territorial aims. Brute force struggles such as the two world wars are important, but they are the exception, not the rule. The struggles for national survival in the late nineteenth and early twentieth centuries informed realist balance-of-power theories developed in the mid-twentieth century. But even in that dark period, there were many crises and limited wars involving coercive diplomacy. And during the Cold War, the United States often found itself in combat with weaker actors with high degrees of resolve, such as in Korea and Vietnam. More recently, we have witnessed a vastly superior U.S. military confront difficulties in the face of insurgencies in post- invasion Iraq and Afghanistan. With that historic backdrop, consider the strategic challenges posed by a modernizing Chinese military today. Although China is hardly a military peer competitor of the United States, the United States has fought no military since World War II that is anywhere near as impressive as Chinese forces are today. And even in World War II, the formidable axis powers—Germany, Japan, and Italy—did not have nuclear weapons that could strike the United States. Contemporary China does, and that fact could, in specific circumstances, limit the willingness of a U.S. president to exercise all aspects of U.S. conventional military superiority. China's military modernization concerns American strategists because Beijing has intelligently focused its development on new capabilities that expose U.S. forces deployed far from the United States and close to China to various risks. By doing so, Chinese elites might gain confidence that they have increased coercive leverage against Washington or against its allies and security partners. The United States relies on bases in those places and cooperation provided by regional actors for power projection not just in Asia but around the world. In this sense, while the U.S. alliance system is a great source of U.S. power and has no equivalent in the Chinese security portfolio, it is also a source of vulnerability to Chinese punishment: China can try to dissuade those allies from cooperating with the United States or can strike directly at U.S. forces at bases relatively close to China to cause pain to the more distant United States. Chinese coercive strategies can thus raise the costs of U.S. intervention in the region even if China cannot prevail in a full-scale conflict. So, while responsible Chinese elites might view the Chinese military as weaker than the United States, and their strategic writings suggest that they almost universally do, they might still be emboldened by certain new coercive capabilities under development. This is particularly true if they believe that the issues at stake matter more to China than to the United States. Chinese leaders might believe they have greater resolve regarding sovereignty disputes, for example, even if their military is not as powerful as that of the United States. Observers around the world have noted U.S. withdrawal from Vietnam, Somalia, and Afghanistan when costs to the United States were raised by significantly weaker actors. By endangering American and allied military assets in the region, Beijing can raise the prospective costs of U.S. intervention. The strategic goals would be to deter U.S. intervention, delay effective deployment of U.S. forces until local actors have been subdued, or compel U.S. withdrawal if the United States decides to intervene in an extended conflict with China. In such a campaign, military pressure might be brought to bear against not only the United States but also key U.S. allies and security partners such as Japan, South Korea, Taiwan, the Philippines, Thailand, Singapore, and Australia. Beijing has invested an impressive amount of resources, especially since the late 1990s, in military capabilities designed to project power offshore and strike the assets of the United States and its allies. Many hundreds of accurate, conventionally tipped ballistic missiles threaten Taiwan's fixed assets. A smaller number of these missiles can reach U.S. bases in Japan and the western Pacific as well. According to the Pentagon, one version of an intermediate-range ballistic missile, the DF-21, can hunt and kill large capital ships at sea by using terminal guidance, the ability to steer a warhead toward its target after it reenters the earth's atmosphere from space. <<card continues>>

### AT: No War

<<card continues>> If deployed and integrated into China's existing doctrine, the DF-21D or antiship ballistic missile (ASBM) could threaten American aircraft carriers, home to several thousand American service personnel and a tremendous amount of firepower and ammunition, making it both an attractive coercive target and an important military target 2 To challenge American sea power, the Chinese navy has developed a large number of submarines armed with advanced torpedoes, cruise missiles, and sea mines. These would be supplemented with a large fleet of smaller naval and civilian surface vessels, including the Houbei-class fast missile boat, that could be used to fire cruise missiles, lay mines, and help locate U.S. forces for targeting by other Chinese assets. China has also invested in a large fleet of fourth-generation fighter planes and advanced air defenses to try to offset the qualitative and quantitative advantages enjoyed by the United States. Chinese surface ships and aircraft can also launch cruise missiles at ships at sea and against fixed targets on land. In 2007 and 2009 China demonstrated the ability to strike satellites in low earth orbit. Along with electronic warfare and cyber attack capabilities, these assets could also serve to reduce America's clear advantage in the realm of what the Department of Defense calls Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR). In combination with the other- weapons systems listed above, these assets can be force multipliers that allow the Chinese military to threaten a greater number of American and allied soldiers, sailors, and airmen. Such perceived coercive capability might embolden the Chinese leadership in potential standoffs.3

## Leadership Advantage

### Space Leadership Low

#### The Wolf Amendment cedes leadership in space to China, undermining US domestic space innovation

Kohler, 15 – JD, Georgetown Law (Hannah, “The Eagle and the Hare: U.S.–Chinese Relations, the Wolf Amendment, and the Future of International Cooperation in Space” Georgetown Law Journal, Vol. 103:1135, <http://georgetownlawjournal.org/files/2015/04/Kohler-TheEagleandtheHare.pdf>

However the 2014–2015 Wolf Amendments are interpreted, they will still have resounding effects for U.S.–China space-industry relations. Although a complete ban of all visitors of Chinese nationality would be an almost unthinkably direct political affront, even the blanket ban on CNSA–NASA cooperation that is the facial purpose of the statute will have repercussions. The moratorium on bi- or multilateral industry communications created by the 2013 Appropriations Act will severely constrain information transfer between both space agencies, effectively blinding NASA to the Chinese space program’s current endeavors as well as the reverse (although considering how closed-mouthed CNSA is about even public projects, it is likely that this effect will hit NASA harder than China). Additionally, such a measure could cause the already tenuous trust developed with the CNSA to deteriorate. Blocking the United States and NASA from cooperating with one of the major space powers of the world—a country with demonstrated ambition and an increasing capability to achieve dominance in space—may hobble us beyond recovery, at least for the next generation of space advancements. Space exploration is no longer the province of individual nations operating alone, and international cooperation is both widespread and necessary. Just as the international sharing of such sensitive and cutting-edge technology is a valid national security concern, so too should be rejecting the contributions of a major developing power, especially considering the relative political stagnation of space exploration in the United States and the burgeoning enthusiasm for it in China. Although it is impossible to predict what the future will hold for the space explorers of tomorrow, it seems fully necessary to initiate cautious, but optimistic, cooperation with China in space: inviting them as a party to the ISS, certainly, and potentially opening the door for future joint—or even bilateral— projects. The Hughes/Loral debacle limited the U.S. communications-satellite industry for decades,130 and its consequences have only recently been corrected in part; Congress must take care not to make the same mistakes with regard to other U.S. investments in space. Isolating NASA from a country that is both a space superpower and one of the largest economies in the world will only hurt the United States in the long run. China has a long history of self-sufficiency in space, and it is demonstrably capable of overcoming the challenges posed by having to reinvent the wheel (or, as it may be, the rocket) because its global neighbors have historically been too afraid of its military capabilities and ambitions to share what they know. Would a free flow of technology—if not launching systems or ballistic information, then at least those many nonmilitary elements of space travel, exploration, and study—truly hurt the United States? Or would it pique the desire of the Chinese citizens to be free from their repressive government and experience the freedom of a democratic society? If NASA is truly the pinnacle of American ingenuity, courage, optimism, and grace, then (sensibly) open communication between the scientists and engineers in the CNSA can only inspire the latter to demand better for themselves, their country, and their space program.

### Space Debris Risk High

#### The risk of space debris collisions is high and growing

Lewis, 15 - Hugh Lewis is a Senior Lecturer in Aerospace Engineering at the University of Southampton (“Trouble in orbit: the growing problem of space junk” BBC News, 8/5, <http://www.bbc.com/news/science-environment-33782943>

Now, the US Space Surveillance Network is tracking tens of thousands of objects larger than a tennis ball orbiting above us, and we suspect that there are one hundred million objects larger than 1mm in the environment. Due to their enormous orbital speed (17,000 mph), each one of these objects carries with it the potential to damage or destroy the satellites that we now depend on. Red Conjunction Perhaps the most visible symptoms of the space junk problem are the regular collision avoidance manoeuvres being performed by the International Space Station (ISS), and the increasingly frequent and alarming need for its occupants to "shelter-in-place" when a piece of junk is detected too late for a manoeuvre. The systems on the ISS that provide vital life support are also responsible for its unique vulnerability to a debris impact - a pressurised module in a vacuum might behave like a balloon if punctured. The recent "red conjunction" (where a piece of debris comes close enough to pose a threat to the space station) involving a fragment from a Russian satellite on 17 July this year was yet another demonstration of the growing threat from space junk. Thanks to the hit film "Gravity", and the Oscar-nominated performance of Sandra Bullock, we can now readily appreciate the anxiety that must be felt by the astronauts and cosmonauts aboard the International Space Station whenever they receive such a "red conjunction" call. In spite of these occurrences, the space station is actually orbiting at an altitude where the number of debris is relatively low. At higher altitudes the amount of space junk is substantially greater, but only robotic spacecraft are exposed there. Nevertheless, these satellites are some of the most valuable for understanding our planet. Due to this congestion, there is an increasing chance that the space junk population could become self-sustaining. That is, more junk could be created by collisions than is removed through the natural decay caused by atmospheric drag. Indeed, we already have some experience of this: in February 2009 two relatively small satellites collided over Siberia creating about 2,000 new fragments that could be tracked, with many still orbiting today and regularly passing close to other satellites.

### AT: Launches Turn

#### The cascade effect is inevitable

Carreau 12/1/11 (Mark Carreau, staff writer at Aviation Weekly, “Orbital Debris Expert Urges Retrieval,” Aerospace Daily and Defense Report, <http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=space&id=news/asd/2011/12/01/11.xml&headline=Orbital%20Debris%20Expert%20Urges%20Retrieval>)

Efforts over the past two decades to mitigate the growth through changes in the design and operation of launch systems and satellites have given way to a new concern – the increasing risk of collision between existing debris in Earth orbit, adding to the fragment population faster than the junk can make a destructive descent into the atmosphere naturally. “It took a lot of effort, energy and money to get these things into space, and by golly, it will take a lot of that to get it out,” Johnson told a Nov. 29 gathering of the Houston section of the American Institute of Aeronautics and Astronautics. “That is our challenge right now.” A failure to methodically address the issue could place future generations of vital communications, navigation and weather satellites in jeopardy, he said. Johnson’s concerns echo those of a Sept. 1 report issued by the National Research Council, Limiting Future Collision Risk to Spacecraft: An Assessment of NASA’s Meteoroid and Orbital Debris Programs. The prospect of new debris from collisions between existing space junk has reached a “tipping point,” according to the NRC, which urged a re-examination of internationally recognized restrictions that prevent any one nation from sweeping away the debris from another country’s spacecraft.

#### The plan’s launch is insignificant

Insurance Daily 11- “Space debris grows 30% in five years” Wednesday, June 15, 2011 [**http://www.pagnanellirs.com/downloads/IDArticle4.pdfhnasser**](http://www.pagnanellirs.com/downloads/IDArticle4.pdfhnasser)

Geostationary Orbit (Geo) - where the majority of insured satellites are located - is now becoming increasingly littered with spent debris. A new study from reinsurer Swiss Re has warned there are now more than 500 defunct satellites, more than 200 spent rocket stages and thousands of smaller pieces of debris littering Geo. The amount of orbital debris today is double that of 20 years ago and more than 30% higher than five years ago, the study warned. Jan Schmidt, head of space at Swiss Re Corporate Solutions and one of the authors of the report, told Insurance Day $18bn of the $20bn of insured exposures in space is located in Geo. While the collision risk from an underwriting perspective is still considered to be small, Schmidt said the increase in space debris is becoming an increasingly significant issue. “In Geo, we don’t have any natural cleaning mechanism. Every satellite that is launched into Geo is there forever - that is the big issue. So even if we stopped launching today, the risk would still be there,” he said. An audience poll at a space debris conference hosted by Swiss Re during the past week indicated 67% of respondents believe insurers have a supporting role to play in managing the risk from space debris. “We will not finance a clean-up but we can try to pursuade insurers to join the Space Data Organisation and to collect data as to where satellites are at any given point in time,” Scmidt said. Philip Chrystal, senior claims expert at Swiss Re Corporate Solutions and a co-author of the report, said the conclusion of the Swiss Re conference was that in the event of a collision causing a loss to the market, this would be factored into the insurance rating process going forward. Chrystal also pointed out the risk of collision is not uniform, and is seven times greater in certain regions where drifting satellites and other debris tend to accumulate but satellites worth hundreds of millions of pounds are continuing to operate. The lack of a cleaning mechanism to remove debris means this risk is likely to continue to grow moving forward, Chrystal warned.

### AT: No Impact To Space Debris

#### Space debris increases the chance of miscalculation

The Guardian 16, (The Guardian, Rise in Space Junk Could Provoke Armed Conflict Say Scientists, lexis)

The steady rise in space junk that is floating around the planet could provoke a political row and even armed conflict, according to scientists, who warn that even tiny pieces of debris have enough energy to damage or destroy military satellites. Researchers said fragments of spent rockets and other hurtling hardware posed a "special political danger" because of the difficulty in confirming that an operational satellite had been struck by flying debris and had not fallen victim to an intentional attack by another nation. Space agencies in the US and Russia track more than 23,000 pieces of space junk larger than 10cm, but estimates suggest there could be half a billion fragments ranging from one to 10cm, and trillions of even smaller particles. The junk poses the greatest danger to satellites in low Earth orbit, where debris can slam into spacecraft at a combined speed of more than 30,000mph. This realm of space, which stretches from 100 to 1200 miles above the surface, is where most military satellites are deployed. In a report to be published in the journal Acta Astronautica, Vitaly Adushkin at the Russian Academy of Sciences in Moscow writes that impacts from space junk, especially on military satellites, posed a "special political danger" and "may provoke political or even armed conflict between space-faring nations. The owner of the impacted and destroyed satellite can hardly quickly determine the real cause of the accident." Adushkin adds that in recent decades there have been repeated sudden failures of defence satellites which have never been explained. But there are only two possibilities, he claims: either unregistered collisions with space debris, or an aggressive action by an adversary. "This is a politically dangerous dilemma," he writes. The warning comes after an incident in 2013 when a Russian satellite, Blits, was disabled after apparently colliding with debris created when China shot down one of its own old weather satellites in 2007. The Chinese used a missile to destroy its satellite, an act that demonstrated its anti-satellite capabilities, and left 3,000 more pieces of debris in orbit. According to the report, the amount of debris cluttering low Earth orbit has risen dramatically in half a century of spacefaring. Without efforts to clean up the space environment, Adushkin warns of a "cascade process" in which chunks of debris crash into one another and produce ever more smaller fragments. Data in the study from the Russian space agency show that the International Space Station took evasive action five times in 2014 to avoid space debris. Even small flecks of paint that have flaked off spacecraft can be hazardous. Nasa's space shuttle was struck by flying paint several times in orbit, forcing ground staff to replace some of the spaceship's windows. The report follows a report commissioned by Nasa in 2011 which warned that the level of space junk was rising exponentially, and had reached a "tipping point" in the threat it posed to satellites and the International Space Station.

## Solvency

### Space Debris Cooperation Key

#### Cooperation on space debris is the foundation of Sino-US trust in all space programs

Hayes, 9 - Lt Col, USAF, paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy (Tracey, “PROPOSAL FOR A COOPERATIVE SPACE STRATEGY WITH CHINA”, <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA530117>

Cooperation can prevent conflict escalation, increase safety in the space environment, prevent hefty cost burdens on an already strained national/defense budget and make China’s opaque space program more transparent. There are also impediments to overcome in order to fully implement a cooperative strategy. Those potential friction points include political will, U.S. and China export controls and speculation that cooperative efforts will ultimately be ineffective. Cooperation however, should not directly improve China’s military or commercial capabilities and give them an edge over the U.S. Benefits Prevent Crisis Escalation. Communication between the U.S. and China on space issues has been limited. Accordingly, there is a great deal of misinterpretation, misrepresentation and poor assumptions made by each side as to their respective intentions in space. The U.S. must not assume it understands the intentions of China and should strive to learn more from China through study and personal interaction. Two Congressmen, Reps. Mark Kirk and Rick Larsen reinforce this idea. They serve as cochairs of the U.S.-China Working Group in the House of Representatives (as of Jan 2006). The working group was formed in Jun 2005 to raise awareness about China among Congressional members and advise them on how to work with the country. Rep. Kirk has stated that “the House view toward China is relentlessly negative and highly misinformed.”119 Lack of communication breeds mutual suspicion and uncertainty. The more informed one is about another nation’s culture, history and normal social behaviors, the more the tide of misperception can be stemmed. Increased dialogue between the U.S. and China would lay the ground work for bilateral security arrangements, force posture and the use of space. Even during the most tenuous times in the Cold War, the U.S. and Russia were able to agree to treaties such as Strategic Arms Limitations Treaty (SALT) and the 1972 ABM Treaty. Although these treaties were arguably the result of a common understanding that national survival was at stake, lessons learned can and should be effectively applied in other situations. Strategic dialogue also helps to “put a face to the name” and increase familiarity between both parties. Over time, such communication will facilitate a shared vocabulary and establish formal and informal guidelines to distinguish between appropriate and destabilizing behavior. Further, data shared between countries would be considered more trustworthy. This would create an atmosphere such that the U.S. may open opportunities to share pertinent information or intelligence on potential anti-U.S. actors to help China assess their future relationships and collaboration with those countries. If agreements between China and the U.S. were made today before a potential “space race” begins, this would help both sides avoid miscalculation by tempering mistrust and uncertainty with a degree of transparency and predictability, thus preventing potential crisis escalation. Another benefit to U.S.-China space cooperation is increased safety while operating in the space environment. Increase Space Environment Safety. Currently, there are over 890 operational satellites, owned and operated by 41 nations as well as a number of other countries working in consortiums with each other or with industry partners.120 As the number of nations tapping into the space resources increases, competition for real estate in space or more specifically, usable orbits and radio frequency spectrums, increase. Additionally, on-orbit collisions with space debris or other spacecraft are becoming increasingly worrisome.121 There are organizations and committees established to help facilitate some of these issues and provide rules of the road for space. For example, the International Telecommunications Union (ITU) was created in 1963 to coordinate space spectrum and prevent interference. The ITU is composed of governments who join as member states by signing the International Telecommunications Convention, as well as private commercial industry who join as “sector members” but have no voting rights.122 International efforts to control the effects and amount of space debris have resulted in the establishment of the Inter-Agency Debris Coordination Committee (IADC) in 1993 as a mechanism for space agencies to exchange information. The IADC is currently comprised of 11 member nations.123 The primary purposes of the IADC are to “exchange information on space debris research activities between member space agencies, to facilitate opportunities for cooperation in space debris research, to review the progress of ongoing cooperative activities, and to identify debris mitigation options.”124 The IADC sends recommendations and guidelines to the UN’s Committee on the Peaceful Uses of Outer Space (COPUOS) and, if agreed upon, they are forwarded to the UN General Assembly for approval. As new players join the satellite “game”, there is bound to be a learning curve. The less experienced operators lack familiarity with the informal rules employed by long-established players and often fail to comply with best practices such as launch notification, maneuvers and close approaches.125 The U.S. cooperation with China (and other nations) in this area could drastically reduce the potential number of accidents and increase the safety of operating in the space environment. One way to ensure success would be to establish an international framework to outline “rules” and best practices for orbital insertion and maneuver. This could include a pre-launch notification system, safety provisions for manned space flight, intentional de-orbits and debris mitigation. Ensuring better access to the U.S. Space Surveillance Network (SSN) data and sharing lessons learned would be critical to the success of this venture. Another benefit to U.S.-China space cooperation is preventing over-spending on potentially expensive space-race technology to include space-based offensive weapons.

### Engagement Solves Miscalculation

#### Increasing diplomatic engagement through the State Department is vital to decreasing miscalculation

Hitchens and Johnson-Freese, 16 - Theresa Hitchens is a senior research scholar at the University of Maryland’s Center for International and Security Studies at Maryland (CISSM). Joan Johnson-Freese is a Professor of National Security Affairs at the U.S. Naval War College (“Toward a New National Security Space Strategy Time for a Strategic Rebalancing” Atlantic Council Strategy Paper No. 5, <http://www.atlanticcouncil.org/images/publications/AC_StrategyPapers_No5_Space_WEB1.pdf>

Diplomacy First The need for the United States to engage in meaningful space security dialogue with Russia, and especially China, cannot be overstated. In particular, US-China dialogue has been weak and scattershot, with blame on both sides for a lack of transparency. This makes paramount the use of signaling regarding US “bright lines”—that is, actions by potential adversaries that will provoke negative US responses, military or otherwise. Again, while the geopolitical barriers to dialogue are currently high, the United States must continue to press for such dialogue and leave the door open for any and all diplomatic possibilities, including finding ways to insert the space security conversation into other aspects of bilateral diplomacy. Though bilateral diplomacy with Russia and China is a critical and immediate need if a preventative strategy is to be successful, elucidation and agreement on multilateral norms or space activities also become paramount, as the way to implement such a strategy. While there is a widespread international consensus that norms of behavior in space are required, multilateral progress toward development of such norms has been stymied in recent years, largely due to geopolitical tensions between Russia and the West over Russian military actions in Ukraine and Syria. Despite Russia’s recent success in playing the spoiler, there remains a high level of accord on certain necessary steps, such as increased transparency and improved space situational awareness for all space operators, to ensure sustainability and security in space. This was attested to during the February 15-26, 2016, meeting of the Working Group on the Long-Term Sustainability of Outer Space Activities (LTS) of the Scientific and Technical Subcommittee of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) in Vienna. During that meeting, all delegations—with the exception of Russia’s—wanted to move forward with an interim set of agreed guidelines (based on the January 28, 2016, report of the Working Group Chair) to be presented to the COPUOS plenary in June. That group included China and Brazil, which had previously shown some reluctance in the LTS discussions. Although Russia blocked this outcome (COPUOS actions require consensus), the Working Group decided to continue its efforts in an intersessional meeting June 6-7, 2016.4546 Moscow has vowed to boycotted that meeting. Nonetheless, if there is otherwise general consensus on some of the draft guidelines, the Russian veto could be circumvented by taking agreed language directly to the United Nations (UN) General Assembly in the form of a resolution. This could allow implementation by individual states, thus creating an initial set of norms that could serve to put pressure on Moscow. Given Russia’s currently belligerent mood, it may be that an approach of diplomatic encirclement would be more likely to constrain negative actions than would threats of military response, which will almost certainly backfire. Might the United States thus take the lead in pushing forward the COPUOS effort, as well as the recommendations in the 2013 report of the UN Group of Governmental Experts on Transparency and Confidence Building Measures in Outer Space Security?47 How else can the United States shape thinking and build consensus among spacefaring nations about rules of behavior in peacetime, and rules of engagement in conflict, that best meet US goals for prevention of conflict and protection of US space assets? How can the United States encourage allies and likeminded nations to work on bridging with Russia and China? The point is that diplomacy also requires the United States to take proactive measures, rather than simply reacting to others. As a positive example, the Obama administration has been vocal in its public diplomacy regarding debris-creating ASATs, criticizing any moves in that direction, by China in particular, as well as vowing to refrain from use of such weapons. Hyten told reporters at a December 2015 breakfast at the Capitol Hill Club that he is “concerned about any potential threat that would create debris in space,” particularly Russia and China’s construction of “kinetic energy antisatellite weapons.” He said, “It creates an environment that will be there for decades, if not centuries. And you can’t get rid of it. So I don’t want to go down that path, and Russia and China are going down that path.”48 However, there is much more that could be done. If the United States does not want to see the advent of debris-creating ASATs, then Washington should seriously consider proposing a ban on testing and use of such weapons. If a ban focused on testing and use of any technologies that deliberately created long-lasting space debris, the current argument over the definition of a weapon could be avoided—although there would obviously need to be negotiation of the exact parameters of activities to be banned. Still, a ban on testing and use would be a verifiable alternative to the treaty proposal by Moscow and Beijing on Prevention of the Placement of Weapons in Outer Space, and the Use or Threat of Force against Outer Space Objects (PPWT), which has garnered support outside of the West despite many shortcomings. The prevention of debris-creating weapons use would be firmly in US interests, as well as in the interests of all spacefaring nations. A ban on testing and use would also go a long way toward reestablishing in the international community the notion of the United States as holding the moral high ground in space. Whatever the specifics, the key to success for a preventative strategy, and for achieving strategic restraint as a norm, will be that the United States emphasizes diplomatic solutions, rather than technological ones, and that Washington puts political will behind developing those solutions. It also means that pugilistic rhetoric regarding military prowess must be avoided, so as not to undermine those solutions. More robust diplomacy will require more resources as well, both within the US Department of State and within the Office of the Secretary of Defense. The State Department bureau responsible for space diplomacy is the Bureau of Arms Control, Verification and Compliance (AVC), currently under the direction of the aforementioned Assistant Secretary Frank A. Rose. The bureau is responsible for all arms-control-related affairs, including nuclear weapons and missile-defense issues. As of fiscal year 2013, it had 141 employees and a budget of $31.2 million.49

### Plan Solves Chinese Aggression

#### Increasing civil space cooperation creates political constituencies that restrain aggressive behavior

Johnson-Freese, 15 - Johnson-Freese is a Professor of National Security Affairs at the U.S. Naval War College (Joan, Testimony before the U.S.-China Economic & Security Review Commission “China’s Space & Counterspace Programs”, 2/18, <http://www.uscc.gov/sites/default/files/Johnson%20Freese_Testimony.pdf>)

Second, Wolf’s rationale assumes the United States has nothing to gain by working with the Chinese. On the contrary, the United States could learn about how they work — their decision-making processes, institutional policies and standard operating procedures. This is valuable information in accurately deciphering the intended use of dual-use space technology, long a weakness and so a vulnerability in U.S. analysis. Working together on an actual project where people confront and solve problems together, perhaps, a space science or space debris project where both parties can contribute something of value, builds trust on both sides, trust that is currently severely lacking. It also allows each side to understand the other’s cultural proclivities, reasoning and institutional constraints with minimal risk of technology sharing. Perhaps most importantly, cooperation would politically empower Chinese individuals and institutions who are stakeholders in Chinese space policy to be more favorably inclined toward the United States. A cooperative civil and commercial relationship creates interests that could inhibit aggressive or reckless behavior, as opposed to Chinese space policy being untethered to any obligations, interest or benefits it might obtain through cooperation with the United States.

#### Joint cooperation is the only way to accurately assess Chinese intentions in space

Johnson-Freese, 15 - Johnson-Freese is a Professor of National Security Affairs at the U.S. Naval War College (Joan, Testimony before the U.S.-China Economic & Security Review Commission “China’s Space & Counterspace Programs”, 2/18, <http://www.uscc.gov/sites/default/files/Johnson%20Freese_Testimony.pdf>)

Because of the largely dual-use nature of space technology, virtually any space activity can be deemed as military. Therefore it is (relatively) easier to know what China is doing in terms of space activities than why. A co-orbital rendezvous and proximity operation satellite in space can, for example, be observed. Whether the satellite is intended for such benign operations as assessing damage to another satellite, or whether for nefarious purposes such as ramming into another satellite, or both, can rarely be determined based on hardware. A multiplicity of views regarding underlying drivers for space activity in China, just as there are in the United States, further complicates assessments. China is a country of such size, and with a rapidly increasing number of media and internet outlets for expressing views and dispersing information, that “evidence” can be found for almost any assessment, thereby accommodating the substantiation of preconceived assumptions as analysis. Consequently, analysis of intent through written statements inherently involves speculation and so careful scrutiny of sources backing such speculation becomes especially imperative.11 Unquestionably though, the best way to assess intentions is through dialog and cooperation.